

Men's 110m Hurdles Touchdown Times - by athlete

LAST UPDATE: 20-Oct-24

		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Abate, Emanuele (ITA) (1985)																		
FINAL - 2016 Golden Gala Pietro Mennea (Roma, ITA) (TV Analysis)													<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>					
date	02-Jun-16	time	2.60	3.72	4.78	5.82	6.86	7.94	8.98	10.08	11.16	12.26	13.83	9 / 6				
reaction time	0.149	interval	7 steps	1.12	1.06	1.04	1.04	1.08	1.04	1.10	1.08	1.10	1.57		3.22	3.16	3.28	
wind	0.6 m/s	velocity	5.28	8.16	8.62	8.79	8.79	8.46	8.79	8.31	8.46	8.31	8.93	7.95	8.52	8.68	8.36	
FINAL - 2012 IAAF World Indoor Championships (Istanbul, TUR) (TV Analysis)													<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>					
date	11-Mar-12	time	2.60	3.62	4.64	5.66	6.68						7.63	7 / 6				
reaction time	0.155	interval	7 steps	1.02	1.02	1.02	1.02					0.95			3.06			
		velocity	5.28	8.96	8.96	8.96	8.96					10.23	7.86		8.96			
Abe, Hirofumi (JPN) (1985)																		
FINAL - 2017 Nambu Memorial (Sapporo, JPN)													<i>(2017) - tfdata-store.com/2017/07/12/post-1025/</i>					
date	09-Jul-17	time	2.68	3.79	4.86	5.95	7.04	8.13	9.20	10.34	11.47	12.62	14.07	6 / 4				
reaction time		interval		1.11	1.07	1.09	1.09	1.09	1.07	1.14	1.13	1.15	1.45		3.27	3.25	3.42	
wind	2.7 m/s	velocity	5.12	8.23	8.54	8.39	8.39	8.39	8.54	8.02	8.09	7.95	9.67	7.82	8.39	8.44	8.02	
FINAL - 2017 East Japan Business Athletics Championships (Yuma, JPN)													<i>(2017) - tfdata-store.com/2017/05/20/post-579/</i>					
date	20-May-17	time	2.61	3.71	4.80	5.88	6.95	8.06	9.14	10.26	11.40	12.53	14.02	3 / 6				
reaction time		interval		1.10	1.09	1.08	1.07	1.11	1.08	1.12	1.14	1.13	1.49		3.27	3.26	3.39	
wind	1.1 m/s	velocity	5.26	8.31	8.39	8.46	8.54	8.23	8.46	8.16	8.02	8.09	9.41	7.85	8.39	8.41	8.09	
Abe, Masaya (JPN) (1996)																		
FINAL - 2017 Nambu Memorial (Sapporo, JPN)													<i>(2017) - tfdata-store.com/2017/07/12/post-1025/</i>					
date	09-Jul-17	time	2.69	3.83	4.95	6.08	7.23	8.35	9.47	10.61	11.76	12.93	14.45	2 / 7				
reaction time		interval		1.14	1.12	1.13	1.15	1.12	1.12	1.14	1.15	1.17	1.52		3.39	3.39	3.46	
wind	2.7 m/s	velocity	5.10	8.02	8.16	8.09	7.95	8.16	8.16	8.02	7.95	7.81	9.22	7.61	8.09	8.09	7.92	
Abe, Ryoto (JPN) (2000)																		
FINAL - 2018 Japanese National High School Championships (Nagoya, JPN) (99cm) <i>Kota (2018) - 71st high school championships: JAF scientific committee - biomechanics data collection</i>																		
date	06-Aug-18	time	2.62	3.69	4.79	5.86	6.96	8.06	9.17	10.28	11.41	12.58	14.09	8 / 1				
reaction time		interval		1.07	1.10	1.07	1.10	1.10	1.11	1.11	1.13	1.17	1.51		3.24	3.31	3.41	
wind	1.6 m/s	velocity	5.24	8.54	8.31	8.54	8.31	8.31	8.23	8.23	8.09	7.81	9.28	7.81	8.46	8.28	8.04	
FINAL - 2017 Japanese National High School Championships (Yamagata, JPN) (99cm) <i>Kota (2017) - 70th high school championships: JAF scientific committee - biomechanics data</i>																		
date	02-Aug-17	time	2.65	3.76	4.92	6.03	7.20	8.34	9.48	10.63	11.82	12.99	14.48	8 / 5				
reaction time	0.144	interval		1.11	1.16	1.11	1.17	1.14	1.14	1.15	1.19	1.17	1.49		3.38	3.45	3.51	
wind	-0.7 m/s	velocity	5.18	8.23	7.88	8.23	7.81	8.02	8.02	7.95	7.68	7.81	9.41	7.60	8.11	7.95	7.81	
Heat 4 - 2016 Japanese National Youth Championships (Mizuho, JPN) (91cm) <i>(2016.11.08) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>																		
date	21-Oct-16	time	2.66	3.76	4.85	5.96	7.06	8.18	9.32	10.45	11.63	12.83	14.30	2 / 3				
reaction time		interval		1.10	1.09	1.11	1.10	1.12	1.14	1.13	1.18	1.20	1.47		3.30	3.36	3.51	
wind	1.5 m/s	velocity	5.16	8.31	8.39	8.23	8.31	8.16	8.02	8.09	7.75	7.62	9.54	7.69	8.31	8.16	7.81	
Abe, Tatsuki (JPN) (2003)																		
FINAL - 2022 Japanese U20 National Championships (Osaka, JPN) (99cm) <i>Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season</i>																		
date	12-Jun-22	time	2.65	3.73	4.77	5.80	6.82	7.85	8.91	9.96	11.01	12.09	13.49	4 / 1				
reaction time	0.157	interval	7 steps	1.08	1.04	1.03	1.02	1.03	1.06	1.05	1.05	1.08	1.40		3.15	3.11	3.18	
wind	1.1 m/s	velocity	5.18	8.46	8.79	8.87	8.96	8.87	8.62	8.70	8.70	8.46	10.01	8.15	8.70	8.82	8.62	
Acson, Dennis (SWE) (1981)																		
FINAL - 2011 Windsprint (Sundsvall, SWE) <i>Blomkvist (2011) - www.sub13.se</i>																		
date	31-Jul-11	time	2.74	3.85	4.97	6.09	7.24						14.99	1 / 5				
reaction time		interval		1.11	1.12	1.12	1.15								3.35			
wind	2.8 m/s	velocity	5.01	8.23	8.16	8.16	7.95						7.34		8.19			
FINAL - 2007 Windsprint (Sundsvall, SWE) <i>(2007) - www.ssg.se/en/Windsprint/Split-times/</i>																		
date	24-Jul-07	time		3.80			7.21						14.62	1 / 5				
reaction time		interval					3.41					3.99						
wind	1.3 m/s	velocity		6.02			8.04					8.10	7.52					
Adachi, Eiji (JPN) (2006)																		
FINAL - 2021 Japanese U16 National Championships (Matsuyama, JPN) (99cm) <i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>																		
date	24-Oct-21	time	2.73	3.92	5.07	6.25	7.42	8.61	9.79	10.97	12.13	13.32	14.89	1 / 7				
reaction time		interval		1.19	1.15	1.18	1.17	1.19	1.18	1.18	1.16	1.19	1.57		3.52	3.54	3.53	
wind	1.0 m/s	velocity	5.03	7.68	7.95	7.75	7.81	7.68	7.75	7.75	7.88	7.68	8.93	7.39	7.79	7.75	7.77	
Adams, Spencer (USA) (1989)																		
FINAL - 2017 Drake Relays (Des Moines, IA) (TV Analysis) <i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>																		
date	29-Apr-17	time	2.50	3.56	4.60	5.63	6.66	7.70	8.73	9.80	10.90	12.00	13.56	8 / 6				
reaction time		interval	7 steps	1.06	1.04	1.03	1.03	1.04	1.03	1.07	1.10	1.10	1.56		3.13	3.10	3.27	

WR=World Rec. AR=Area Rec. OR=Olympic Rec. CR=Championship Rec. NR=National Rec. PB=Personal Best DQ=Disqualified DV=Drug Violation

wind	1.8 m/s	velocity	5.49	8.62	8.79	8.87	8.87	8.79	8.87	8.54	8.31	8.31	8.99	8.11	8.76	8.85	8.39
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FINAL - 2016 Doha Diamond League (Doha, QAT) (TV Analysis)*Henson (2020) - Athlete First: 2016 year end hurdle report*

date	06-May-16	time	2.52	3.56	4.60	5.64	6.68	7.72	8.76	9.80	10.88	11.96	13.44	8 / 7			
reaction time	0.124	interval	7 steps	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.08	1.08	1.48		3.12	3.12	3.20
wind	1.4 m/s	velocity	5.44	8.79	8.79	8.79	8.79	8.79	8.79	8.79	8.46	8.46	9.47	8.18	8.79	8.79	8.57

Aihaiti Yisikandaer (CHN) (1998)**Decathlon - Heat 1 - 2019 Chinese National Championships (Shenyang, CHN)** *CAA Hurdle Development (2019)*

date	11-Jul-19	time	2.88	4.10	5.34	6.59	7.81	9.07	10.34	11.58	12.84	14.14	15.80	8 / 5			
reaction time	0.193	interval		1.22	1.24	1.25	1.22	1.26	1.27	1.24	1.26	1.30	1.66		3.71	3.75	3.80
wind	-0.6 m/s	velocity	4.76	7.49	7.37	7.31	7.49	7.25	7.20	7.37	7.25	7.03	8.45	6.96	7.39	7.31	7.22

Aiso, Ibuki (JPN) (1996)**FINAL - 2017 Kansai Regional University Championships (Osaka, JPN)** *(2017) - tfdata-store.com/2017/05/13/post-441/*

date	11-May-17	time	2.69	3.82	4.95	6.06	7.15	8.27	9.42	10.54	11.68	12.85	14.34	3 / 6			
reaction time		interval		1.13	1.13	1.11	1.09	1.12	1.15	1.12	1.14	1.17	1.49		3.37	3.36	3.43
wind	1.6 m/s	velocity	5.10	8.09	8.09	8.23	8.39	8.16	7.95	8.16	8.02	7.81	9.41	7.67	8.14	8.16	7.99

Heat 2 - 2017 Mito Invitational (Mito, JPN)*(2017) - tfdata-store.com/2017/05/06/post-423/*

date	05-May-17	time	2.70	3.84	4.98	6.11	7.23	8.35	9.47	10.59	11.73	12.91	14.40	9 / 4			
reaction time		interval		1.14	1.14	1.13	1.12	1.12	1.12	1.12	1.14	1.18	1.49		3.41	3.36	3.44
wind	0.6 m/s	velocity	5.08	8.02	8.02	8.09	8.16	8.16	8.16	8.16	8.02	7.75	9.41	7.64	8.04	8.16	7.97

FINAL - 2017 Kyoto University Meeting (Kyoto, JPN)*(2017) - tfdata-store.com/2017/04/12/post-362/*

date	09-Apr-17	time	2.70	3.84	4.95	6.04	7.17	8.28	9.38	10.50	11.64	12.82	14.33	4 / 3			
reaction time		interval		1.14	1.11	1.09	1.13	1.11	1.10	1.12	1.14	1.18	1.51		3.34	3.34	3.44
wind	1.5 m/s	velocity	5.08	8.02	8.23	8.39	8.09	8.23	8.31	8.16	8.02	7.75	9.28	7.68	8.21	8.21	7.97

Akindele, Oladayo (USA) (1996)**FINAL - 2020 Leonard Hilton Memorial Invitational (Houston, TX)** *CAA Hurdle Development (2020)*

date	17-Jan-20	time	2.53	3.60	4.64	5.67	6.71							7.78	5 / 1		
reaction time		interval	7 steps	1.07	1.04	1.03	1.04						1.07	PB		3.14	
		velocity	5.42	8.54	8.79	8.87	8.79						9.08	7.71		8.73	

Akins, Ty (USA) (1986)**FINAL - 2012 USA Olympic Trials (Eugene, OR)** *Henson (2020) - Athlete First: 2012 Aries Merritt world record season*

date	30-Jun-12	time	2.40	3.47	4.50	5.54	6.59	7.61	8.61					dnf	1 / --		
reaction time	0.179	interval		1.07	1.03	1.04	1.05	1.02	1.00							3.14	3.07
wind	1.2 m/s	velocity	5.72	8.54	8.87	8.79	8.70	8.96	9.14							8.73	8.93

FINAL - 2011 Folksam GP (Göteborg, SWE)*Blomkvist (2011) - www.sub13.se*

date	11-Jun-11	time	2.44	3.48	4.52	5.56	6.60	7.64	8.68	9.72	10.76	11.84	13.41	1 / 1			
reaction time		interval		1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.08	1.57		3.12	3.12	3.16
wind	0.6 m/s	velocity	5.62	8.79	8.79	8.79	8.79	8.79	8.79	8.79	8.79	8.46	8.93	8.20	8.79	8.79	8.68

FINAL - 2008 IAAF World Athletics Final (Stuttgart, GER)*Graubner (2009) - http://www.fgs.uni-halle.de*

date	14-Sep-08	time	2.61	3.69	4.76	5.80	6.86	7.93	9.00	10.06	11.13	12.22	13.62	5 / 6			
reaction time	0.150	interval		1.08	1.07	1.04	1.06	1.07	1.07	1.06	1.07	1.09	1.40		3.19	3.20	3.22
wind	-1.3 m/s	velocity	5.26	8.46	8.54	8.79	8.62	8.54	8.54	8.62	8.54	8.39	10.01	8.08	8.60	8.57	8.52

FINAL - 2008 USA Olympic Trials (Eugene, OR)*USATF Hurdle Development (2008)*

date	06-Jul-08	time	2.57	3.67	4.74	5.79	6.84	7.89	8.94	9.98	11.03	12.19	13.82	8 / 7			
reaction time	0.175	interval		1.10	1.07	1.05	1.05	1.05	1.05	1.04	1.05	1.16	1.63		3.22	3.15	3.25
wind	3.5 m/s	velocity	5.34	8.31	8.54	8.70	8.70	8.70	8.70	8.79	8.70	7.88	8.60	7.96	8.52	8.70	8.44

Heat 4 - 2007 USATF National Championships (Indianapolis, IN)*USATF Men's Hurdle Development (2007)*

date	23-Jun-07	time	2.69	3.82	4.90	6.02	7.12	8.19	9.29	10.37	11.49	12.61	14.09	3 / 6			
reaction time		interval		1.13	1.08	1.12	1.10	1.07	1.10	1.08	1.12	1.12	1.48		3.33	3.27	3.32
wind	-2.8 m/s	velocity	5.10	8.09	8.46	8.16	8.31	8.54	8.31	8.46	8.16	8.16	9.47	7.81	8.23	8.39	8.26

Al-Ameen, Alex (GBR) (1989)**FINAL - 2010 Windsprint (Sundsvall, SWE)** *Blomkvist (2010) - www.sub13.se*

date	08-Aug-10	time	2.75	3.86	4.95	6.03	7.11	8.21	9.31	10.42	11.53	12.67	14.20	1 / 6			
reaction time		interval		1.11	1.09	1.08	1.08	1.10	1.10	1.11	1.11	1.14	1.53		3.28	3.28	3.36
wind	1.1 m/s	velocity	4.99	8.23	8.39	8.46	8.46	8.31	8.31	8.23	8.23	8.02	9.16	7.75	8.36	8.36	8.16

Al-Moualed, Ahmad (KSA) (1988)**FINAL - 2018 IAAF Continental Cup (Ostrava, CZE) (TV Analysis)** *Henson (2021) - Athlete First: 2018 year end hurdle report*

date	09-Sep-18	time	2.56	3.62	4.68	5.72	6.76	7.86	8.92	10.04	11.16	12.28	13.83	1 / 7			
reaction time	0.143	interval		1.06	1.06	1.04	1.04	1.10	1.06	1.12	1.12	1.12	1.55		3.16	3.20	3.36
wind	0.9 m/s	velocity	5.36	8.62	8.62	8.79	8.79	8.31	8.62	8.16	8.16	8.16	9.05	7.95	8.68	8.57	8.16

FINAL - 2018 Asian Games (Jakarta, INA)														<i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>				
date	28-Aug-18	time	2.53	3.58	4.62	5.63	6.66	7.70	8.73	9.82	10.92	12.03	13.50	3 / 4				
reaction time	0.115	interval		1.05	1.04	1.01	1.03	1.04	1.03	1.09	1.10	1.11	1.47		3.10	3.10	3.30	
wind	0.0 m/s	velocity	5.42	8.70	8.79	9.05	8.87	8.79	8.87	8.39	8.31	8.23	9.54	8.15	8.85	8.85	8.31	

Al-Yoha, Yaqoub (KUW) (1993)														H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10				
Heat 5 - 2024 Olympic Games (Paris, FRA)														<i>Paris 2024 Olympic Games - Results Book (2024)</i>				
date	04-Aug-24	time	2.50	3.65	4.86	6.45	8.73							dnf	7 / --			
reaction time	0.151	interval	7 steps	1.15	1.21	1.59	2.28									3.95		
wind	0.7 m/s	velocity	5.49	7.95	7.55	5.75	4.01									6.94		

Semi-Final 3 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>				
date	21-Aug-23	time	2.58	3.63	4.66	5.68	6.70	7.70	8.73	9.80	10.86	11.95	13.44	2 / 6				
reaction time	0.157	interval	7 steps	1.05	1.03	1.02	1.02	1.00	1.03	1.07	1.06	1.09	1.49		3.10	3.05	3.22	
wind	-0.1 m/s	velocity	5.32	8.70	8.87	8.96	8.96	9.14	8.87	8.54	8.62	8.39	9.41	8.18	8.85	8.99	8.52	

Heat 1 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>				
date	20-Aug-23	time	2.60	3.68	4.72	5.75	6.77	7.80	8.86	9.92	10.96	12.06	13.56	1 / 5				
reaction time	0.140	interval	7 steps	1.08	1.04	1.03	1.02	1.03	1.06	1.06	1.04	1.10	1.50		3.15	3.11	3.20	
wind	-0.3 m/s	velocity	5.28	8.46	8.79	8.87	8.96	8.87	8.62	8.62	8.79	8.31	9.35	8.11	8.70	8.82	8.57	

Semi-Final 1 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)														<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>				
date	20-Mar-22	time	2.50	3.53	4.56	5.56	6.60						7.59	6 / 5				
reaction time	0.156	interval		1.03	1.03	1.00	1.04						0.99		3.06			
		velocity	5.49	8.87	8.87	9.14	8.79						9.82	7.91	8.96			

FINAL - 2022 Müller Indoor Grand Prix (Birmingham, GBR) (TV Analysis)														<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>				
date	19-Feb-22	time	2.49	3.53	4.58	5.61	6.65						7.65	5 / 6				
reaction time	0.146	interval		1.04	1.05	1.03	1.04						1.00		3.12			
		velocity	5.51	8.79	8.70	8.87	8.79						9.72	7.84	8.79			

Heat 2 - 2022 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)														<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>				
date	17-Feb-22	time	2.53	3.58	4.62	5.66	6.70						7.73	7 / 6				
reaction time	0.166	interval		1.05	1.04	1.04	1.04						1.03		3.13			
		velocity	5.42	8.70	8.79	8.79	8.79						9.44	7.76	8.76			

FINAL - 2021 Copernicus Cup (Toruń, POL) (TV Analysis)														<i>Henson (2021) - men's 60m hurdles world record season - Grant Holloway</i>				
date	17-Feb-21	time	2.59	3.65	4.70	5.72	6.75						7.75	5 / 5				
reaction time	0.166	interval		1.06	1.05	1.02	1.03						1.00		3.13			
		velocity	5.30	8.62	8.70	8.96	8.87						9.72	7.74	8.76			

FINAL - 2020 Golden Gala Pietro Mennea (Rome, ITA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2020 year end hurdle report</i>				
date	17-Sep-20	time	2.56	3.64	4.68	5.70	6.74	7.78	8.82	9.86	10.94	12.08	13.60	9 / 5				
reaction time	0.139	interval		1.08	1.04	1.02	1.04	1.04	1.04	1.04	1.08	1.14	1.52		3.14	3.12	3.26	
wind	0.1 m/s	velocity	5.36	8.46	8.79	8.96	8.79	8.79	8.79	8.79	8.46	8.02	9.22	8.09	8.73	8.79	8.41	

Semi-Final 1 - 2019 IAAF World Championships (Doha, QAT)														<i>CAA Hurdle Development (2019)</i>				
date	02-Oct-19	time	2.62	3.66	4.70	5.72	6.74	7.76	8.82	9.90	10.98	12.10	13.57	9 / 4				
reaction time	0.154	interval		1.04	1.04	1.02	1.02	1.02	1.06	1.08	1.08	1.12	1.47		3.10	3.10	3.28	
wind	1.1 m/s	velocity	5.24	8.79	8.79	8.96	8.96	8.96	8.62	8.46	8.46	8.16	9.54	8.11	8.85	8.85	8.36	

FINAL - 2019 Asian Athletics Championships (Doha, QAT)														<i>CAA Hurdle Development (2019)</i>				
date	24-Apr-19	time	2.51	3.56	4.58	5.60	6.62	7.64	8.69	9.74	10.82	11.91	13.35	6 / 2				
reaction time	0.120	interval		1.05	1.02	1.02	1.02	1.02	1.05	1.05	1.08	1.09	1.44	NR PB	3.09	3.09	3.22	
wind	1.7 m/s	velocity	5.47	8.70	8.96	8.96	8.96	8.96	8.70	8.70	8.46	8.39	9.74	8.24	8.87	8.87	8.52	

Semi-Final 1 - 2017 IAAF World Championships (London, GBR)														<i>Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles</i>				
date	06-Aug-17	time	2.43	3.47	4.52								dnf	3 / --				
reaction time	0.152	interval		1.04	1.05													
wind	0.2 m/s	velocity	5.65	8.79	8.70													

Alkana, Antonio (RSA) (1990)														H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10				
Heat 1 - 2023 Kamila Skolimowska Memorial (Silesia, POL)														<i>Omega Timing (2023) - diamond league race analysis</i>				
date	16-Jul-23	time	2.44	3.51	4.55	5.58	6.60	7.63	8.67	9.71	10.77	11.84	13.44	1 / 7				
reaction time	0.132	interval		1.07	1.04	1.03	1.02	1.03	1.04	1.04	1.06	1.07	1.60		3.14	3.09	3.17	
wind	0.3 m/s	velocity	5.62	8.54	8.79	8.87	8.96	8.87	8.79	8.79	8.62	8.54	8.76	8.18	8.73	8.87	8.65	

Heat 2 - 2023 Meeting de Paris (Paris, FRA)														<i>Omega Timing (2023) - diamond league race analysis</i>				
date	09-Jun-23	time	2.39	3.46	4.50	5.52	6.54	7.57	8.62	9.69	10.78	11.88	13.52	2 / 6				
reaction time	0.114	interval		1.07	1.04	1.02	1.02	1.03	1.05	1.07	1.09	1.10	1.64		3.13	3.10	3.26	
wind	-0.6 m/s	velocity	5.74	8.54	8.79	8.96	8.96	8.87	8.70	8.54	8.39	8.31	8.55	8.14	8.76	8.85	8.41	

FINAL - 2020 Golden Gala Pietro Mennea (Rome, ITA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2020 year end hurdle report</i>				
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date	17-Sep-20	time	2.52	3.60	4.68	5.76	6.80	7.84	8.88	9.96	11.04	12.14	13.66	8 / 7			
reaction time	0.130	interval		1.08	1.08	1.08	1.04	1.04	1.04	1.08	1.08	1.10	1.52		3.24	3.12	3.26
wind	0.1 m/s	velocity	5.44	8.46	8.46	8.46	8.79	8.79	8.79	8.46	8.46	8.31	9.22	8.05	8.46	8.79	8.41
FINAL - 2020 Meeting Pro Athlé Tour de Marseille (Marseille, FRA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2020 year end hurdle report</i>			
date	03-Sep-20	time	2.56	3.60	4.71	5.75	6.81	7.84	8.89	9.96	11.11	12.18	13.81	3 / 4			
reaction time	0.201	interval		1.04	1.11	1.04	1.06	1.03	1.05	1.07	1.15	1.07	1.63		3.19	3.14	3.29
wind	-0.3 m/s	velocity	5.36	8.79	8.23	8.79	8.62	8.87	8.70	8.54	7.95	8.54	8.60	7.97	8.60	8.73	8.33
FINAL - 2020 Herculis Meeting International d'Athletisme (Monaco, MON) (TV Analysis)														<i>Henson (2020) - Athlete First: 2020 year end hurdle report</i>			
date	14-Aug-20	time	2.57	3.63	4.70	5.77	6.84	7.91	8.98	10.07	11.18	12.31	13.87	7 / 8			
reaction time	0.134	interval		1.06	1.07	1.07	1.07	1.07	1.07	1.09	1.11	1.13	1.56		3.20	3.21	3.33
wind	0.8 m/s	velocity	5.34	8.62	8.54	8.54	8.54	8.54	8.54	8.39	8.23	8.09	8.99	7.93	8.57	8.54	8.23
FINAL - 2020 Paavo Nurmi Games (Turku, FIN) (TV Analysis)														<i>Henson (2020) - Athlete First: 2020 year end hurdle report</i>			
date	11-Aug-20	time	2.57	3.60	4.64	5.70	6.77	7.84	8.88	9.91	11.01	12.08	13.58	8 / 4			
reaction time	0.158	interval		1.03	1.04	1.06	1.07	1.07	1.04	1.03	1.10	1.07	1.50		3.13	3.18	3.20
wind	1.1 m/s	velocity	5.34	8.87	8.79	8.62	8.54	8.54	8.79	8.87	8.31	8.54	9.35	8.10	8.76	8.62	8.57
Semi-Final 3 - 2019 IAAF World Championships (Doha, QAT)														<i>CAA Hurdle Development (2019)</i>			
date	02-Oct-19	time	2.58	3.61	4.67	5.69	6.73	7.77	8.81	9.87	10.94	12.03	13.47	5 / 3			
reaction time	0.123	interval		1.03	1.06	1.02	1.04	1.04	1.04	1.06	1.07	1.09	1.44		3.11	3.12	3.22
wind	0.6 m/s	velocity	5.32	8.87	8.62	8.96	8.79	8.79	8.79	8.62	8.54	8.39	9.74	8.17	8.82	8.79	8.52
FINAL - 2019 AG Memorial van Damme (Brussels, BEL) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>			
date	06-Sep-19	time	2.48	3.56	4.60	5.64	6.70	7.76	8.82	9.88	10.96	12.04	13.61	8 / 7			
reaction time	0.136	interval		1.08	1.04	1.04	1.06	1.06	1.06	1.06	1.08	1.08	1.57		3.16	3.18	3.22
wind	0.0 m/s	velocity	5.53	8.46	8.79	8.79	8.62	8.62	8.62	8.62	8.46	8.46	8.93	8.08	8.68	8.62	8.52
FINAL - 2019 Müller Anniversary Games (London, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>			
date	21-Jul-19	time	2.43	3.46	4.51	5.53	6.55	7.57	8.62	9.71	10.78	11.91	13.51	7 / 5			
reaction time	0.111	interval		1.03	1.05	1.02	1.02	1.02	1.05	1.09	1.07	1.13	1.60		3.10	3.09	3.29
wind	0.4 m/s	velocity	5.65	8.87	8.70	8.96	8.96	8.96	8.70	8.39	8.54	8.09	8.76	8.14	8.85	8.87	8.33
FINAL - 2019 Meeting International Mohammed VI d'Athlétisme (Rabat, MAR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>			
date	16-Jun-19	time	2.48	3.52	4.52	5.56	6.60	7.64	8.68	9.74	10.88	11.98	13.51	3 / 6			
reaction time	0.168	interval		1.04	1.00	1.04	1.04	1.04	1.04	1.06	1.14	1.10	1.53		3.08	3.12	3.30
wind	0.3 m/s	velocity	5.53	8.79	9.14	8.79	8.79	8.79	8.79	8.62	8.02	8.31	9.16	8.14	8.90	8.79	8.31
FINAL - 2019 Golden Gala Pietro Mennea (Rome, ITA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>			
date	06-Jun-19	time	2.53	3.60	4.62	5.63	6.63	7.63	8.68	9.72	10.78	11.83	13.30	8 / 3			
reaction time	0.133	interval		1.07	1.02	1.01	1.00	1.00	1.05	1.04	1.06	1.05	1.47		3.10	3.05	3.15
wind	0.4 m/s	velocity	5.42	8.54	8.96	9.05	9.14	9.14	8.70	8.79	8.62	8.70	9.54	8.27	8.85	8.99	8.70
FINAL - 2019 Nanjing World Challenge (Nanjing, CHN)														<i>CAA Hurdle Development (2019)</i>			
date	21-May-19	time	2.55	3.60	4.66	5.72	6.76	7.81	8.87	9.95	11.03	12.14	13.61	3 / 7			
reaction time	0.140	interval		1.05	1.06	1.06	1.04	1.05	1.06	1.08	1.08	1.11	1.47		3.17	3.15	3.27
wind	0.1 m/s	velocity	5.38	8.70	8.62	8.62	8.79	8.70	8.62	8.46	8.46	8.23	9.54	8.08	8.65	8.70	8.39
FINAL - 2019 Shanghai Diamond League (Shanghai, CHN)														<i>CAA Hurdle Development (2019)</i>			
date	18-May-19	time	2.54	3.60	4.68	5.72	6.76	7.78	8.82	9.86	10.92	12.02	13.47	2 / 8			
reaction time	0.132	interval		1.06	1.08	1.04	1.04	1.02	1.04	1.04	1.06	1.10	1.45		3.18	3.10	3.20
wind	0.7 m/s	velocity	5.40	8.62	8.46	8.79	8.79	8.96	8.79	8.79	8.62	8.31	9.67	8.17	8.62	8.85	8.57
FINAL - 2018 IAAF Continental Cup (Ostrava, CZE) (TV Analysis)														<i>Henson (2021) - Athlete First: 2018 year end hurdle report</i>			
date	09-Sep-18	time	2.48	3.56	4.60	5.62	6.64	7.64	8.66	9.68	10.76	11.84	13.36	4 / 4			
reaction time	0.117	interval		1.08	1.04	1.02	1.02	1.00	1.02	1.02	1.08	1.08	1.52		3.14	3.04	3.18
wind	0.9 m/s	velocity	5.53	8.46	8.79	8.96	8.96	9.14	8.96	8.96	8.46	8.46	9.22	8.23	8.73	9.02	8.62
FINAL - 2018 Müller Anniversary Games (London, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>			
date	22-Jul-18	time	2.52	3.56	4.58	5.60	6.62	7.66	8.70	9.74	10.84	11.94	13.40	7 / 5			
reaction time	0.140	interval		1.04	1.02	1.02	1.02	1.04	1.04	1.04	1.10	1.10	1.46		3.08	3.10	3.24
wind	0.2 m/s	velocity	5.44	8.79	8.96	8.96	8.96	8.79	8.79	8.79	8.31	8.31	9.60	8.21	8.90	8.85	8.46
FINAL - 2018 Meeting de Paris (Paris, FRA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>			
date	30-Jun-18	time	2.50	3.54	4.58	5.58	6.60	7.64	8.66	9.72	10.74	11.82	13.32	7 / 4			
reaction time	0.138	interval		1.04	1.04	1.00	1.02	1.04	1.02	1.06	1.02	1.08	1.50		3.08	3.08	3.16
wind	1.5 m/s	velocity	5.49	8.79	8.79	9.14	8.96	8.79	8.96	8.62	8.96	8.46	9.35	8.26	8.90	8.90	8.68
Semi-Final 3 - 2017 IAAF World Championships (London, GBR)														<i>Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles</i>			
date	06-Aug-17	time	2.66	3.74	4.78	5.81	6.82	7.85	8.88	9.95	11.02	12.13	13.59	9 / 4			
reaction time	0.230	interval		1.08	1.04	1.03	1.01	1.03	1.03	1.07	1.07	1.11	1.46		3.15	3.07	3.25
wind	0.3 m/s	velocity	5.16	8.46	8.79	8.87	9.05	8.87	8.87	8.54	8.54	8.23	9.60	8.09	8.70	8.93	8.44

FINAL - 2017 István Gyulai Memorial (Székesfehérvár, HUN) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date	04-Jul-17	time	2.54	3.58	4.62	5.64	6.64	7.68	8.72	9.76	10.80	11.86	13.31	5 / 5				
reaction time		interval		1.04	1.04	1.02	1.00	1.04	1.04	1.04	1.04	1.06	1.45		3.10	3.08	3.14	
wind	0.3 m/s	velocity	5.40	8.79	8.79	8.96	9.14	8.79	8.79	8.79	8.79	8.62	9.67	8.26	8.85	8.90	8.73	

FINAL - 2017 Meeting de Paris (Paris, FRA) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date	01-Jul-17	time	2.52	3.56	4.56	5.58	6.58	7.60	8.62	9.66	10.70	11.78	13.24	1 / 5				
reaction time	0.139	interval		1.04	1.00	1.02	1.00	1.02	1.02	1.04	1.04	1.08	1.46		3.06	3.04	3.16	
wind	-0.1 m/s	velocity	5.44	8.79	9.14	8.96	9.14	8.96	8.96	8.79	8.79	8.46	9.60	8.31	8.96	9.02	8.68	

FINAL - 2017 Golden Spike (Ostrava, CZE) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date	28-Jun-17	time	2.52	3.56	4.58	5.60	6.64	7.68	8.74	9.80	10.86	11.92	13.37	4 / 4				
reaction time	0.155	interval		1.04	1.02	1.02	1.04	1.04	1.06	1.06	1.06	1.06	1.45		3.08	3.14	3.18	
wind	0.6 m/s	velocity	5.44	8.79	8.96	8.96	8.79	8.79	8.62	8.62	8.62	8.62	9.67	8.23	8.90	8.73	8.62	

FINAL - 2016 Herculis Meeting International d'Athlétisme (Monaco, MON) (TV Analysis)*Henson (2021) - Athlete First: 2016 year end hurdle report*

date	15-Jul-16	time	2.48	3.54	4.60	5.64	6.68	7.76	8.80	9.88	11.04	12.12	13.66	7 / 7				
reaction time	0.130	interval		1.06	1.06	1.04	1.04	1.08	1.04	1.08	1.16	1.08	1.54		3.16	3.16	3.32	
wind	0.0 m/s	velocity	5.53	8.62	8.62	8.79	8.79	8.46	8.79	8.46	7.88	8.46	9.10	8.05	8.68	8.68	8.26	

FINAL - 2016 Meeting International Mohammed VI D'Athlétisme (Rabat, MAR) (TV Analysis)*Henson (2020) - Athlete First: 2016 year end hurdle report*

date	22-May-16	time	2.48	3.52	4.52	5.52	6.52	7.56	8.58	9.62	10.68	11.78	13.28	9 / 3				
reaction time	0.129	interval		1.04	1.00	1.00	1.00	1.04	1.02	1.04	1.06	1.10	1.50	PB	3.04	3.06	3.20	
wind	1.4 m/s	velocity	5.53	8.79	9.14	9.14	9.14	8.79	8.96	8.79	8.62	8.31	9.35	8.28	9.02	8.96	8.57	

FINAL - 2016 Doha Diamond League (Doha, QAT) (TV Analysis)*Henson (2020) - Athlete First: 2016 year end hurdle report*

date	06-May-16	time	2.56	3.60	4.66	5.72	6.74	7.78	8.82	9.88	10.94	12.04	13.50	1 / 8				
reaction time	0.139	interval		1.04	1.06	1.06	1.02	1.04	1.04	1.06	1.06	1.10	1.46		3.16	3.10	3.22	
wind	1.4 m/s	velocity	5.36	8.79	8.62	8.62	8.96	8.79	8.79	8.62	8.62	8.31	9.60	8.15	8.68	8.85	8.52	

Allen, Charles (CAN) (1977)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2004 Olympic Games (Athens, GRE)***Ruiz (2004) - las carreras con vallas de juegos olimpicos de atenas '04*

date	27-Aug-04	time	2.46	3.50	4.53	5.57	6.63	7.66	8.71	9.75	10.82	11.88	13.48	1 / 6				
reaction time	0.139	interval		1.04	1.03	1.04	1.06	1.03	1.05	1.04	1.07	1.06	1.60		3.11	3.14	3.17	
wind	0.3 m/s	velocity	5.58	8.79	8.87	8.79	8.62	8.87	8.70	8.79	8.54	8.62	8.76	8.16	8.82	8.73	8.65	

Allen, Devon (USA) (1994)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2023 USATF New York City Grand Prix (Randalls Island, NY) (TV Analysis)***Henson (2023) - Athlete First: 2023 year end hurdle report*

date	24-Jun-23	time	2.57	3.62	4.64	5.62	6.61	7.61	8.61	9.62	10.64	11.66	13.04	5 / 2				
reaction time	0.173	interval	7 steps	1.05	1.02	0.98	0.99	1.00	1.00	1.01	1.02	1.02	1.38		3.05	2.99	3.05	
wind	1.6 m/s	velocity	5.34	8.70	8.96	9.33	9.23	9.14	9.14	9.05	8.96	8.96	10.16	8.44	8.99	9.17	8.99	

Heat 1 - 2023 Meeting de Paris (Paris, FRA)*Omega Timing (2023) - diamond league race analysis*

date	09-Jun-23	time	2.44	4.48										dnf	5 / --			
reaction time	0.140	interval	7 steps	2.04														
wind	-2.0 m/s	velocity	5.62	4.48														

FINAL - 2023 FBK Games (Hengelo, NED) (TV Analysis)*Henson (2023) - Athlete First: 2023 year end hurdle report*

date	04-Jun-23	time	2.56	3.61	4.62	5.63	6.62	7.62	8.64	9.68	10.72	11.78	13.12	5 / 2				
reaction time	0.137	interval	7 steps	1.05	1.01	1.01	0.99	1.00	1.02	1.04	1.04	1.06	1.34		3.07	3.01	3.14	
wind	0.4 m/s	velocity	5.36	8.70	9.05	9.05	9.23	9.14	8.96	8.79	8.79	8.62	10.46	8.38	8.93	9.11	8.73	

FINAL - 2023 Golden Gala Pietro Mennea (Firenze, ITA) (TV Analysis)*Henson (2023) - Athlete First: 2023 year end hurdle report*

date	02-Jun-23	time	2.56	3.61	4.65	5.65	6.65	7.65	8.66	9.68	10.72	11.76	13.19	5 / 3				
reaction time	0.136	interval	7 steps	1.05	1.04	1.00	1.00	1.00	1.01	1.02	1.04	1.04	1.43		3.09	3.01	3.10	
wind	-0.2 m/s	velocity	5.36	8.70	8.79	9.14	9.14	9.05	8.96	8.79	8.79	9.80	8.34		8.87	9.11	8.85	

FINAL - 2023 Meeting International Mohammed VI d'Athlétisme (Rabat, MAR)*Omega Timing (2023) - diamond league race analysis*

date	28-May-23	time	2.38	3.45	4.47	5.48	6.49	7.51	8.54	9.57	10.62	11.68	13.25	3 / 4				
reaction time	0.152	interval	7 steps	1.07	1.02	1.01	1.01	1.02	1.03	1.03	1.05	1.06	1.57		3.10	3.06	3.14	
wind	-1.3 m/s	velocity	5.76	8.54	8.96	9.05	9.05	8.96	8.87	8.87	8.70	8.62	8.93	8.30	8.85	8.96	8.73	

Semi-Final 3 - 2022 World Athletics Championships (Eugene, OR)*Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season*

date	17-Jul-22	time	2.60	3.64	4.65	5.65	6.63	7.62	8.63	9.63	10.67	11.72	13.09	5 / 2				
reaction time	0.101	interval	7 steps	1.04	1.01	1.00	0.98	0.99	1.01	1.00	1.04	1.05	1.37		3.05	2.98	3.09	
wind	2.5 m/s	velocity	5.28	8.79	9.05	9.14	9.33	9.23	9.05	9.14	8.79	8.70	10.23	8.40	8.99	9.20	8.87	

Heat 5 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)*Henson (2022) - Athlete First: 2022 year end hurdle report*

date	16-Jul-22	time	2.56	3.58	4.63	5.63	6.66	7.70	8.76	9.83	10.93	12.00	13.47	3 / 1				
reaction time	0.123	interval	7 steps	1.02	1.05	1.00	1.03	1.04	1.06	1.07	1.10	1.07	1.47		3.07	3.13	3.24	
wind	0.4 m/s	velocity	5.36	8.96	8.70	9.14	8.87	8.79	8.62	8.54	8.31	8.54	9.54	8.17	8.93	8.76	8.46	

FINAL - 2022 USATF National Championships (Eugene, OR) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>			
date	26-Jun-22	time	2.53	3.56	4.55	5.58	6.57	7.57	8.59	9.61	10.64	11.70	13.09	4 / 3			
reaction time		interval	7 steps	1.03	0.99	1.03	0.99	1.00	1.02	1.02	1.03	1.06	1.39		3.05	3.01	3.11
wind	1.2 m/s	velocity	5.42	8.87	9.23	8.87	9.23	9.14	8.96	8.96	8.87	8.62	10.09	8.40	8.99	9.11	8.82
Semi-Final 2 - 2022 USATF National Championships (Eugene, OR)														<i>USATF (2022) - Results powered by Karmarush.com</i>			
date	26-Jun-22	time	2.45	3.52	4.55	5.54	6.55	7.61	8.55	9.61	10.63	11.64	13.14	5 / 2			
reaction time		interval	7 steps	1.07	1.03	0.99	1.01	1.06	0.94	1.06	1.02	1.01	1.50		3.09	3.01	3.09
wind	0.1 m/s	velocity	5.60	8.54	8.87	9.23	9.05	8.62	9.72	8.62	8.96	9.05	9.35	8.37	8.87	9.11	8.87
FINAL - 2022 Meeting de Paris (Paris, FRA) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>			
date	18-Jun-22	time	2.50	3.54	4.56	5.56	6.56	7.60	8.60	9.64	10.70	11.76	13.16	5 / 1			
reaction time	0.138	interval	7 steps	1.04	1.02	1.00	1.00	1.04	1.00	1.04	1.06	1.06	1.40		3.06	3.04	3.16
wind	-0.2 m/s	velocity	5.49	8.79	8.96	9.14	9.14	8.79	9.14	8.79	8.62	8.62	10.01	8.36	8.96	9.02	8.68
FINAL - 2022 Bislett Games (Oslo, NOR) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>			
date	16-Jun-22	time	2.52	3.56	4.57	5.58	6.56	7.58	8.60	9.62	10.70	11.80	13.22	5 / 1			
reaction time	0.140	interval	7 steps	1.04	1.01	1.01	0.98	1.02	1.02	1.02	1.08	1.10	1.42		3.06	3.02	3.20
wind	-1.2 m/s	velocity	5.44	8.79	9.05	9.05	9.33	8.96	8.96	8.96	8.46	8.31	9.87	8.32	8.96	9.08	8.57
FINAL - 2022 New York Grand Prix (New York, NY) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>			
date	12-Jun-22	time	2.42	3.44	4.43	5.42	6.38	7.38	8.36	9.38	10.38	11.42	12.84	5 / 1			
reaction time	0.128	interval	7 steps	1.02	0.99	0.99	0.96	1.00	0.98	1.02	1.00	1.04	1.42		3.00	2.94	3.06
wind	1.6 m/s	velocity	5.67	8.96	9.23	9.23	9.52	9.14	9.33	8.96	9.14	8.79	9.87	8.57	9.14	9.33	8.96
FINAL - 2022 New Balance Indoor Grand Prix (Staten Island, NY) (TV Analysis)														<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>			
date	06-Feb-22	time	2.51	3.55	4.58	5.57	6.58						7.51	5 / 3			
reaction time	0.143	interval		1.04	1.03	0.99	1.01						0.93		3.06		
		velocity	5.47	8.79	8.87	9.23	9.05						10.45	7.99	8.96		
FINAL - 2021 Boris Hanzeković Memorial (Zagreb, CRO) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>			
date	14-Sep-21	time	2.46	3.50	4.50	5.47	6.47	7.47	8.47	9.47	10.50	11.53	12.99	5 / 1			
reaction time	0.126	interval		1.04	1.00	0.97	1.00	1.00	1.00	1.00	1.03	1.03	1.46		3.01	3.00	3.06
wind	0.7 m/s	velocity	5.58	8.79	9.14	9.42	9.14	9.14	9.14	9.14	8.87	8.87	9.60	8.47	9.11	9.14	8.96
FINAL - 2021 Weltklasse (Zürich, SUI) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>			
date	09-Sep-21	time	2.48	3.52	4.52	5.52	6.54	7.56	8.58	9.60	10.60	11.64	13.06	4 / 1			
reaction time	0.115	interval		1.04	1.00	1.00	1.02	1.02	1.02	1.02	1.00	1.04	1.42		3.04	3.06	3.06
wind	0.6 m/s	velocity	5.53	8.79	9.14	9.14	8.96	8.96	8.96	8.96	9.14	8.79	9.87	8.42	9.02	8.96	8.96
FINAL - 2021 Meeting de Paris (Paris, FRA) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>			
date	28-Aug-21	time	2.52	3.54	4.56	5.56	6.56	7.56	8.58	9.58	10.60	11.62	13.08	5 / 2			
reaction time	0.141	interval		1.02	1.02	1.00	1.00	1.00	1.02	1.00	1.02	1.02	1.46		3.04	3.02	3.04
wind	0.7 m/s	velocity	5.44	8.96	8.96	9.14	9.14	9.14	8.96	9.14	8.96	8.96	9.60	8.41	9.02	9.08	9.02
FINAL - 2021 Athletissima (Lausanne, SUI) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>			
date	26-Aug-21	time	2.48	3.48	4.52	5.56	6.56	7.56	8.56	9.56	10.56	11.62	13.07	5 / 1			
reaction time	0.140	interval		1.00	1.04	1.04	1.00	1.00	1.00	1.00	1.00	1.06	1.45		3.08	3.00	3.06
wind	2.5 m/s	velocity	5.53	9.14	8.79	8.79	9.14	9.14	9.14	9.14	9.14	8.62	9.67	8.42	8.90	9.14	8.96
FINAL - 2020 Olympic Games (Tokyo, JPN) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>			
date	06-Aug-21	time	2.52	3.56	4.58	5.60	6.58	7.62	8.62	9.66	10.70	11.72	13.14	6 / 4			
reaction time	0.133	interval		1.04	1.02	1.02	0.98	1.04	1.00	1.04	1.04	1.02	1.42		3.08	3.02	3.10
wind	-0.5 m/s	velocity	5.44	8.79	8.96	8.96	9.33	8.79	9.14	8.79	8.79	8.96	9.87	8.37	8.90	9.08	8.85
Semi-Final 2 - 2020 Olympic Games (Tokyo, JPN) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>			
date	04-Aug-21	time	2.52	3.55	4.57	5.60	6.60	7.60	8.64	9.67	10.71	11.76	13.18	5 / 1			
reaction time	0.121	interval		1.03	1.02	1.03	1.00	1.00	1.04	1.03	1.04	1.05	1.42		3.08	3.04	3.12
wind	0.1 m/s	velocity	5.44	8.87	8.96	8.87	9.14	9.14	8.79	8.87	8.79	8.70	9.87	8.35	8.90	9.02	8.79
FINAL - 2020 USA Olympic Trials (Eugene, OR) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>			
date	26-Jun-21	time	2.50	3.53	4.53	5.53	6.54	7.57	8.56	9.58	10.60	11.64	13.10	5 / 2			
reaction time	0.152	interval		1.03	1.00	1.00	1.01	1.03	0.99	1.02	1.02	1.04	1.46		3.03	3.03	3.08
wind	0.4 m/s	velocity	5.49	8.87	9.14	9.14	9.05	8.87	9.23	8.96	8.96	8.79	9.60	8.40	9.05	9.05	8.90
Semi-Final 2 - 2020 USA Olympic Trials (Eugene, OR) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>			
date	26-Jun-21	time	2.53	3.56	4.56	5.54	6.55	7.56	8.55	9.58	10.61	11.64	13.10	5 / 1			
reaction time	0.124	interval		1.03	1.00	0.98	1.01	1.01	0.99	1.03	1.03	1.03	1.46		3.01	3.01	3.09
wind	1.2 m/s	velocity	5.42	8.87	9.14	9.33	9.05	9.05	9.23	8.87	8.87	8.87	9.60	8.40	9.11	9.11	8.87
Heat 3 - 2020 USA Olympic Trials (Eugene, OR) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>			
date	25-Jun-21	time	2.50	3.53	4.56	5.63	6.63	7.63	8.66	9.73	10.73	11.76	13.26	3 / 1			
reaction time	0.139	interval		1.03	1.03	1.07	1.00	1.00	1.03	1.07	1.00	1.03	1.50		3.13	3.03	3.10

wind	0.5 m/s	velocity	5.49	8.87	8.87	8.54	9.14	9.14	8.87	8.54	9.14	8.87	9.35	8.30	8.76	9.05	8.85
FINAL - 2021 Golden Gala Pietro Mennea (Florence, ITA) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>			
date	10-Jun-21	time	2.52	3.56	4.58	5.60	6.62	7.64	8.68	9.72	10.76	11.82	13.32	5 / 4			
reaction time	0.136	interval	1.04	1.02	1.02	1.02	1.02	1.04	1.04	1.04	1.06	1.50			3.08	3.08	3.14
wind	-0.1 m/s	velocity	5.44	8.79	8.96	8.96	8.96	8.96	8.79	8.79	8.62	9.35	8.26		8.90	8.90	8.73
FINAL - 2021 Fanny Blankers Koen Games (Hengelo, NED) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>			
date	06-Jun-21	time	2.47	3.54	4.54	5.60	6.64	7.67	8.73	9.74	10.77	11.86	13.32	4 / 2			
reaction time		interval	1.07	1.00	1.06	1.04	1.03	1.06	1.01	1.03	1.09	1.46			3.13	3.13	3.13
wind	1.7 m/s	velocity	5.55	8.54	9.14	8.62	8.79	8.87	8.62	9.05	8.87	8.39	9.60	8.26	8.76	8.76	8.76
FINAL - 2019 IAAF World Championships (Doha, QAT)														<i>CAA Hurdle Development (2019)</i>			
date	02-Oct-19	time	2.58	3.67	4.73	5.77	6.80	7.82	8.88	9.94	11.05	12.19	13.70	3 / 7			
reaction time	0.124	interval	1.09	1.06	1.04	1.03	1.02	1.06	1.06	1.11	1.14	1.51			3.19	3.11	3.31
wind	0.6 m/s	velocity	5.32	8.39	8.62	8.79	8.87	8.96	8.62	8.62	8.23	8.02	9.28	8.03	8.60	8.82	8.28
Semi-Final 2 - 2019 IAAF World Championships (Doha, QAT)														<i>CAA Hurdle Development (2019)</i>			
date	02-Oct-19	time	2.60	3.64	4.67	5.69	6.76	7.75	8.80	9.83	10.87	11.95	13.36	9 / 4			
reaction time	0.119	interval	1.04	1.03	1.02	1.07	0.99	1.05	1.03	1.04	1.08	1.41			3.09	3.11	3.15
wind	0.9 m/s	velocity	5.28	8.79	8.87	8.96	8.54	9.23	8.70	8.87	8.79	8.46	9.94	8.23	8.87	8.82	8.70
FINAL - 2019 USATF National Championships (Des Moines, IA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>			
date	28-Jul-19	time	2.50	3.60	4.63	5.67	6.69	7.70	8.74	9.77	10.83	11.90	13.38	8 / 3			
reaction time		interval	1.10	1.03	1.04	1.02	1.01	1.04	1.03	1.06	1.07	1.48			3.17	3.07	3.16
wind	-0.8 m/s	velocity	5.49	8.31	8.87	8.79	8.96	9.05	8.79	8.87	8.62	8.54	9.47	8.22	8.65	8.93	8.68
FINAL - 2019 Athletissima (Lausanne, SUI) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>			
date	05-Jul-19	time	2.56	3.58	4.58	5.60	6.60	7.64	8.68	9.72	10.78	11.86	13.35	1 / 7			
reaction time	0.133	interval	1.02	1.00	1.02	1.00	1.04	1.04	1.04	1.06	1.08	1.49			3.04	3.08	3.18
wind	1.0 m/s	velocity	5.36	8.96	9.14	8.96	9.14	8.79	8.79	8.79	8.62	8.46	9.41	8.24	9.02	8.90	8.62
FINAL - 2019 Prefontaine Classic (Stanford, CA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>			
date	30-Jun-19	time	2.56	3.60	4.62	5.64	6.66	7.68	8.75	9.76	10.82	11.86	13.33	3 / 5			
reaction time	0.145	interval	1.04	1.02	1.02	1.02	1.02	1.07	1.01	1.06	1.04	1.47			3.08	3.11	3.11
wind	0.3 m/s	velocity	5.36	8.79	8.96	8.96	8.96	8.96	8.54	9.05	8.62	8.79	9.54	8.25	8.90	8.82	8.82
FINAL - 2018 IAAF Continental Cup (Ostrava, CZE) (TV Analysis)														<i>Henson (2021) - Athlete First: 2018 year end hurdle report</i>			
date	09-Sep-18	time	2.52	3.60	4.64	5.68	6.72	7.72	8.80	9.88	10.96	12.02	13.57	7 / 5			
reaction time	0.118	interval	1.08	1.04	1.04	1.04	1.00	1.08	1.08	1.08	1.06	1.55			3.16	3.12	3.22
wind	0.9 m/s	velocity	5.44	8.46	8.79	8.79	8.79	9.14	8.46	8.46	8.46	8.62	9.05	8.11	8.68	8.79	8.52
FINAL - 2018 AG Memorial van Damme (Brussels, BEL) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>			
date	31-Aug-18	time	2.54	3.56	4.60	5.62	6.64	7.68	8.72	9.78	10.84	11.94	13.41	2 / 6			
reaction time	0.126	interval	1.02	1.04	1.02	1.02	1.04	1.04	1.06	1.06	1.10	1.47			3.08	3.10	3.22
wind	-0.1 m/s	velocity	5.40	8.96	8.79	8.96	8.96	8.79	8.79	8.62	8.62	8.31	9.54	8.20	8.90	8.85	8.52
FINAL - 2018 Müller Anniversary Games (London, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>			
date	22-Jul-18	time	2.54	3.58	4.62	5.62	6.62	7.66	8.70	9.74	10.78	11.90	13.30	6 / 2			
reaction time	0.111	interval	1.04	1.04	1.00	1.00	1.04	1.04	1.04	1.04	1.12	1.40			3.08	3.08	3.20
wind	0.2 m/s	velocity	5.40	8.79	8.79	9.14	9.14	8.79	8.79	8.79	8.79	8.16	10.01	8.27	8.90	8.90	8.57
FINAL - 2018 Herculis Meeting International d'Athletisme (Monaco, MON) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>			
date	20-Jul-18	time	2.50	3.56	4.60	5.62	6.66	7.70	8.74	9.78	10.82	11.88	13.38	2 / 5			
reaction time	0.141	interval	1.06	1.04	1.02	1.04	1.04	1.04	1.04	1.04	1.06	1.50			3.12	3.12	3.14
wind	-0.2 m/s	velocity	5.49	8.62	8.79	8.96	8.79	8.79	8.79	8.79	8.79	8.62	9.35	8.22	8.79	8.79	8.73
FINAL - 2018 Athletissima (Lausanne, SUI) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>			
date	05-Jul-18	time	2.57	3.59	4.63	5.63	6.64	7.68	8.70	9.72	10.80	11.87	13.29	4 / 2			
reaction time	0.121	interval	1.02	1.04	1.00	1.01	1.04	1.02	1.02	1.08	1.07	1.42			3.06	3.07	3.17
wind	0.6 m/s	velocity	5.34	8.96	8.79	9.14	9.05	8.79	8.96	8.96	8.46	8.54	9.87	8.28	8.96	8.93	8.65
FINAL - 2018 István Gyulai Memorial (Székesfehérvár, HUN) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>			
date	02-Jul-18	time	2.52	3.58	4.62	5.64	6.66	7.70	8.74	9.78	10.84	11.90	13.36	5 / 3			
reaction time	0.130	interval	1.06	1.04	1.02	1.02	1.04	1.04	1.04	1.06	1.06	1.46			3.12	3.10	3.16
wind	0.6 m/s	velocity	5.44	8.62	8.79	8.96	8.96	8.79	8.79	8.79	8.62	8.62	9.60	8.23	8.79	8.85	8.68
FINAL - 2018 Meeting de Paris (Paris, FRA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>			
date	30-Jun-18	time	2.52	3.56	4.60	5.64	6.64	7.68	8.70	9.70	10.72	11.76	13.23	1 / 3			
reaction time	0.123	interval	1.04	1.04	1.04	1.00	1.04	1.02	1.00	1.02	1.04	1.47			3.12	3.06	3.06
wind	1.5 m/s	velocity	5.44	8.79	8.79	8.79	9.14	8.79	8.96	9.14	8.96	8.79	9.54	8.31	8.79	8.96	8.96
FINAL - 2018 USATF Championships (Des Moines, IA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>			

date	24-Jun-18	time	2.50	3.55	4.62	5.66	6.70	7.74	8.77	9.82	10.88	11.95	13.46	3 / 1				
reaction time		interval		1.05	1.07	1.04	1.04	1.04	1.03	1.05	1.06	1.07	1.51		3.16	3.11	3.18	
wind	-1.8 m/s	velocity	5.49	8.70	8.54	8.79	8.79	8.79	8.87	8.70	8.62	8.54	9.28	8.17	8.68	8.82	8.62	
FINAL - 2018 Prefontaine Classic (Eugene, OR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>				
date	26-May-18	time	2.52	3.56	4.58	5.60	6.60	7.60	8.62	9.66	10.68	11.72	13.13	8 / 3				
reaction time	0.122	interval		1.04	1.02	1.02	1.00	1.00	1.02	1.04	1.02	1.04	1.41		3.08	3.02	3.10	
wind	3.0 m/s	velocity	5.44	8.79	8.96	8.96	9.14	9.14	8.96	8.79	8.96	8.79	9.94	8.38	8.90	9.08	8.85	
FINAL - 2017 Memorial van Damme (Brussels, BEL) (TV Analysis)														<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>				
date	01-Sep-17	time	2.52	3.58	4.62	5.62	6.66	7.68	8.72	9.74	10.78	11.82	13.24	4 / 4				
reaction time	0.122	interval		1.06	1.04	1.00	1.04	1.02	1.04	1.02	1.04	1.04	1.42		3.10	3.10	3.10	
wind	0.5 m/s	velocity	5.44	8.62	8.79	9.14	8.79	8.96	8.79	8.96	8.79	8.79	9.87	8.31	8.85	8.85	8.85	
FINAL - 2017 Müller Grand Prix (Birmingham, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>				
date	20-Aug-17	time	2.52	3.56	4.58	5.58	6.62	7.62	8.68	9.74	10.78	11.86	13.40	9 / 3				
reaction time	0.119	interval		1.04	1.02	1.00	1.04	1.00	1.06	1.06	1.04	1.08	1.54		3.06	3.10	3.18	
wind	-0.6 m/s	velocity	5.44	8.79	8.96	9.14	8.79	9.14	8.62	8.62	8.79	8.46	9.10	8.21	8.96	8.85	8.62	
Semi-Final 2 - 2017 IAAF World Championships (London, GBR)														<i>Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles</i>				
date	06-Aug-17	time	2.29	3.35	4.37	5.40	6.42	7.47	8.50	9.54	10.58	11.65	13.27	4 / 3				
reaction time	0.126	interval		1.06	1.02	1.03	1.02	1.05	1.03	1.04	1.04	1.07	1.62		3.11	3.10	3.15	
wind	0.6 m/s	velocity	5.99	8.62	8.96	8.87	8.96	8.70	8.87	8.79	8.79	8.54	8.65	8.29	8.82	8.85	8.70	
FINAL - 2017 Spitzen Leichtathletik (Luzern, SUI)														<i>(2017.07.11) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>				
date	18-Jul-17	time	2.60	3.64	4.68	5.71	6.73	7.75	8.77	9.82	10.88	11.94	13.31	5 / 1				
reaction time		interval		1.04	1.04	1.03	1.02	1.02	1.02	1.05	1.06	1.06	1.37		3.11	3.06	3.17	
wind	-0.1 m/s	velocity	5.28	8.79	8.79	8.87	8.96	8.96	8.96	8.70	8.62	8.62	10.23	8.26	8.82	8.96	8.65	
FINAL - 2017 Müller's Anniversary Games (London, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>				
date	09-Jul-17	time	2.52	3.56	4.56	5.64	6.70	7.70	8.74	9.80	10.82	11.88	13.30	6 / 4				
reaction time	0.104	interval		1.04	1.00	1.08	1.06	1.00	1.04	1.06	1.02	1.06	1.42		3.12	3.10	3.14	
wind	0.0 m/s	velocity	5.44	8.79	9.14	8.46	8.62	9.14	8.79	8.62	8.96	8.62	9.87	8.27	8.79	8.85	8.73	
FINAL - 2017 Prefontaine Classic (Eugene, OR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>				
date	27-May-17	time	2.48	3.52	4.54	5.54	6.56	7.56	8.58	9.60	10.60	11.64	13.11	5 / 3				
reaction time	0.131	interval		1.04	1.02	1.00	1.02	1.00	1.02	1.02	1.00	1.04	1.47		3.06	3.04	3.06	
wind	0.9 m/s	velocity	5.53	8.79	8.96	9.14	8.96	9.14	8.96	8.96	9.14	8.79	9.54	8.39	8.96	9.02	8.96	
FINAL - 2016 Olympic Games (Rio de Janeiro, BRA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>				
date	16-Aug-16	time	2.50	3.58	4.60	5.60	6.62	7.66	8.70	9.74	10.76	11.82	13.31	3 / 5				
reaction time	0.135	interval		1.08	1.02	1.00	1.02	1.04	1.04	1.04	1.02	1.06	1.49		3.10	3.10	3.12	
wind	0.2 m/s	velocity	5.49	8.46	8.96	9.14	8.96	8.79	8.79	8.79	8.96	8.62	9.41	8.26	8.85	8.85	8.79	
FINAL - 2016 USA Olympic Trials (Eugene, OR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>				
date	09-Jul-16	time	2.53	3.55	4.57	5.55	6.54	7.54	8.52	9.54	10.56	11.57	13.03	3 / 1				
reaction time	0.157	interval		1.02	1.02	0.98	0.99	1.00	0.98	1.02	1.02	1.01	1.46	PB	3.02	2.97	3.05	
wind	1.0 m/s	velocity	5.42	8.96	8.96	9.33	9.23	9.14	9.33	8.96	8.96	9.05	9.60	8.44	9.08	9.23	8.99	
Almgren, Daniel (SWE) (1979)																		
			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
B FINAL - 2010 Folksam GP (Sollentuna, SWE)														<i>Blomkvist (2010) - www.sub13.se</i>				
date	01-Jul-10	time	2.66	3.87	5.04	6.25	7.43	8.66		11.09			15.44		1 / 5			
reaction time		interval		1.21	1.17	1.21	1.18	1.23		2.43						3.59		
wind	0.8 m/s	velocity	5.16	7.55	7.81	7.55	7.75	7.43		7.52			7.12			7.64		
Decathlon - Heat 4 - 2009 IAAF World Championships (Berlin, GER)														<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>				
date	20-Aug-09	time	2.89	4.08	5.25	6.39	7.53	8.75	9.93	11.11	12.31	13.52	15.14	3 / 6				
reaction time	0.193	interval		1.19	1.17	1.14	1.14	1.22	1.18	1.18	1.20	1.21	1.62		3.50	3.54	3.59	
wind	0.0 m/s	velocity	4.75	7.68	7.81	8.02	8.02	7.49	7.75	7.75	7.62	7.55	8.65	7.27	7.83	7.75	7.64	
Amaoka, Naoki (JPN) (2000)																		
			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
U20 FINAL - 2018 National Sports Festival (Fukui, JPN) (99cm)														<i>Joshi (2018) - research on athlete performance and technique- 2018 data book</i>				
date	07-Oct-18	time	2.64	3.71	4.77	5.83	6.86	7.91	8.96	10.02	11.08	12.17	13.57	5 / 2				
reaction time	0.140	interval		1.07	1.06	1.06	1.03	1.05	1.05	1.06	1.06	1.09	1.40		3.19	3.13	3.21	
wind	1.5 m/s	velocity	5.20	8.54	8.62	8.62	8.87	8.70	8.70	8.62	8.62	8.39	10.01	8.11	8.60	8.76	8.54	
Ames, Brendan (USA) (1988)																		
			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Semi-Final 2 - 2020 USA Olympic Trials (Eugene, OR) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>				
date	26-Jun-21	time	2.56	3.63	4.65	5.67	6.70	7.73	8.88	10.00	11.13	12.30	13.96	8 / 8 7				
reaction time	0.208	interval	7 steps	1.07	1.02	1.02	1.03	1.03	1.15	1.12	1.13	1.17	1.66		3.11	3.21	3.42	
wind	1.2 m/s	velocity	5.36	8.54	8.96	8.96	8.87	8.87	7.95	8.16	8.09	7.81	8.45	7.88	8.82	8.54	8.02	
FINAL - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)														<i>CAA Hurdle Development (2020)</i>				

date	15-Feb-20	time	2.58	3.63	4.67	5.72	6.74							7.65	5 / 3				
reaction time	0.145	interval	7 Steps	1.05	1.04	1.05	1.02							0.91			3.14		
		velocity	5.32	8.70	8.79	8.70	8.96							10.68	7.84		8.73		
Semi-Final 2 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)																<i>CAA Hurdle Development (2020)</i>			
date	15-Feb-20	time	2.58	3.65	4.69	5.70	6.75							7.65	3 / 1				
reaction time	0.174	interval	7 Steps	1.07	1.04	1.01	1.05							0.90			3.12		
		velocity	5.32	8.54	8.79	9.05	8.70							10.80	7.84		8.79		
Heat 3 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)																<i>CAA Hurdle Development (2020)</i>			
date	14-Feb-20	time	2.60	3.69	4.74	5.75	6.81							7.71	3 / 2				
reaction time	0.183	interval	7 Steps	1.09	1.05	1.01	1.06							0.90			3.15		
		velocity	5.28	8.39	8.70	9.05	8.62							10.80	7.78		8.70		
FINAL - 2007 USATF National Junior Championships (Indianapolis, IN) (99cm)																<i>USATF Men's Hurdle Development (2007)</i>			
date	21-Jun-07	time	2.59	3.67	4.70	5.69	6.67	7.66	8.64	9.63	10.64	11.68		13.15	1 / 1				
reaction time		interval	1.08	1.03	0.99	0.98	0.99	0.98	0.99	1.01	1.04	1.47					3.10	2.95	3.04
wind	2.7 m/s	velocity	5.30	8.46	8.87	9.23	9.33	9.23	9.33	9.23	9.05	8.79	9.54	8.37			8.85	9.29	9.02
Anderson, Joseph (USA) (1999)																			
Semi-Final 1 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)																<i>CAA Hurdle Development (2020)</i>			
date	15-Feb-20	time	2.68	3.78	4.88	5.97	7.07							8.03	1 / 7				
reaction time	0.171	interval	1.10	1.10	1.09	1.10								0.96			3.29		
		velocity	5.12	8.31	8.31	8.39	8.31							10.13	7.47		8.33		
Heat 3 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)																<i>CAA Hurdle Development (2020)</i>			
date	14-Feb-20	time	2.67	3.79	4.89	5.96	7.06							7.97	2 / 5				
reaction time	0.160	interval	1.12	1.10	1.07	1.10								0.91			3.29		
		velocity	5.14	8.16	8.31	8.54	8.31							10.68	7.53		8.33		
Anderson, Nick (USA) (1995)																			
Semi-Final 2 - 2022 USATF National Championships (Eugene, OR)																<i>USATF (2022) - Results powered by Karmarush.com</i>			
date	26-Jun-22	time	2.50	3.56	4.61	5.66	6.66	7.78	8.82	9.90	10.94	12.04		13.69	3 / 7				
reaction time		interval	1.06	1.05	1.05	1.00	1.12	1.04	1.08	1.04	1.10	1.65					3.16	3.16	3.22
wind	0.1 m/s	velocity	5.49	8.62	8.70	8.70	9.14	8.16	8.79	8.46	8.79	8.31	8.50	8.04			8.68	8.68	8.52
Andersson, Andreas (SWE) (1987)																			
FINAL - 2013 Windsprint (Sundsvall, SWE)																<i>(2013) - www.ssg.se/windsprint/Splittider/</i>			
date	28-Jul-13	time	2.78	3.96	5.08	6.20	7.35	8.56	9.75	10.94	12.14	13.35		14.97	8 / 8				
reaction time		interval	1.18	1.12	1.12	1.15	1.21	1.19	1.19	1.20	1.21	1.62		PB			3.42	3.55	3.60
wind	1.7 m/s	velocity	4.94	7.75	8.16	8.16	7.95	7.55	7.68	7.68	7.62	7.55	8.65	7.35			8.02	7.72	7.62
Andrews, Antoine (BAH) (2003)																			
Semi-Final 1 - 2024 Olympic Games (Paris, FRA)																<i>Paris 2024 Olympic Games - Results Book (2024)</i>			
date	07-Aug-24	time	2.41	3.50	4.54	5.57	6.60	7.63	8.65	9.71	10.78	11.85		13.43	7 / 8				
reaction time	0.135	interval	7 steps	1.09	1.04	1.03	1.03	1.03	1.02	1.06	1.07	1.07	1.58				3.16	3.08	3.20
wind	0.1 m/s	velocity	5.69	8.39	8.79	8.87	8.87	8.87	8.96	8.62	8.54	8.54	8.87	8.19			8.68	8.90	8.57
Heat 3 - 2024 Olympic Games (Paris, FRA)																<i>Paris 2024 Olympic Games - Results Book (2024)</i>			
date	04-Aug-24	time	2.36	3.45	4.50	5.54	6.59	7.62	8.66	9.71	10.76	11.85		13.43	6 / 2				
reaction time	0.151	interval	7 steps	1.09	1.05	1.04	1.05	1.03	1.04	1.05	1.05	1.09	1.58				3.18	3.12	3.19
wind	1.1 m/s	velocity	5.81	8.39	8.70	8.79	8.70	8.87	8.79	8.70	8.70	8.39	8.87	8.19			8.62	8.79	8.60
Andrews, Nicholas (AUS) (1997)																			
FINAL - 2022 Michitaka Kinami Memorial (Osaka, JPN)																<i>Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season</i>			
date	01-May-22	time	2.60	3.66	4.72	5.76	6.81	7.86	8.93	10.04	11.17	12.27		13.72	8 / 5				
reaction time	0.119	interval	1.06	1.06	1.04	1.05	1.05	1.07	1.11	1.13	1.10	1.45					3.16	3.17	3.34
wind	0.8 m/s	velocity	5.28	8.62	8.62	8.79	8.70	8.70	8.54	8.23	8.09	8.31	9.67	8.02			8.68	8.65	8.21
B FINAL - 2022 Mikio Oda Memorial (Hiroshima, JPN)																<i>Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season</i>			
date	29-Apr-22	time	2.64	3.76	4.86	5.95	7.01	8.11	9.20	10.29	11.40	12.53		13.98	4 / 3				
reaction time	0.150	interval	1.12	1.10	1.09	1.06	1.10	1.09	1.09	1.11	1.13	1.45					3.31	3.25	3.33
wind	-0.7 m/s	velocity	5.20	8.16	8.31	8.39	8.62	8.31	8.39	8.39	8.23	8.09	9.67	7.87			8.28	8.44	8.23
Andrews, Ron (USA) (1979)																			
FINAL - 2007 Windsprint (Sundsvall, SWE)																<i>(2007) - www.ssg.se/en/Windsprint/Split-times/</i>			
date	24-Jul-07	time	3.74				6.98							13.97	1 / 3				
reaction time		interval					3.24						3.75						
wind	1.3 m/s	velocity	6.11				8.46						8.61	7.87					
Aoki, Yuto (JPN) (1984)																			
FINAL - 2009 Mikio Oda Memorial (Hiroshima, JPN)																<i>Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdles</i>			
date	29-Apr-09	time	2.65	3.74	4.81	5.84	6.92	7.98	9.07	10.16	11.28	12.37		13.80	1 / 7				

reaction time	interval	1.09	1.07	1.03	1.08	1.06	1.09	1.09	1.12	1.09	1.43		3.19	3.23	3.30		
wind	1.9 m/s	velocity	5.18	8.39	8.54	8.87	8.46	8.62	8.39	8.39	8.16	8.39	9.80	7.97	8.60	8.49	8.31

FINAL - 2008 Seiko Super Grand Prix (Kawasaki, JPN) *Akirabun (2009) - race analysis of 2008 men's and women's 100m and 110m & 100m hurdles*

date	23-Sep-08	time	2.59	3.69	4.75	5.83	6.89	8.00	9.07	10.22	11.31	12.43	14.16	/ 6			
reaction time	interval	1.10	1.06	1.08	1.06	1.11	1.07	1.15	1.09	1.12	1.73				3.24	3.24	3.36
wind	-0.7 m/s	velocity	5.30	8.31	8.62	8.46	8.62	8.23	8.54	7.95	8.39	8.16	8.10	7.77	8.46	8.46	8.16

Ariga, Takashi (JPN)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2017 Osaka University Athletics Championships (Osaka, JPN) <i>(2017) - tfdata-store.com/2017/04/07/post-249/</i>																
date	06-Apr-17	time	2.71	3.87	5.07	6.32	7.68					19.33	7 / 8			
reaction time	interval	1.16	1.20	1.25	1.36										3.61	
wind	-1.8 m/s	velocity	5.06	7.88	7.62	7.31	6.72					5.69			7.60	

Arnold, Dominique (USA) (1973)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2007 USATF National Championships (Indianapolis, IN) <i>USATF Men's Hurdle Development (2007)</i>																	
date	24-Jun-07	time	2.62	3.67	4.70	5.69	6.69	7.69	8.69	9.69	10.71	11.73	13.17	5 / 2			
reaction time	interval	1.05	1.03	0.99	1.00	1.00	1.00	1.00	1.02	1.02	1.44			3.07	3.00	3.04	
wind	0.5 m/s	velocity	5.24	8.70	8.87	9.23	9.14	9.14	9.14	9.14	8.96	8.96	9.74	8.35	8.93	9.14	9.02

Semi-Final 1 - 2007 USATF National Championships (Indianapolis, IN) *USATF Men's Hurdle Development (2007)*

date	24-Jun-07	time	2.62	3.67	4.69	5.71	6.72	7.72	8.74	9.79	10.81	11.88	13.35	3 / 2			
reaction time	interval	1.05	1.02	1.02	1.01	1.00	1.02	1.05	1.02	1.07	1.47			3.09	3.03	3.14	
wind	-0.6 m/s	velocity	5.24	8.70	8.96	8.96	9.05	9.14	8.96	8.70	8.96	8.54	9.54	8.24	8.87	9.05	8.73

Heat 2 - 2007 USATF National Championships (Indianapolis, IN) *USATF Men's Hurdle Development (2007)*

date	23-Jun-07	time	2.74	3.80	4.87	5.91	6.89	7.92	8.96	10.01	11.09	12.24	13.66	6 / 1			
reaction time	interval	1.06	1.07	1.04	0.98	1.03	1.04	1.05	1.08	1.15	1.42			3.17	3.05	3.28	
wind	-1.9 m/s	velocity	5.01	8.62	8.54	8.79	9.33	8.87	8.79	8.70	8.46	7.95	9.87	8.05	8.65	8.99	8.36

Race 2 - 2006 Athletissima Meeting (Lausanne, SUI) *Li (2013) - technical characteristics of Merritt, the 110m hurdle champion at London Olympics*

date	11-Jul-06	time	2.59	3.61	4.59	5.55	6.51	7.47	8.45	9.45	10.47	11.48	12.90	4 / 2			
reaction time	interval	1.02	0.98	0.96	0.96	0.96	0.98	1.00	1.02	1.01	1.42	AR		2.96	2.90	3.03	
wind	1.1 m/s	velocity	5.30	8.96	9.33	9.52	9.52	9.33	9.14	8.96	9.05	9.87	8.53		9.26	9.46	9.05

FINAL - 2006 USATF National Championships (Indianapolis, IN) *USATF Men's Hurdle Development (2006)*

date	25-Jun-06	time	2.55	3.59	4.57	5.56	6.56	7.57	8.56	9.59	10.61	11.68	13.10	/ 1			
reaction time	interval	1.04	0.98	0.99	1.00	1.01	0.99	1.03	1.02	1.07	1.42			3.01	3.00	3.12	
wind	-0.4 m/s	velocity	5.38	8.79	9.33	9.23	9.14	9.05	9.23	8.87	8.96	8.54	9.87	8.40	9.11	9.14	8.79

FINAL - 2005 USATF National Championships (Carson, CA) *USATF Women's Sprint Development (2005)*

date	24-Jun-05	time	2.61	3.66	4.66	5.66	6.61	7.60	8.56	9.61	10.61	11.62	13.01	5 / 2			
reaction time	interval	1.05	1.00	1.00	0.95	0.99	0.96	1.05	1.00	1.01	1.39	PB		3.05	2.90	3.06	
wind	0.2 m/s	velocity	5.26	8.70	9.14	9.14	9.62	9.23	9.52	8.70	9.14	9.05	10.09	8.46	8.99	9.46	8.96

FINAL - 2001 ISTAF (Berlin, GER) *Graubner (2009) - http://www.fgs.uni-halle.de*

date	31-Aug-09	time	2.58	3.60	4.63	5.67	6.68	7.67	8.69	9.70	10.74	11.80	13.21	3 / 3			
reaction time	0.167	interval	1.02	1.03	1.04	1.01	0.99	1.02	1.01	1.04	1.06	1.41			3.09	3.02	3.11
wind	1.0 m/s	velocity	5.32	8.96	8.87	8.79	9.05	9.23	8.96	9.05	8.79	8.62	9.94	8.33	8.87	9.08	8.82

FINAL - 2000 ISTAF (Berlin, GER) *Graubner (2009) - http://www.fgs.uni-halle.de*

date	01-Sep-00	time	2.55	3.63	4.66	5.68	6.70	7.73	8.76	9.78	10.82	11.88	13.31	/ 2			
reaction time	0.157	interval	1.08	1.03	1.02	1.02	1.03	1.03	1.02	1.04	1.06	1.43			3.13	3.08	3.12
wind	-0.4 m/s	velocity	5.38	8.46	8.87	8.96	8.96	8.87	8.87	8.96	8.79	8.62	9.80	8.26	8.76	8.90	8.79

Asai, Seira (JPN) (2006)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2024 Japanese National High School Championships (Fukuoka, JPN) <i>Takashima (2024) - national high school sports festival - biomechanics data</i>																	
date	01-Aug-24	time	2.69	3.79	4.87	5.97	7.04	8.13	9.22	10.32	11.45	12.58	14.05	6 / 3			
reaction time	0.159	interval	1.10	1.08	1.10	1.07	1.09	1.09	1.10	1.13	1.13	1.47	PB		3.28	3.25	3.36
wind	-0.7 m/s	velocity	5.10	8.31	8.46	8.31	8.54	8.39	8.39	8.31	8.09	8.09	9.54	7.83	8.36	8.44	8.16

FINAL - 2022 Japanese National High School Championships (Naruto, JPN) *Kishima (2022) - national high school championships biomechanics data collection*

date	07-Aug-22	time	2.74	3.88	5.03	6.19	7.35	8.50	9.70	10.92	12.17	13.40	14.97	3 / 7			
reaction time	0.145	interval	1.14	1.15	1.16	1.16	1.15	1.20	1.22	1.25	1.23	1.57			3.45	3.51	3.70
wind	-3.8 m/s	velocity	5.01	8.02	7.95	7.88	7.88	7.95	7.62	7.49	7.31	7.43	8.93	7.35	7.95	7.81	7.41

FINAL - 2021 Japanese U16 National Championships (Matsuyama, JPN) (99cm) *Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season*

date	24-Oct-21	time	2.83	3.96	5.10	6.27	7.44	8.60	9.75	10.87	12.02	13.18	14.77	/ 3			
reaction time	interval	1.13	1.14	1.17	1.17	1.16	1.15	1.12	1.15	1.16	1.59			3.44	3.48	3.43	
wind	1.0 m/s	velocity	4.85	8.09	8.02	7.81	7.81	7.88	7.95	8.16	7.95	7.88	8.82	7.45	7.97	7.88	7.99

Ash, Ronnie (USA) (1988)

FINAL - 2016 Olympic Games (Rio de Janeiro, BRA) (TV Analysis) *Henson (2020) - Athlete First: 2016 year end hurdle report*

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2016 Olympic Games (Rio de Janeiro, BRA) (TV Analysis) <i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>																

date	16-Aug-16	time	2.52	3.58	4.60	5.60	6.60	7.60	8.62	9.64	10.70	11.72							
reaction time	0.160	interval	7 steps	1.06	1.02	1.00	1.00	1.00	1.02	1.02	1.06	1.02		DQ					
wind	0.2 m/s	velocity	5.44	8.62	8.96	9.14	9.14	9.14	8.96	8.96	8.62	8.96							

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FINAL - 2016 USA Olympic Trials (Eugene, OR) (TV Analysis)*Henson (2020) - Athlete First: 2016 year end hurdle report*

date	09-Jul-16	time	2.53	3.57	4.57	5.60	6.57	7.60	8.60	9.62	10.65	11.71							
reaction time	0.203	interval	7 steps	1.04	1.00	1.03	0.97	1.03	1.00	1.02	1.03	1.06	1.50						
wind	1.0 m/s	velocity	5.42	8.79	9.14	8.87	9.42	8.87	9.14	8.96	8.87	8.62	9.35	8.33					

Askros, Rafael (SWE) (1981)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2011 Landskamp FIN-SWE-NOR (Tampere, FIN)																
date	05-Feb-11	time	2.68	3.86	4.94	6.04	7.12					8.15	2 / 6			
reaction time		interval	1.18	1.08	1.10	1.08					1.03			3.36		
wind		velocity	5.12	7.75	8.46	8.31	8.46				9.44	7.36		8.16		

FINAL - 2010 Swedish National Championships (Falun, SWE)*Blomkvist (2010) - www.sub13.se*

date	22-Aug-10	time	2.79	3.91	5.02	6.14	7.25	8.36	9.50	10.64	11.80	12.97							
reaction time		interval	1.12	1.11	1.12	1.11	1.11	1.14	1.14	1.16	1.17	1.48							
wind	-0.7 m/s	velocity	4.92	8.16	8.23	8.16	8.23	8.23	8.02	8.02	7.88	7.81	9.47	7.61					

FINAL - 2010 Windsprint (Sundsvall, SWE)*Blomkvist (2010) - www.sub13.se*

date	08-Aug-10	time	2.79	3.91	5.01	6.11	7.20	8.33	9.44	10.58	11.74	12.90							
reaction time		interval	1.12	1.10	1.10	1.09	1.13	1.11	1.14	1.16	1.16	1.53							
wind	1.1 m/s	velocity	4.92	8.16	8.31	8.31	8.39	8.09	8.23	8.02	7.88	7.88	9.16	7.62					

FINAL - 2010 Folksam GP (Sollentuna, SWE)*Blomkvist (2010) - www.sub13.se*

date	01-Jul-10	time	2.60	3.73	4.83	5.93	7.03	8.15	9.27	10.40	11.56	12.76							
reaction time		interval	1.13	1.10	1.10	1.10	1.12	1.12	1.13	1.16	1.20	1.72							
wind	0.4 m/s	velocity	5.28	8.09	8.31	8.31	8.31	8.16	8.16	8.09	7.88	7.62	8.15	7.60					

B FINAL - 2010 Folksam GP (Sollentuna, SWE)*Blomkvist (2010) - www.sub13.se*

date	01-Jul-10	time	2.56	3.67	4.77	5.88	6.99	8.10	9.23	10.38	11.56	12.74							
reaction time		interval	1.11	1.10	1.11	1.11	1.11	1.13	1.15	1.18	1.18	1.81							
wind	0.4 m/s	velocity	5.36	8.23	8.31	8.23	8.23	8.23	8.09	7.95	7.75	7.75	7.75	7.56					

FINAL - 2007 Windsprint (Sundsvall, SWE)*(2007) - www.ssg.se/en/Windsprint/Split-times/*

date	24-Jul-07	time		3.76			7.19			10.59									
reaction time		interval					3.43			3.40					3.87				
wind	1.3 m/s	velocity		6.08			7.99			8.06					8.35				

Aubert, Philippe (FRA) (1957)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 1986 French National Indoor Championships (Lievin, FRA)																
date	26-Jan-86	time	2.61	3.69	4.78	5.83	6.91					7.82	1 / 2			
reaction time		interval	1.08	1.09	1.05	1.08					0.91			3.22		
wind		velocity	5.26	8.46	8.39	8.70	8.46				10.68	7.67		8.52		

Semi-Final ? - 1986 French National Indoor Championships (Lievin, FRA)*Aubert (1986) - indoor - video - haies, etude des performances*

date	26-Jan-86	time	2.66	3.75	4.79	5.86	6.95					7.86	1 / 2			
reaction time		interval	1.09	1.04	1.07	1.09					0.91			3.20		
wind		velocity	5.16	8.39	8.79	8.54	8.39				10.68	7.63		8.57		

Baba, Kazuki (JPN) (1992)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Heat 4 - 2017 Japanese National Championships (Osaka, JPN)																
date	24-Jun-17	time	2.67	3.77	4.83	5.88	6.97	8.06	9.15	10.27	11.39	12.53				
reaction time	0.136	interval	1.10	1.06	1.05	1.09	1.09	1.09	1.12	1.12	1.14	1.40				
wind	0.0 m/s	velocity	5.14	8.31	8.62	8.70	8.39	8.39	8.39	8.16	8.16	8.02	10.01	7.90		

Babiš, Ivo (CZE) (1997)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Heat 1 - 2014 Czech Republic National U18 Championships (Trinec, CZE) (91cm)																
date	28-Jun-14	time	2.99	4.16	5.33	6.49	7.72	8.95	10.15	11.38	12.60	13.96				
reaction time	0.258	interval	1.17	1.17	1.16	1.23	1.23	1.20	1.23	1.22	1.36	1.78				
wind	-0.3 m/s	velocity	4.59	7.81	7.81	7.88	7.43	7.43	7.62	7.43	7.49	6.72	7.88	6.99		

Bacari, Elie (BEL) (2003)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Repechage 3 - 2024 Olympic Games (Paris, FRA)																
date	06-Aug-24	time	2.39	3.47	4.53	5.58	6.64	7.70	8.79	9.90	11.02	12.18				
reaction time	0.147	interval	7 steps	1.08	1.06	1.05	1.06	1.06	1.09	1.11	1.12	1.16	1.95			
wind	-1.1 m/s	velocity	5.74	8.46	8.62	8.70	8.62	8.62	8.39	8.23	8.16	7.88	7.19	7.78		

Heat 4 - 2024 Olympic Games (Paris, FRA)*Paris 2024 Olympic Games - Results Book (2024)*

date	04-Aug-24	time	2.39	3.47	4.51	5.53	6.57	7.61	8.67	9.74	10.81	11.91							
reaction time	0.135	interval	7 steps	1.08	1.04	1.02	1.04	1.04	1.06	1.07	1.07	1.10	1.75						
wind	0.3 m/s	velocity	5.74	8.46	8.79	8.96	8.79	8.79	8.62	8.54	8.54	8.31	8.01	8.05					

FINAL - 2024 European Athletics Championships (Roma, ITA) (TV Analysis)*Henson (2024) - Athlete First: 2024 year end hurdle report*

date	08-Jun-24	time	2.53	3.58	4.60	5.63	6.65	7.68	8.75	9.83	10.87	12.00	13.88	2 / 8	<i>no official time given</i>			
reaction time	0.115	interval	7 steps	1.05	1.02	1.03	1.02	1.03	1.07	1.08	1.04	1.13	1.88	DQ	3.10	3.12	3.25	
wind	0.6 m/s	velocity	5.42	8.70	8.96	8.87	8.96	8.87	8.54	8.46	8.79	8.09	7.46	7.93	8.85	8.79	8.44	

FINAL - 2024 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)*Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record*

date	10-Feb-24	time	2.44	3.52	4.58	5.60	6.60						7.73	7 / 8			
reaction time	0.149	interval	7 steps	1.08	1.06	1.02	1.00						7.73		3.16		
		velocity	5.62	8.46	8.62	8.96	9.14						1.81	7.76	8.68		

Heat 2 - 2024 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)*Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record*

date	10-Feb-24	time	2.46	3.50	4.56	5.58	6.60						7.61	7 / 3			
reaction time	0.138	interval	7 steps	1.04	1.06	1.02	1.02						7.61	PB	3.12		
		velocity	5.58	8.79	8.62	8.96	8.96						1.84	7.88	8.79		

Baillie, Chris (GBR) (1981)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Heat 2 - 2010 Samsung Galan (Göteborg, SWE)***Blomkvist (2010) - www.sub13.se*

date	02-Feb-10	time	2.52	3.60	4.66	5.72	6.78						7.80	1 / 3			
reaction time		interval		1.08	1.06	1.06	1.06						1.02		3.20		
		velocity	5.44	8.46	8.62	8.62	8.62						9.53	7.69	8.57		

Baji, Balázs (HUN) (1989)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2020 István Gyulai Memorial (Székesfehérvár, HUN) (TV Analysis)***Henson (2020) - Athlete First: 2020 year end hurdle report*

date	19-Aug-20	time	2.54	3.67	4.74	5.80	6.84	7.91	8.95	10.04	11.14	12.28	13.86	2 / 8			
reaction time	0.137	interval	7 steps	1.13	1.07	1.06	1.04	1.07	1.04	1.09	1.10	1.14	1.58		3.26	3.15	3.33
wind	0.3 m/s	velocity	5.40	8.09	8.54	8.62	8.79	8.54	8.79	8.39	8.31	8.02	8.87	7.94	8.41	8.70	8.23

FINAL - 2018 AG Memorial van Damme (Brussels, BEL) (TV Analysis)*Henson (2020) - Athlete First: 2018 year end hurdle report*

date	31-Aug-18	time	2.56	3.62	4.64	5.68	6.70	7.72	8.82	9.88	10.96	12.08	13.63	1 / 8			
reaction time	0.140	interval	7 steps	1.06	1.02	1.04	1.02	1.02	1.10	1.06	1.08	1.12	1.55		3.12	3.14	3.26
wind	-0.1 m/s	velocity	5.36	8.62	8.96	8.79	8.96	8.96	8.31	8.62	8.46	8.16	9.05	8.07	8.79	8.73	8.41

FINAL - 2018 Müller Anniversary Games (London, GBR) (TV Analysis)*Henson (2020) - Athlete First: 2018 year end hurdle report*

date	22-Jul-18	time	2.54	3.60	4.64	5.66	6.68	7.70	8.74	9.78	10.86	11.94	13.42	8 / 7			
reaction time	0.146	interval	7 steps	1.06	1.04	1.02	1.02	1.02	1.04	1.04	1.08	1.08	1.48		3.12	3.08	3.20
wind	0.2 m/s	velocity	5.40	8.62	8.79	8.96	8.96	8.96	8.79	8.79	8.46	8.46	9.47	8.20	8.79	8.90	8.57

FINAL - 2018 Herculis Meeting International d'Athletisme (Monaco, MON) (TV Analysis)*Henson (2020) - Athlete First: 2018 year end hurdle report*

date	20-Jul-18	time	2.48	3.52	4.56	5.58	6.60	7.62	8.66	9.70	10.74	11.82	13.38	7 / 6			
reaction time	0.139	interval	7 steps	1.04	1.04	1.02	1.02	1.02	1.04	1.04	1.04	1.08	1.56		3.10	3.08	3.16
wind	-0.2 m/s	velocity	5.53	8.79	8.79	8.96	8.96	8.96	8.79	8.79	8.79	8.46	8.99	8.22	8.85	8.90	8.68

FINAL - 2018 Athletissima (Lausanne, SUI) (TV Analysis)*Henson (2020) - Athlete First: 2018 year end hurdle report*

date	05-Jul-18	time	2.59	3.63	4.67	5.69	6.71	7.71	8.74	9.76	10.86	11.93	13.36	7 / 4			
reaction time	0.135	interval	7 steps	1.04	1.04	1.02	1.02	1.00	1.03	1.02	1.10	1.07	1.43		3.10	3.05	3.19
wind	0.6 m/s	velocity	5.30	8.79	8.79	8.96	8.96	9.14	8.87	8.96	8.31	8.54	9.80	8.23	8.85	8.99	8.60

FINAL - 2018 István Gyulai Memorial (Székesfehérvár, HUN) (TV Analysis)*Henson (2020) - Athlete First: 2018 year end hurdle report*

date	02-Jul-18	time	2.48	3.54	4.56	5.58	6.58	7.62	8.64	9.68	10.72	11.76	13.27	2 / 2			
reaction time	0.143	interval	7 steps	1.06	1.02	1.02	1.00	1.04	1.02	1.04	1.04	1.04	1.51		3.10	3.06	3.12
wind	0.6 m/s	velocity	5.53	8.62	8.96	8.96	9.14	8.79	8.96	8.79	8.79	8.79	9.28	8.29	8.85	8.96	8.79

FINAL - 2017 Müller Grand Prix (Birmingham, GBR) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date	20-Aug-17	time	2.48	3.56	4.60	5.64	6.64	7.66	8.70	9.74	10.82	11.90	13.47	8 / 4			
reaction time	0.132	interval	7 steps	1.08	1.04	1.04	1.00	1.02	1.04	1.04	1.08	1.08	1.57		3.16	3.06	3.20
wind	-0.6 m/s	velocity	5.53	8.46	8.79	8.79	9.14	8.96	8.79	8.79	8.46	8.46	8.93	8.17	8.68	8.96	8.57

FINAL - 2017 IAAF World Championships (London, GBR)*Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles*

date	07-Aug-17	time	2.39	3.47	4.49	5.52	6.54	7.56	8.58	9.61	10.66	11.71	13.28	5 / 3			
reaction time	0.122	interval	7 steps	1.08	1.02	1.03	1.02	1.02	1.02	1.03	1.05	1.05	1.57		3.13	3.06	3.13
wind	0.0 m/s	velocity	5.74	8.46	8.96	8.87	8.96	8.96	8.96	8.87	8.70	8.70	8.93	8.28	8.76	8.96	8.76

Semi-Final 3 - 2017 IAAF World Championships (London, GBR)*Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles*

date	06-Aug-17	time	2.34	3.40	4.44	5.46	6.48	7.50	8.51	9.54	10.57	11.63	13.23	5 / 1			
reaction time	0.120	interval	7 steps	1.06	1.04	1.02	1.02	1.02	1.01	1.03	1.03	1.06	1.60		3.12	3.05	3.12
wind	0.3 m/s	velocity	5.86	8.62	8.79	8.96	8.96	8.96	9.05	8.87	8.87	8.62	8.76	8.31	8.79	8.99	8.79

FINAL - 2017 István Gyulai Memorial (Székesfehérvár, HUN) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date	04-Jul-17	time	2.50	3.56	4.56	5.56	6.56	7.56	8.58	9.58	10.62	11.66	13.15	2 / 4			
reaction time	0.139	interval	7 steps	1.06	1.00	1.00	1.00	1.00	1.02	1.00	1.04	1.04	1.49	NR PB	3.06	3.02	3.08
wind	0.3 m/s	velocity	5.49	8.62	9.14	9.14	9.14	9.14	8.96	9.14	8.79	8.79	9.41	8.37	8.96	9.08	8.90

FINAL - 2017 Golden Spike (Ostrava, CZE) (TV Analysis)														<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>				
date	28-Jun-17	time	2.52	3.56	4.58	5.60	6.60	7.60	8.62	9.64	10.68	11.74	13.23	6 / 2				
reaction time	0.152	interval	7 steps	1.04	1.02	1.02	1.00	1.00	1.02	1.02	1.04	1.06	1.49	NR PB	3.08	3.02	3.12	
wind	0.6 m/s	velocity	5.44	8.79	8.96	8.96	9.14	9.14	8.96	8.96	8.79	8.62	9.41	8.31	8.90	9.08	8.79	

FINAL - 2016 Memorial van Damme (Brussels, BEL) (TV Analysis)														<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>				
date	09-Sep-16	time	2.53	3.60	4.64	5.67	6.70	7.70	8.74	9.81	10.88	11.99	13.50	2 / 7				
reaction time	0.183	interval	7 steps	1.07	1.04	1.03	1.03	1.00	1.04	1.07	1.07	1.11	1.51		3.14	3.07	3.25	
wind	0.2 m/s	velocity	5.42	8.54	8.79	8.87	8.87	9.14	8.79	8.54	8.54	8.23	9.28	8.15	8.73	8.93	8.44	

FINAL - 2016 Athletissima (Lausanne, SUI) (TV Analysis)														<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>				
date	25-Aug-16	time	2.52	3.56	4.60	5.60	6.60	7.62	8.64	9.66	10.72	11.78	13.34	1 / 5				
reaction time	0.141	interval	7 steps	1.04	1.04	1.00	1.00	1.02	1.02	1.02	1.06	1.06	1.56		3.08	3.04	3.14	
wind	0.5 m/s	velocity	5.44	8.79	8.79	9.14	9.14	8.96	8.96	8.96	8.62	8.62	8.99	8.25	8.90	9.02	8.73	

FINAL - 2016 Herculis Meeting International d'Athlétisme (Monaco, MON) (TV Analysis)														<i>Henson (2021) - Athlete First: 2016 year end hurdle report</i>				
date	15-Jul-16	time	2.48	3.54	4.56	5.58	6.60	7.60	8.64	9.68	10.72	11.86	13.45	8 / 5				
reaction time	0.131	interval	7 steps	1.06	1.02	1.02	1.02	1.00	1.04	1.04	1.04	1.14	1.59		3.10	3.06	3.22	
wind	0.0 m/s	velocity	5.53	8.62	8.96	8.96	8.96	9.14	8.79	8.79	8.79	8.02	8.82	8.18	8.85	8.96	8.52	

FINAL - 2013 European Indoor Championships (Göteborg, SWE)														<i>Blomkvist (2013) - www.elitlandslag.se/SprintHäck/KortHäck.aspx</i>				
date	01-Mar-13	time	2.55	3.61	4.65	5.66	6.67							7.56	8 / 4			
reaction time	0.159	interval	7 steps	1.06	1.04	1.01	1.01						0.89	=NR	3.11			
wind		velocity	5.38	8.62	8.79	9.05	9.05						10.92	7.94	8.82			

FINAL - 2011 Folksam GP (Göteborg, SWE)														<i>Blomkvist (2011) - www.sub13.se</i>				
date	11-Jun-11	time	2.53	3.64	4.72	5.78	6.84	7.88	8.96	10.04	11.12	12.20	13.80	/ 5				
reaction time		interval		1.11	1.08	1.06	1.06	1.04	1.08	1.08	1.08	1.08	1.60		3.25	3.18	3.24	
wind	0.6 m/s	velocity	5.42	8.23	8.46	8.62	8.62	8.79	8.46	8.46	8.46	8.46	8.76	7.97	8.44	8.62	8.46	

Baldwin, Heath (USA) (2001)																		
Decathlon - Heat 3 - 2024 Olympic Games (Paris, FRA)														<i>Paris 2024 Olympic Games - Results Book (2024)</i>				
date	03-Aug-24	time	2.57	3.66	4.74	5.81	6.88	7.97	9.06	10.15	11.27	12.38	14.04	7 / 6				
reaction time	0.145	interval	7 steps	1.09	1.08	1.07	1.07	1.09	1.09	1.09	1.12	1.11	1.66		3.24	3.25	3.32	
wind	0.7 m/s	velocity	5.34	8.39	8.46	8.54	8.54	8.39	8.39	8.39	8.16	8.23	8.45	7.83	8.46	8.44	8.26	

Balnuweit, Erik (GER) (1988)																		
FINAL - 2019 PSD Bank Meeting (Düsseldorf, GER) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>				
date	20-Feb-19	time	2.42	3.46	4.52	5.52	6.56							7.67	1 / 6			
reaction time	0.148	interval		1.04	1.06	1.00	1.04						1.11		3.10			
wind		velocity	5.67	8.79	8.62	9.14	8.79						8.76	7.82	8.85			

FINAL - 2013 European Indoor Championships (Göteborg, SWE)														<i>Blomkvist (2013) - www.elitlandslag.se/SprintHäck/KortHäck.aspx</i>				
date	01-Mar-13	time	2.55	3.60	4.62	5.65	6.68							7.58	5 / 5			
reaction time	0.146	interval	7 steps	1.05	1.02	1.03	1.03						0.90	PB	3.10			
wind		velocity	5.38	8.70	8.96	8.87	8.87						10.80	7.92	8.85			

Balzer, Falk (GER) (1973)																		
FINAL - 2000 ISTAF (Berlin, GER)														<i>Graubner (2009) - http://www.fgs.uni-halle.de</i>				
date	01-Sep-00	time	2.60	3.67	4.70	5.72	6.72	7.73	8.78	9.80	10.88	12.00	13.47	/ 4				
reaction time	0.158	interval		1.07	1.03	1.02	1.00	1.01	1.05	1.02	1.08	1.12	1.47		3.12	3.06	3.22	
wind	-0.4 m/s	velocity	5.28	8.54	8.87	8.96	9.14	9.05	8.70	8.96	8.46	8.16	9.54	8.17	8.79	8.96	8.52	

FINAL - 1999 IAAF World Championships (Sevilla, ESP)														<i>Sanchez (1999) - Sevilla '99: análisis de la carreras con villas</i>				
date	25-Aug-99	time	2.60	3.64	4.65	5.67	6.69	7.71	8.71	9.72	10.76	11.84	13.26	2 / 5				
reaction time	0.153	interval		1.04	1.01	1.02	1.02	1.02	1.00	1.01	1.04	1.08	1.42		3.07	3.04	3.13	
wind	1.0 m/s	velocity	5.28	8.79	9.05	8.96	8.96	8.96	9.14	9.05	8.79	8.46	9.87	8.30	8.93	9.02	8.76	

Semi-Final 1 - 1999 IAAF World Championships (Sevilla, ESP)														<i>Sanchez (1999) - Sevilla '99: análisis de la carreras con villas</i>				
date	24-Aug-99	time	2.58	3.61	4.62	5.63	6.65	7.66	8.70	9.74	10.80	11.88	13.32	6 / 4				
reaction time	0.136	interval		1.03	1.01	1.01	1.02	1.01	1.04	1.04	1.06	1.08	1.44		3.05	3.07	3.18	
wind	0.0 m/s	velocity	5.32	8.87	9.05	9.05	8.96	9.05	8.79	8.79	8.62	8.46	9.74	8.26	8.99	8.93	8.62	

FINAL - 1998 European Championships (Budapest, HUN)														<i>Sanchez (1998) - Budapest '98: análisis de la carreras con villas</i>				
date	22-Aug-98	time	2.60	3.62	4.63	5.64	6.67	7.67	8.68	9.68	10.71	11.77	13.12	6 / 2				
reaction time		interval		1.02	1.01	1.01	1.03	1.00	1.01	1.00	1.03	1.06	1.35	PB	3.04	3.04	3.09	
wind	1.5 m/s	velocity	5.28	8.96	9.05	9.05	8.87	9.14	9.05	9.14	8.87	8.62	10.39	8.38	9.02	9.02	8.87	

Barras, Romain (FRA) (1980)																		
Decathlon - Heat 3 - 2009 IAAF World Championships (Berlin, GER)														<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>				
date	20-Aug-09	time	2.72	3.85	4.96	6.07	7.15	8.27	9.37	10.49	11.61	12.75	14.27	8 / 3				
reaction time	0.135	interval		1.13	1.11	1.11	1.08	1.12	1.10	1.12	1.12	1.14	1.52		3.35	3.30	3.38	
wind	-0.1 m/s	velocity	5.04	8.09	8.23	8.23	8.46	8.16	8.31	8.16	8.16	8.02	9.22	7.71	8.19	8.31	8.11	

Bárta, Dan (CZE) (1998)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2015 Czech Republic National U18 Indoor Championships (Praha, CZE) (91cm)													<i>Feher (2015) - Final report U18 & U20 Czech Republic indoor national champs</i>				
date	14-Feb-15	time	2.70	3.86	5.00	6.09	7.23						8.20	6 / 5			
reaction time	0.158	interval		1.16	1.14	1.09	1.14						0.97		3.39		
		velocity	5.08	7.88	8.02	8.39	8.02						10.02	7.32	8.09		
FINAL - 2014 Czech Republic National U18 Championships (Trinec, CZE) (91cm)													<i>Feher (2014) - Final report from the U18 & U20 Czech Republic national championships</i>				
date	28-Jun-14	time	2.80	3.97	5.13	6.28	7.44	8.59	9.83				dnf	3 / --			
reaction time	0.169	interval		1.17	1.16	1.15	1.16	1.15	1.24						3.48	3.55	
wind	-3.7 m/s	velocity	4.90	7.81	7.88	7.95	7.88	7.95	7.37						7.88	7.72	
Heat 3 - 2014 Czech Republic National U18 Championships (Trinec, CZE) (91cm)													<i>Feher (2014) - Final report from the U18 & U20 Czech Republic national championships</i>				
date	28-Jun-14	time	2.79	3.94	5.08	6.22	7.33	8.50	9.67	10.86	12.08	13.28	14.90	4 / 1			
reaction time	0.166	interval		1.15	1.14	1.14	1.11	1.17	1.17	1.19	1.22	1.20	1.62		3.43	3.45	3.61
wind	-1.6 m/s	velocity	4.92	7.95	8.02	8.02	8.23	7.81	7.81	7.68	7.49	7.62	8.65	7.38	7.99	7.95	7.60
Bascou, Dimitri (FRA) (1987)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Heat 2 - 2023 French National Championships (Albi, FRA) (TV Analysis)													<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>				
date	29-Jul-23	time	2.54	3.58	4.58	5.56	6.54	7.54	8.54	9.58	10.66	11.70	13.14	3 / 2			
reaction time	0.162	interval	7 steps	1.04	1.00	0.98	0.98	1.00	1.00	1.04	1.08	1.04	1.44		3.02	2.98	3.16
wind	5.3 m/s	velocity	5.40	8.79	9.14	9.33	9.33	9.14	9.14	8.79	8.46	8.79	9.74	8.37	9.08	9.20	8.68
Heat 1 - 2023 Meeting de Paris (Paris, FRA)													<i>Omega Timing (2023) - diamond league race analysis</i>				
date	09-Jun-23	time	2.43	3.49	4.54	5.58	6.61	7.65	8.69	9.74	10.85	11.98	13.66	8 / 7			
reaction time	0.162	interval	7 steps	1.06	1.05	1.04	1.03	1.04	1.04	1.05	1.11	1.13	1.68		3.15	3.11	3.29
wind	-2.0 m/s	velocity	5.65	8.62	8.70	8.79	8.87	8.79	8.79	8.70	8.23	8.09	8.35	8.05	8.70	8.82	8.33
Semi-Final 1 - 2019 IAAF World Championships (Doha, QAT)													<i>CAA Hurdle Development (2019)</i>				
date	02-Oct-19	time	2.58	3.62	4.66	5.68	6.70	7.74	8.80	9.88	10.94	12.04	13.48	2 / 3			
reaction time	0.152	interval	7 steps	1.04	1.04	1.02	1.02	1.04	1.06	1.08	1.06	1.10	1.44		3.10	3.12	3.24
wind	1.1 m/s	velocity	5.32	8.79	8.79	8.96	8.96	8.79	8.62	8.46	8.62	8.31	9.74	8.16	8.85	8.79	8.46
FINAL - 2017 Prefontaine Classic (Eugene, OR) (TV Analysis)													<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>				
date	27-May-17	time	2.48	3.50	4.54	5.56	6.60	7.66	8.74	9.82	10.90	12.00	13.55	3 / 8			
reaction time	0.158	interval	7 steps	1.02	1.04	1.02	1.04	1.06	1.08	1.08	1.08	1.10	1.55		3.08	3.18	3.26
wind	0.9 m/s	velocity	5.53	8.96	8.79	8.96	8.79	8.62	8.46	8.46	8.46	8.31	9.05	8.12	8.90	8.62	8.41
FINAL - 2016 Memorial van Damme (Brussels, BEL) (TV Analysis)													<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>				
date	09-Sep-16	time	2.50	3.57	4.57	5.57	6.57	7.60	8.64	9.67	10.75	11.86	13.37	4 / 4			
reaction time	0.160	interval	7 steps	1.07	1.00	1.00	1.00	1.03	1.04	1.03	1.08	1.11	1.51		3.07	3.07	3.22
wind	0.2 m/s	velocity	5.49	8.54	9.14	9.14	9.14	8.87	8.79	8.87	8.46	8.23	9.28	8.23	8.93	8.93	8.52
FINAL - 2016 Athletissima (Lausanne, SUI) (TV Analysis)													<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>				
date	25-Aug-16	time	2.48	3.52	4.54	5.56	6.56	7.56	8.58	9.62	10.68	11.76	13.25	6 / 3			
reaction time	0.139	interval	7 steps	1.04	1.02	1.02	1.00	1.00	1.02	1.04	1.06	1.08	1.49		3.08	3.02	3.18
wind	0.5 m/s	velocity	5.53	8.79	8.96	8.96	9.14	9.14	8.96	8.79	8.62	8.46	9.41	8.30	8.90	9.08	8.62
FINAL - 2016 Olympic Games (Rio de Janeiro, BRA) (TV Analysis)													<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>				
date	16-Aug-16	time	2.50	3.52	4.54	5.56	6.56	7.62	8.66	9.72	10.76	11.80	13.24	6 / 3			
reaction time	0.131	interval	7 steps	1.02	1.02	1.02	1.00	1.06	1.04	1.06	1.04	1.04	1.44		3.06	3.10	3.14
wind	0.2 m/s	velocity	5.49	8.96	8.96	8.96	9.14	8.62	8.79	8.62	8.79	8.79	9.74	8.31	8.96	8.85	8.73
FINAL - 2016 London Anniversary Games (London, GBR) (TV Analysis)													<i>Henson (2021) - Athlete First: 2016 year end hurdle report</i>				
date	23-Jul-16	time	2.50	3.53	4.56	5.56	6.58	7.60	8.62	9.64	10.68	11.74	13.20	5 / 1			
reaction time	0.103	interval	7 steps	1.03	1.03	1.00	1.02	1.02	1.02	1.02	1.04	1.06	1.46		3.06	3.06	3.12
wind	-1.0 m/s	velocity	5.49	8.87	8.87	9.14	8.96	8.96	8.96	8.96	8.79	8.62	9.60	8.33	8.96	8.96	8.79
FINAL - 2016 Herculis Meeting International d'Atlétisme (Monaco, MON) (TV Analysis)													<i>Henson (2021) - Athlete First: 2016 year end hurdle report</i>				
date	15-Jul-16	time	2.44	3.48	4.48	5.46	6.44	7.46	8.48	9.52	10.56	11.64	13.12	6 / 2			
reaction time	0.136	interval	7 steps	1.04	1.00	0.98	0.98	1.02	1.02	1.04	1.04	1.08	1.48	PB	3.02	3.02	3.16
wind	0.0 m/s	velocity	5.62	8.79	9.14	9.33	9.33	8.96	8.96	8.79	8.79	8.46	9.47	8.38	9.08	9.08	8.68
FINAL - 2016 European Championships (Amsterdam, NED)													<i>(2016.07.09) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>				
date	09-Jul-16	time	2.53	3.56	4.58	5.59	6.60	7.62	8.65	9.71	10.78	11.86	13.25	7 / 1			
reaction time	0.141	interval	7 steps	1.03	1.02	1.01	1.01	1.02	1.03	1.06	1.07	1.08	1.39		3.06	3.06	3.21
wind	0.0 m/s	velocity	5.42	8.87	8.96	9.05	9.05	8.96	8.87	8.62	8.54	8.46	10.09	8.30	8.96	8.96	8.54
FINAL - 2016 Golden Gala Pietro Mennea (Roma, ITA) (TV Analysis)													<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>				
date	02-Jun-16	time	2.48	3.58	4.66	5.70	6.72	7.74	8.80				dnf	4 / --			
reaction time	0.149	interval	7 steps	1.10	1.08	1.04	1.02	1.02	1.06						3.22	3.10	
wind	0.6 m/s	velocity	5.53	8.31	8.46	8.79	8.96	8.96	8.62						8.52	8.85	

FINAL - 2016 Shanghai Golden Grand Prix (Shanghai, CHN)*Henson (2021) - Athlete First: 2016 year end hurdle report*

date	14-May-16	time	2.48	3.52	4.56	5.58	6.62	7.64	8.68	9.72	10.76	11.86	13.34	2 / 4				
reaction time	0.141	interval	7 steps	1.04	1.04	1.02	1.04	1.02	1.04	1.04	1.04	1.10	1.48		3.10	3.10	3.18	
wind	1.2 m/s	velocity	5.53	8.79	8.79	8.96	8.79	8.96	8.79	8.79	8.79	8.31	9.47	8.25	8.85	8.85	8.62	

FINAL - 2016 Doha Diamond League (Doha, QAT) (TV Analysis)*Henson (2020) - Athlete First: 2016 year end hurdle report*

date	06-May-16	time	2.56	3.60	4.64	5.64	6.64	7.68	8.72	9.76	10.82	11.90	13.33	2 / 5				
reaction time	0.153	interval	7 steps	1.04	1.04	1.00	1.00	1.04	1.04	1.04	1.06	1.08	1.43		3.08	3.08	3.18	
wind	1.4 m/s	velocity	5.36	8.79	8.79	9.14	9.14	8.79	8.79	8.79	8.62	8.46	9.80	8.25	8.90	8.90	8.62	

FINAL - 2015 IAAF World Championships (Beijing, CHN) (TV Analysis)*Henson (2021) - Athlete First: major championships report*

date	28-Aug-15	time	2.48	3.50	4.52	5.56	6.56	7.58	8.60	9.64	10.68	11.72	13.17	5 / 5				
reaction time	0.137	interval	7 steps	1.02	1.02	1.04	1.00	1.02	1.02	1.04	1.04	1.04	1.45		3.08	3.04	3.12	
wind	0.2 m/s	velocity	5.53	8.96	8.96	8.79	9.14	8.96	8.96	8.79	8.79	8.79	9.67	8.35	8.90	9.02	8.79	

Heat 2 - 2014 European Championships (Zurich, SUI)*Incalza (2014) - https://www.youtube.com/watch?v=nliXgBWbl_k&list=UU7691fxeyNFIMROfkJ-WWUg*

date	13-Aug-14	time	2.58	3.61	4.64	5.68	6.70	7.73	8.77	9.81	10.86	11.92	13.35	8 / 1				
reaction time	0.148	interval		1.03	1.03	1.04	1.02	1.03	1.04	1.04	1.05	1.06	1.43		3.10	3.09	3.15	
wind	0.4 m/s	velocity	5.32	8.87	8.87	8.79	8.96	8.87	8.79	8.79	8.70	8.62	9.80	8.24	8.85	8.87	8.70	

FINAL - 2012 Herculis Meeting International D'Atlétisme (Monaco, MON) (TV Analysis)*Henson (2020) - Athlete First: 2012 Aries Merritt world record season*

date	20-Jul-12	time	2.50	3.55	4.60	5.64	6.67	7.71	8.77	9.84	10.91	12.01	13.54	1 / 8				
reaction time	0.159	interval	7 steps	1.05	1.05	1.04	1.03	1.04	1.06	1.07	1.07	1.10	1.53		3.14	3.13	3.24	
wind	0.0 m/s	velocity	5.49	8.70	8.70	8.79	8.87	8.79	8.62	8.54	8.54	8.31	9.16	8.12	8.73	8.76	8.46	

Heat 5 - 2009 IAAF World Championships (Berlin, GER)*Graubner (2009) - biomechanical analyses at the 12th IAAF world championships*

date	19-Aug-09	time	2.65	3.72	4.75	5.77	6.80	7.85	8.91	9.97	11.05	12.13	13.55	6 / 4				
reaction time	0.158	interval		1.07	1.03	1.02	1.03	1.05	1.06	1.06	1.08	1.08	1.42		3.12	3.14	3.22	
wind	0.0 m/s	velocity	5.18	8.54	8.87	8.96	8.87	8.70	8.62	8.62	8.46	8.46	9.87	8.12	8.79	8.73	8.52	

Bates, Di'Niko (USA) (2003)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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Semi-Final 2 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)*Henson (2024) - Athlete First: 2024 year end hurdle report*

date	27-Jun-24	time	2.63	3.73	4.80	5.84	6.88	7.92	8.96	10.03	11.13	12.23	13.72	2 / 7				
reaction time		interval	7 steps	1.10	1.07	1.04	1.04	1.04	1.04	1.07	1.10	1.10	1.49		3.21	3.12	3.27	
wind	-0.2 m/s	velocity	5.22	8.31	8.54	8.79	8.79	8.79	8.79	8.54	8.31	8.31	9.41	8.02	8.54	8.79	8.39	

Heat 4 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)*Henson (2024) - Athlete First: 2024 year end hurdle report*

date	24-Jun-24	time	2.56	3.60	4.67	5.76	6.76	7.78	8.80	9.88	11.00	12.08	13.56	8 / 6				
reaction time		interval	7 steps	1.04	1.07	1.09	1.00	1.02	1.02	1.08	1.12	1.08	1.48		3.20	3.04	3.28	
wind	1.2 m/s	velocity	5.36	8.79	8.54	8.39	9.14	8.96	8.96	8.46	8.16	8.46	9.47	8.11	8.57	9.02	8.36	

Batte, Erick (CUB) (1974)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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Semi-Final 1 - 1999 IAAF World Championships (Sevilla, ESP)*Sanchez (1999) - Sevilla '99: análisis de la carreras con villas*

date	24-Aug-99	time	2.54	3.58	4.60	5.64	6.64	7.66	8.67	9.72	10.76	11.86	13.40	7 / 6				
reaction time	0.136	interval		1.04	1.02	1.04	1.00	1.02	1.01	1.05	1.04	1.10	1.54		3.10	3.03	3.19	
wind	0.0 m/s	velocity	5.40	8.79	8.96	8.79	9.14	8.96	9.05	8.70	8.79	8.31	9.10	8.21	8.85	9.05	8.60	

FINAL - 1996 Olympic Games (Atlanta, GA)*Butler (2016) - IAAF statistics handbook- special edition: Games of the XXXI Olympiad- Rio 2016*

date	26-Jul-96	time	2.40	3.48	4.52	5.58	6.63	7.62	8.68	9.64	10.78	11.83	13.43	1 / 8				
reaction time	0.160	interval		1.08	1.04	1.06	1.05	0.99	1.06	0.96	1.14	1.05	1.60		3.18	3.10	3.15	
wind	0.8 m/s	velocity	5.72	8.46	8.79	8.62	8.70	9.23	8.62	9.52	8.02	8.70	8.76	8.19	8.62	8.85	8.70	

Bautista, Clinton Kingsley (PHI) (199)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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FINAL - 2019 Asian Grand Prix 2 (Chongqing, CHN)*CAA Hurdle Development (2019)*

date	07-Jun-19	time	2.65	3.77	4.87	5.99	7.07	8.17	9.29	10.41	11.52	12.67	14.13	2 / 7				
reaction time	0.180	interval	7 steps	1.12	1.10	1.12	1.08	1.10	1.12	1.12	1.11	1.15	1.46	PB	3.34	3.30	3.38	
wind	1.2 m/s	velocity	5.18	8.16	8.31	8.16	8.46	8.31	8.16	8.16	8.23	7.95	9.60	7.78	8.21	8.31	8.11	

FINAL - 2019 Asian Grand Prix 1 (Chongqing, CHN)*CAA Hurdle Development (2019)*

date	04-Jun-19	time	2.60	3.70	4.80	5.88	6.99	8.10	9.25	10.41	11.57	12.72	14.22	2 / 6				
reaction time	0.169	interval	7 steps	1.10	1.10	1.08	1.11	1.11	1.15	1.16	1.16	1.15	1.50		3.28	3.37	3.47	
wind	-0.3 m/s	velocity	5.28	8.31	8.31	8.46	8.23	8.23	7.95	7.88	7.88	7.95	9.35	7.74	8.36	8.14	7.90	

Beard, Dylan (USA) (1998)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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FINAL - 2024 Golden Gala • Pietro Mennea (Roma, ITA)*Omega Timing (2024) - diamond league race analysis*

date	30-Aug-24	time	2.41	3.48	4.49	5.50	6.50	7.51	8.54	9.58	10.64	11.73	13.35	7 / 8				
reaction time	0.170	interval		1.07	1.01	1.01	1.00	1.01	1.03	1.04	1.06	1.09	1.62		3.09	3.04	3.19	
wind	0.4 m/s	velocity	5.69	8.54	9.05	9.05	9.14	9.05	8.87	8.79	8.62	8.39	8.65	8.24	8.87	9.02	8.60	

FINAL - 2024 Meeting de Paris (Paris, FRA)*Omega Timing (2024) - diamond league race analysis*

date	07-Jul-24	time	2.39	3.44	4.45	5.46	6.46	7.45	8.46	9.48	10.53	11.60	13.21	3 / 5				
reaction time	0.156	interval		1.05	1.01	1.01	1.00	0.99	1.01	1.02	1.05	1.07	1.61		3.07	3.00	3.14	
wind	-0.6 m/s	velocity	5.74	8.70	9.05	9.05	9.14	9.23	9.05	8.96	8.70	8.54	8.71	8.33	8.93	9.14	8.73	

Heat 2 - 2024 Meeting de Paris (Paris, FRA)

Omega Timing (2024) - diamond league race analysis

date	07-Jul-24	time	2.39	3.44	4.45	5.44	6.44	7.44	8.47	9.51	10.57	11.65	13.25	3 / 2				
reaction time	0.164	interval		1.05	1.01	0.99	1.00	1.00	1.03	1.04	1.06	1.08	1.60		3.05	3.03	3.18	
wind	0.4 m/s	velocity	5.74	8.70	9.05	9.23	9.14	9.14	8.87	8.79	8.62	8.46	8.76	8.30	8.99	9.05	8.62	

Semi-Final 1 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)

Henson (2024) - Athlete First: 2024 year end hurdle report

date	27-Jun-24	time	2.51	3.54	4.54	5.56	6.54	7.57	8.61	9.65	10.74	11.85	13.38	5 / 5				
reaction time		interval		1.03	1.00	1.02	0.98	1.03	1.04	1.04	1.09	1.11	1.53		3.05	3.05	3.24	
wind	0.3 m/s	velocity	5.47	8.87	9.14	8.96	9.33	8.87	8.79	8.79	8.39	8.23	9.16	8.22	8.99	8.99	8.46	

Heat 3 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)

Henson (2024) - Athlete First: 2024 year end hurdle report

date	24-Jun-24	time	2.48	3.50	4.53	5.53	6.53	7.54	8.57	9.60	10.63	11.76	13.19	4 / 2				
reaction time		interval		1.02	1.03	1.00	1.00	1.01	1.03	1.03	1.03	1.13	1.43		3.05	3.04	3.19	
wind	1.8 m/s	velocity	5.53	8.96	8.87	9.14	9.14	9.05	8.87	8.87	8.87	8.09	9.80	8.34	8.99	9.02	8.60	

Behrenbruch, Pascal (GER) (1985)**Decathlon - Heat 2 - 2009 IAAF World Championships (Berlin, GER)**

Graubner (2009) - biomechanical analyses at the 12th IAAF world championships

date	20-Aug-09	time	2.75	3.87	4.97	6.07	7.17	8.28	9.39	10.50	11.63	12.77	14.24	2 / 4				
reaction time	0.156	interval		1.12	1.10	1.10	1.10	1.11	1.11	1.11	1.13	1.14	1.47		3.32	3.32	3.38	
wind	0.3 m/s	velocity	4.99	8.16	8.31	8.31	8.31	8.23	8.23	8.23	8.09	8.02	9.54	7.72	8.26	8.26	8.11	

Belmar, Félix (ESP) (1978)**FINAL - 1998 Spanish National Championships (San Sebastián, ESP)**

Ruiz (1998) - campeonato des españa absoluto: análisis de la carreras con villas

date	02-Aug-98	time	2.70	3.82	4.96	6.06	7.20	8.36	9.51	10.70	11.86	13.08	14.73	8 / 5				
reaction time		interval		1.12	1.14	1.10	1.14	1.16	1.15	1.19	1.16	1.22	1.65		3.36	3.45	3.57	
wind	0.1 m/s	velocity	5.08	8.16	8.02	8.31	8.02	7.88	7.95	7.68	7.88	7.49	8.50	7.47	8.16	7.95	7.68	

Belocian, Wilhem (FRA) (1995)**Semi-Final 3 - 2024 Olympic Games (Paris, FRA)**

Paris 2024 Olympc Games - Results Book (2024)

date	07-Aug-24	time	2.38	3.45	4.49	5.51	6.54	7.56	8.63	9.70	10.78	11.87	13.52	9 / 8				
reaction time	0.148	interval		1.07	1.04	1.02	1.03	1.02	1.07	1.07	1.08	1.09	1.65		3.13	3.12	3.24	
wind	0.6 m/s	velocity	5.76	8.54	8.79	8.96	8.87	8.96	8.54	8.54	8.46	8.39	8.50	8.14	8.76	8.79	8.46	

Repechage 3 - 2024 Olympic Games (Paris, FRA)

Paris 2024 Olympc Games - Results Book (2024)

date	06-Aug-24	time	2.38	3.45	4.49	5.52	6.55	7.59	8.63	9.68	10.75	11.84	13.45	2 / 2				
reaction time	0.130	interval		1.07	1.04	1.03	1.03	1.04	1.04	1.05	1.07	1.09	1.61		3.14	3.11	3.21	
wind	-1.1 m/s	velocity	5.76	8.54	8.79	8.87	8.87	8.79	8.79	8.70	8.54	8.39	8.71	8.18	8.73	8.82	8.54	

Heat 4 - 2024 Olympic Games (Paris, FRA)

Paris 2024 Olympc Games - Results Book (2024)

date	04-Aug-24	time	2.41	3.46	4.49	5.51	6.53	7.55	8.60	9.68	10.74	11.86	13.48	8 / 5				
reaction time	0.145	interval		1.05	1.03	1.02	1.02	1.02	1.05	1.08	1.06	1.12	1.62		3.10	3.09	3.26	
wind	0.3 m/s	velocity	5.69	8.70	8.87	8.96	8.96	8.96	8.70	8.46	8.62	8.16	8.65	8.16	8.85	8.87	8.41	

FINAL - 2023 Xiamen Diamond League (Xiamen, CHN)

Omega Timing (2023) - diamond league race analysis

date	02-Sep-23	time	2.38	3.43	4.44	5.44	6.45	7.45	8.47	9.51	10.56	11.62	13.17	3 / 4				
reaction time	0.130	interval		1.05	1.01	1.00	1.01	1.00	1.02	1.04	1.05	1.06	1.55		3.06	3.03	3.15	
wind	0.0 m/s	velocity	5.76	8.70	9.05	9.14	9.05	9.14	8.96	8.79	8.70	8.62	9.05	8.35	8.96	9.05	8.70	

FINAL - 2023 World Athletics Championships (Budapest, HUN)

Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season

date	21-Aug-23	time	2.58	3.60	4.62	5.62	6.64	7.70	8.72	9.75	10.80	11.87	13.32	2 / 8				
reaction time	0.158	interval		1.02	1.02	1.00	1.02	1.06	1.02	1.03	1.05	1.07	1.45		3.04	3.10	3.15	
wind	0.0 m/s	velocity	5.32	8.96	8.96	9.14	8.96	8.62	8.96	8.87	8.70	8.54	9.67	8.26	9.02	8.85	8.70	

Semi-Final 3 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)

Henson (2023) - Athlete First: 2023 year end hurdle report

date	21-Aug-23	time	2.50	3.52	4.53	5.53	6.55	7.56	8.60	9.63	10.72	11.77	13.23	4 / 3				
reaction time	0.140	interval		1.02	1.01	1.00	1.02	1.01	1.04	1.03	1.09	1.05	1.46		3.03	3.07	3.17	
wind	-0.1 m/s	velocity	5.49	8.96	9.05	9.14	8.96	9.05	8.79	8.87	8.39	8.70	9.60	8.31	9.05	8.93	8.65	

Heat 2 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)

Henson (2023) - Athlete First: 2023 year end hurdle report

date	20-Aug-23	time	2.55	3.58	4.63	5.63	6.64	7.65	8.69	9.75	10.81	11.87	13.31	9 / 1				
reaction time	0.156	interval		1.03	1.05	1.00	1.01	1.01	1.04	1.06	1.06	1.06	1.44		3.08	3.06	3.18	
wind	0.5 m/s	velocity	5.38	8.87	8.70	9.14	9.05	9.05	8.79	8.62	8.62	8.62	9.74	8.26	8.90	8.96	8.62	

FINAL - 2023 French National Championships (Albi, FRA) (TV Analysis)

Henson (2023) - Athlete First: 2023 year end hurdle report

date	29-Jul-23	time	2.46	3.50	4.50	5.50	6.48	7.50	8.52	9.52	10.56	11.60	13.07	5 / 2				
reaction time	0.168	interval		1.04	1.00	1.00	0.98	1.02	1.02	1.00	1.04	1.04	1.47		3.04	3.02	3.08	
wind	2.3 m/s	velocity	5.58	8.79	9.14	9.14	9.33	8.96	8.96	9.14	8.79	9.54	8.42		9.02	9.08	8.90	

FINAL - 2023 Meeting de Paris (Paris, FRA)

Omega Timing (2023) - diamond league race analysis

date	09-Jun-23	time	2.35	3.40	4.42	5.43	6.45	7.47	8.50	9.53	10.57	11.62	13.20	8 / 5				
reaction time	0.142	interval		1.05	1.02	1.01	1.02	1.02	1.03	1.03	1.04	1.05	1.58		3.08	3.07	3.12	
wind	-0.5 m/s	velocity	5.84	8.70	8.96	9.05	8.96	8.96	8.87	8.87	8.79	8.70	8.87	8.33	8.90	8.93	8.79	

Heat 1 - 2023 Meeting de Paris (Paris, FRA)

Omega Timing (2023) - diamond league race analysis

date	09-Jun-23	time	2.36	3.43	4.46	5.49	6.52	7.56	8.60	9.64	10.70	11.78	13.37	6 / 3			
reaction time	0.129	interval		1.07	1.03	1.03	1.03	1.04	1.04	1.04	1.06	1.08	1.59		3.13	3.11	3.18
wind	-2.0 m/s	velocity	5.81	8.54	8.87	8.87	8.87	8.79	8.79	8.79	8.62	8.46	8.82	8.23	8.76	8.82	8.62

FINAL - 2022 Bislett Games (Oslo, NOR) (TV Analysis)

Henson (2022) - Athlete First: 2022 year end hurdle report

date	16-Jun-22	time	2.48	3.52	4.58	5.64								dnf	1 / --		
reaction time	0.111	interval		7 steps 1.04	1.06	1.06										3.16	
wind	-1.2 m/s	velocity	5.53	8.79	8.62	8.62										8.68	

FINAL - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)

Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record

date	20-Mar-22	time	2.50	3.54	4.58	5.62	6.66						7.67	3 / 8			
reaction time	0.177	interval		1.04	1.04	1.04	1.04					1.01				3.12	
		velocity	5.49	8.79	8.79	8.79	8.79					9.62	7.82			8.79	

Semi-Final 3 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)

Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record

date	20-Mar-22	time	2.53	3.56	4.56	5.56	6.56						7.53	4 / 1			
reaction time	0.129	interval		1.03	1.00	1.00	1.00					0.97				3.03	
		velocity	5.42	8.87	9.14	9.14	9.14					10.02	7.97			9.05	

Heat 6 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)

Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record

date	20-Mar-22	time	2.50	3.55	4.57	5.57	6.60						7.55	1 / 1			
reaction time	0.109	interval		1.05	1.02	1.00	1.03					0.95				3.07	
		velocity	5.49	8.70	8.96	9.14	8.87					10.23	7.95			8.93	

FINAL - 2022 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)

Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record

date	17-Feb-22	time	2.46	3.52	4.55	5.57	6.66						7.72	3 / 8			
reaction time	0.130	interval		1.06	1.03	1.02	1.09					1.06				3.11	
		velocity	5.58	8.62	8.87	8.96	8.39					9.17	7.77			8.82	

Heat 2 - 2022 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)

Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record

date	17-Feb-22	time	2.43	3.45	4.50	5.54	6.54						7.57	5 / 2			
reaction time	0.139	interval		1.02	1.05	1.04	1.00					1.03				3.11	
		velocity	5.65	8.96	8.70	8.79	9.14					9.44	7.93			8.82	

FINAL - 2021 Golden Gala Pietro Mennea (Florence, ITA) (TV Analysis)

Henson (2021) - Athlete First: 2021 year end hurdle report

date	10-Jun-21	time	2.48	3.52	4.56	5.58	6.60	7.64	8.66	9.68	10.76	11.82	13.31	6 / 3			
reaction time	0.138	interval		1.04	1.04	1.02	1.02	1.04	1.02	1.02	1.08	1.06	1.49			3.10	3.08
wind	-0.1 m/s	velocity	5.53	8.79	8.79	8.96	8.96	8.79	8.96	8.96	8.46	8.62	9.41	8.26		8.85	8.90

FINAL - 2021 Fanny Blankers Koen Games (Hengelo, NED) (TV Analysis)

Henson (2021) - Athlete First: 2021 year end hurdle report

date	06-Jun-21	time	2.47	3.54	4.54	5.57	6.60	7.62	8.64	9.67	10.74	11.84	13.34	6 / 3			
reaction time		interval		1.07	1.00	1.03	1.03	1.02	1.02	1.03	1.07	1.10	1.50			3.10	3.07
wind	1.7 m/s	velocity	5.55	8.54	9.14	8.87	8.87	8.96	8.96	8.87	8.54	8.31	9.35	8.25		8.85	8.93

FINAL - 2021 European Indoor Championships (Toruń, POL) (TV Analysis)

Henson (2021) - Athlete First: 2021 year end hurdle report

date	07-Mar-21	time	2.40	3.46	4.44	5.44	6.42						7.42	5 / 1			
reaction time	0.129	interval		1.06	0.98	1.00	0.98					1.00	PB			3.04	
		velocity	5.72	8.62	9.33	9.14	9.33					9.72	8.09			9.02	

FINAL - 2021 Copernicus Cup (Toruń, POL) (TV Analysis)

Henson (2021) - men's 60m hurdles world record season - Grant Holloway

date	17-Feb-21	time	2.54	3.56	4.58	5.60	6.61						7.57	3 / 2			
reaction time	0.143	interval		1.02	1.02	1.02	1.01					0.96				3.06	
		velocity	5.40	8.96	8.96	8.96	9.05					10.13	7.93			8.96	

FINAL - 2021 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)

Henson (2021) - men's 60m hurdles world record season - Grant Holloway

date	09-Feb-21	time	2.52	3.54	4.56	5.55	6.56						7.52	4 / 2			
reaction time	0.160	interval		1.02	1.02	0.99	1.01					0.96				3.03	
		velocity	5.44	8.96	8.96	9.23	9.05					10.13	7.98			9.05	

Heat 1 - 2021 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)

Henson (2021) - men's 60m hurdles world record season - Grant Holloway

date	09-Feb-21	time	2.40	3.43	4.46	5.46	6.46						7.50	5 / 1			
reaction time	0.141	interval		1.03	1.03	1.00	1.00					1.04				3.06	
		velocity	5.72	8.87	8.87	9.14	9.14					9.35	8.00			8.96	

FINAL - 2021 Meeting Elite en Salle de Metz (Metz, FRA)Vazel (2021) - <https://twitter.com/pjvazel/status/1358428540241399810>

date	06-Feb-21	time	2.53	3.55	4.54	5.61							dnf	3 / --			
reaction time		interval		1.02	0.99	1.07										3.08	
		velocity	5.42	8.96	9.23	8.54										8.90	

Heat 1 - 2021 Meeting Elite en Salle de Metz (Metz, FRA)Vazel (2021) - <https://twitter.com/pjvazel/status/1358428540241399810>

date	06-Feb-21	time	2.54	3.57	4.56	5.56	6.56						7.45	1 / 1			
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reaction time	0.148	interval	1.03	0.99	1.00	1.00							0.89	PB	3.02				
		velocity	5.40	8.87	9.23	9.14	9.14						10.92	14.77	9.08				
FINAL - 2020 Golden Gala Pietro Mennea (Rome, ITA) (TV Analysis)													<i>Henson (2020) - Athlete First: 2020 year end hurdle report</i>						
date	17-Sep-20	time	2.50	3.52	4.56	5.60	6.64	7.68	8.72	9.78	10.86	11.94		13.49	5 / 4				
reaction time	0.134	interval	1.02	1.04	1.04	1.04	1.04	1.04	1.04	1.06	1.08	1.08	1.55		3.10	3.12	3.22		
wind	0.1 m/s	velocity	5.49	8.96	8.79	8.79	8.79	8.79	8.79	8.62	8.46	8.46	9.05	8.15	8.85	8.79	8.52		
FINAL - 2020 French National Championships (Albi, FRA) (TV Analysis)													<i>Henson (2020) - Athlete First: 2020 year end hurdle report</i>						
date	13-Sep-20	time	2.50	3.51	4.49	5.50	6.48	7.53	8.57	9.59	10.63	11.67		13.20	4 / 1				
reaction time	0.156	interval	1.01	0.98	1.01	0.98	1.05	1.04	1.02	1.04	1.04	1.53			3.00	3.07	3.10		
wind	0.0 m/s	velocity	5.49	9.05	9.33	9.05	9.33	8.70	8.79	8.96	8.79	8.79	9.16	8.33	9.14	8.93	8.85		
FINAL - 2020 Meeting Pro Athl� Tour de Marseille (Marseille, FRA) (TV Analysis)													<i>Henson (2020) - Athlete First: 2020 year end hurdle report</i>						
date	03-Sep-20	time	2.52	3.57	4.57	5.55	6.60	7.61	8.62	9.66	10.70	11.75		13.27	6 / 2				
reaction time	0.211	interval	1.05	1.00	0.98	1.05	1.01	1.01	1.04	1.04	1.05	1.52			3.03	3.07	3.13		
wind	-0.3 m/s	velocity	5.44	8.70	9.14	9.33	8.70	9.05	9.05	8.79	8.79	8.70	9.22	8.29	9.05	8.93	8.76		
FINAL - 2020 Istv�n Gyulai Memorial (Sz�kesfeh�rv�r, HUN) (TV Analysis)													<i>Henson (2020) - Athlete First: 2020 year end hurdle report</i>						
date	19-Aug-20	time	2.47	3.50	4.54	5.57	6.57	7.60	8.64	9.68	10.74	11.84		13.34	6 / 4				
reaction time	0.134	interval	1.03	1.04	1.03	1.00	1.03	1.04	1.04	1.06	1.10	1.50			3.10	3.07	3.20		
wind	0.3 m/s	velocity	5.55	8.87	8.79	8.87	9.14	8.87	8.79	8.79	8.62	8.31	9.35	8.25	8.85	8.93	8.57		
FINAL - 2020 Herculis Meeting International d'athl�tisme (Monaco, MON) (TV Analysis)													<i>Henson (2020) - Athlete First: 2020 year end hurdle report</i>						
date	14-Aug-20	time	2.54	3.57	4.60	5.60	6.60	7.61	8.64	9.67	10.71	11.77		13.18	6 / 3				
reaction time	0.134	interval	1.03	1.03	1.00	1.00	1.01	1.03	1.03	1.04	1.06	1.41	PB		3.06	3.04	3.13		
wind	0.8 m/s	velocity	5.40	8.87	8.87	9.14	9.14	9.05	8.87	8.87	8.79	8.62	9.94	8.35	8.96	9.02	8.76		
FINAL - 2020 Paavo Nurmi Games (Turku, FIN) (TV Analysis)													<i>Henson (2020) - Athlete First: 2020 year end hurdle report</i>						
date	11-Aug-20	time	2.57	3.60	4.60	5.64	6.64	7.64	8.67	9.74	10.81	11.88		13.38	3 / 2				
reaction time	0.147	interval	1.03	1.00	1.04	1.00	1.00	1.03	1.07	1.07	1.07	1.50			3.07	3.03	3.21		
wind	1.1 m/s	velocity	5.34	8.87	9.14	8.79	9.14	9.14	8.87	8.54	8.54	8.54	9.35	8.22	8.93	9.05	8.54		
Semi-Final 3 - 2019 IAAF World Championships (Doha, QAT)													<i>CAA Hurdle Development (2019)</i>						
date	02-Oct-19	time	2.58	3.64	4.66	5.67	6.72	7.74	8.80	9.90	11.00	12.12		13.60	3 / 7				
reaction time	0.133	interval	1.06	1.02	1.01	1.05	1.02	1.06	1.10	1.10	1.12	1.48			3.09	3.13	3.32		
wind	0.6 m/s	velocity	5.32	8.62	8.96	9.05	8.70	8.96	8.62	8.31	8.31	8.16	9.47	8.09	8.87	8.76	8.26		
FINAL - 2019 M�ller Anniversary Games (London, GBR) (TV Analysis)													<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>						
date	21-Jul-19	time	2.43	3.46	4.48	5.50	6.50	7.53	8.56	9.58	10.61	11.66		13.28	6 / 2				
reaction time	0.125	interval	1.03	1.02	1.02	1.00	1.03	1.03	1.02	1.03	1.05	1.62			3.07	3.06	3.10		
wind	0.4 m/s	velocity	5.65	8.87	8.96	8.96	9.14	8.87	8.87	8.96	8.87	8.70	8.65	8.28	8.93	8.96	8.85		
FINAL - 2019 Prefontaine Classic (Stanford, CA) (TV Analysis)													<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>						
date	30-Jun-19	time	2.56	3.60	4.63	5.63	6.63	7.65	8.68	9.70	10.76	11.83		13.29	2 / 2				
reaction time	0.151	interval	1.04	1.03	1.00	1.00	1.02	1.03	1.02	1.06	1.07	1.46			3.07	3.05	3.15		
wind	0.3 m/s	velocity	5.36	8.79	8.87	9.14	9.14	8.96	8.87	8.96	8.62	8.54	9.60	8.28	8.93	8.99	8.70		
FINAL - 2019 Meeting International Mohammed VI d'athl�tisme (Rabat, MAR) (TV Analysis)													<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>						
date	16-Jun-19	time	2.54	3.58	4.60	5.60	6.64	7.66	8.70	9.74	10.80	11.90		13.43	7 / 4				
reaction time	0.137	interval	1.04	1.02	1.00	1.04	1.02	1.04	1.04	1.04	1.06	1.10	1.53		3.06	3.10	3.20		
wind	0.3 m/s	velocity	5.40	8.79	8.96	9.14	8.79	8.96	8.79	8.79	8.62	8.31	9.16	8.19	8.96	8.85	8.57		
FINAL - 2019 French National Indoor Championships (Miramas, FRA) (TV Analysis)													<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>						
date	16-Feb-19	time	2.56	3.58	4.62	5.64	6.66							7.63	3 / 3				
reaction time	0.147	interval	1.02	1.04	1.02	1.02							0.97		3.08				
		velocity	5.36	8.96	8.79	8.96	8.96						10.02	7.86	8.90				
FINAL - 2016 Memorial van Damme (Brussels, BEL) (TV Analysis)													<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>						
date	09-Sep-16	time	2.50	3.53	4.57	5.57	6.57	7.60	8.62	9.64	10.71	11.81		13.32	8 / 3				
reaction time	0.153	interval	1.03	1.04	1.00	1.00	1.03	1.02	1.02	1.07	1.10	1.51			3.07	3.05	3.19		
wind	0.2 m/s	velocity	5.49	8.87	8.79	9.14	9.14	8.87	8.96	8.96	8.54	8.31	9.28	8.26	8.93	8.99	8.60		
FINAL - 2016 Athletissima (Lausanne, SUI) (TV Analysis)													<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>						
date	25-Aug-16	time	2.48	3.50	4.50	5.52	6.52	7.54	8.56	9.60	10.66	11.74		13.25	7 / 4				
reaction time	0.126	interval	1.02	1.00	1.02	1.00	1.02	1.02	1.04	1.06	1.08	1.51	PB		3.04	3.04	3.18		
wind	0.5 m/s	velocity	5.53	8.96	9.14	8.96	9.14	8.96	8.96	8.79	8.62	8.46	9.28	8.30	9.02	9.02	8.62		
FINAL - 2016 Golden Gala Pietro Mennea (Roma, ITA) (TV Analysis)													<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>						
date	02-Jun-16	time	2.52	3.56	4.60	5.64	6.70	7.76	8.82	9.94	11.02	12.14		13.73	8 / 5				
reaction time	0.132	interval	1.04	1.04	1.04	1.06	1.06	1.06	1.12	1.08	1.12	1.59			3.12	3.18	3.32		
wind	0.6 m/s	velocity	5.44	8.79	8.79	8.79	8.62	8.62	8.62	8.16	8.46	8.16	8.82	8.01	8.79	8.62	8.26		

FINAL - 2016 Herculis Meeting International d'Athlétisme (Monaco, MON) (TV Analysis)*Henson (2021) - Athlete First: 2016 year end hurdle report*

date	15-Jul-16	time	2.48	3.52	4.54	5.56	6.56	7.60	8.66	9.72	10.78	11.88	13.42	2 / 4			
reaction time	0.129	interval		1.04	1.02	1.02	1.00	1.04	1.06	1.06	1.06	1.10	1.54		3.08	3.10	3.22
wind	0.0 m/s	velocity	5.53	8.79	8.96	8.96	9.14	8.79	8.62	8.62	8.62	8.31	9.10	8.20	8.90	8.85	8.52

Bennett, Orlando (JAM) (1999)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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FINAL - 2024 Golden Gala • Pietro Mennea (Roma, ITA)*Omega Timing (2024) - diamond league race analysis*

date	30-Aug-24	time	2.40	3.49	4.53	5.54	6.57	7.58	8.60	9.64	10.69	11.75	13.33	5 / 5			
reaction time	0.166	interval		1.09	1.04	1.01	1.03	1.01	1.02	1.04	1.05	1.06	1.58		3.14	3.06	3.15
wind	0.4 m/s	velocity	5.72	8.39	8.79	9.05	8.87	9.05	8.96	8.79	8.70	8.62	8.87	8.25	8.73	8.96	8.70

FINAL - 2024 Kamila Skolimowska Memorial (Silesia, POL)*Omega Timing (2024) - diamond league race analysis*

date	25-Aug-24	time	2.42	3.48	4.51	5.51	6.51	7.52	8.56	9.64	10.71	11.78	13.35	3 / 5			
reaction time	0.154	interval		1.06	1.03	1.00	1.00	1.01	1.04	1.08	1.07	1.07	1.57		3.09	3.05	3.22
wind	1.1 m/s	velocity	5.67	8.62	8.87	9.14	9.14	9.05	8.79	8.46	8.54	8.54	8.93	8.24	8.87	8.99	8.52

FINAL - 2024 Olympic Games (Paris, FRA)*Paris 2024 Olympic Games - Results Book (2024)*

date	08-Aug-24	time	2.36	3.44	4.48	5.48	6.49	7.50	8.51	9.56	10.62	11.69	13.34	7 / 7			
reaction time	0.142	interval		1.08	1.04	1.00	1.01	1.01	1.01	1.05	1.06	1.07	1.65		3.12	3.03	3.18
wind	-0.1 m/s	velocity	5.81	8.46	8.79	9.14	9.05	9.05	9.05	8.70	8.62	8.54	8.50	8.25	8.79	9.05	8.62

Semi-Final 3 - 2024 Olympic Games (Paris, FRA)*Paris 2024 Olympic Games - Results Book (2024)*

date	07-Aug-24	time	2.33	3.38	4.40	5.39	6.38	7.38	8.39	9.42	10.45	11.50	13.09	7 / 1			
reaction time	0.155	interval		1.05	1.02	0.99	0.99	1.00	1.01	1.03	1.03	1.05	1.59	PB	3.06	3.00	3.11
wind	0.6 m/s	velocity	5.89	8.70	8.96	9.23	9.23	9.14	9.05	8.87	8.87	8.70	8.82	8.40	8.96	9.14	8.82

Heat 2 - 2024 Olympic Games (Paris, FRA)*Paris 2024 Olympic Games - Results Book (2024)*

date	04-Aug-24	time	2.35	3.46	4.51	5.51	6.53	7.55	8.58	9.61	10.67	11.73	13.35	7 / 2			
reaction time	0.160	interval		1.11	1.05	1.00	1.02	1.02	1.03	1.03	1.06	1.06	1.62		3.16	3.07	3.15
wind	1.2 m/s	velocity	5.84	8.23	8.70	9.14	8.96	8.96	8.87	8.87	8.62	8.62	8.65	8.24	8.68	8.93	8.70

FINAL - 2024 Xiamen Diamond League (Xiamen, CHN)*Omega Timing (2024) - diamond league race analysis*

date	20-Apr-24	time	2.49	3.57	4.62	5.65	6.69	7.72	8.75	9.80	10.86	11.95	13.58	2 / 8			
reaction time	0.182	interval		1.08	1.05	1.03	1.04	1.03	1.03	1.05	1.06	1.09	1.63		3.16	3.10	3.20
wind	-0.3 m/s	velocity	5.51	8.46	8.70	8.87	8.79	8.87	8.87	8.70	8.62	8.39	8.60	8.10	8.68	8.85	8.57

Semi-Final 1 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)*Henson (2023) - Athlete First: 2023 year end hurdle report*

date	21-Aug-23	time	2.54	3.62	4.65	5.67	6.70	7.70	8.73	9.78	10.83	11.90	13.34	9 / 4			
reaction time	0.144	interval		1.08	1.03	1.02	1.03	1.00	1.03	1.05	1.05	1.07	1.44		3.13	3.06	3.17
wind	-0.2 m/s	velocity	5.40	8.46	8.87	8.96	8.87	9.14	8.87	8.70	8.70	8.54	9.74	8.25	8.76	8.96	8.65

Heat 4 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)*Henson (2023) - Athlete First: 2023 year end hurdle report*

date	20-Aug-23	time	2.53	3.62	4.66	5.70	6.73	7.76	8.80	9.83	10.88	11.93	13.39	9 / 5			
reaction time	0.140	interval		1.09	1.04	1.04	1.03	1.03	1.04	1.03	1.05	1.05	1.46		3.17	3.10	3.13
wind	-0.6 m/s	velocity	5.42	8.39	8.79	8.79	8.87	8.87	8.79	8.87	8.70	8.70	9.60	8.22	8.65	8.85	8.76

FINAL - 2023 Jamaican National Championships (Kingston, JAM) (TV Analysis)*Henson (2023) - Athlete First: 2023 year end hurdle report*

date	09-Jul-23	time	2.50	3.56	4.58	5.60	6.58	7.58	8.60	9.60	10.63	11.70	13.19	6 / 3			
reaction time		interval		1.06	1.02	1.02	0.98	1.00	1.02	1.00	1.03	1.07	1.49		3.10	3.00	3.10
wind	0.7 m/s	velocity	5.49	8.62	8.96	8.96	9.33	9.14	8.96	9.14	8.87	8.54	9.41	8.34	8.85	9.14	8.85

FINAL - 2023 USATF New York City Grand Prix (Randalls Island, NY) (TV Analysis)*Henson (2023) - Athlete First: 2023 year end hurdle report*

date	24-Jun-23	time	2.58	3.64	4.67	5.70	6.72	7.74	8.76	9.79	10.84	11.91	13.34	2 / 7			
reaction time	0.150	interval		1.06	1.03	1.03	1.02	1.02	1.02	1.03	1.05	1.07	1.43		3.12	3.06	3.15
wind	1.6 m/s	velocity	5.32	8.62	8.87	8.87	8.96	8.96	8.96	8.87	8.70	8.54	9.80	8.25	8.79	8.96	8.70

FINAL - 2022 NACAC Championships (Freeport, BAH) (TV Analysis)*Henson (2022) - Athlete First: 2022 year end hurdle report*

date	20-Aug-22	time	2.47	3.53	4.56	5.55	6.55	7.55	8.57	9.62	10.64	11.69	13.18	6 / 3			
reaction time		interval		1.06	1.03	0.99	1.00	1.00	1.02	1.05	1.02	1.05	1.49	PB	3.08	3.02	3.12
wind	0.3 m/s	velocity	5.55	8.62	8.87	9.23	9.14	9.14	8.96	8.70	8.96	8.70	9.41	8.35	8.90	9.08	8.79

Semi-Final 1 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)*Henson (2022) - Athlete First: 2022 year end hurdle report*

date	17-Jul-22	time	2.56	3.60	4.70	5.76	6.80	7.85	8.90	9.96	11.06	12.17	13.67	2 / 6			
reaction time	0.139	interval		1.04	1.10	1.06	1.04	1.05	1.05	1.06	1.10	1.11	1.50		3.20	3.14	3.27
wind	-0.6 m/s	velocity	5.36	8.79	8.31	8.62	8.79	8.70	8.70	8.62	8.31	8.23	9.35	8.05	8.57	8.73	8.39

Semi-Final 1 - 2019 IAAF World Championships (Doha, QAT)*CAA Hurdle Development (2019)*

date	02-Oct-19	time	2.62	3.72	4.76	5.80	6.84	7.90	8.92	10.00	11.08	12.18	13.60	3 / 6			
reaction time	0.162	interval		1.10	1.04	1.04	1.04	1.06	1.02	1.08	1.08	1.10	1.42		3.18	3.12	3.26
wind	1.1 m/s	velocity	5.24	8.31	8.79	8.79	8.79	8.62	8.96	8.46	8.46	8.31	9.87	8.09	8.62	8.79	8.41

FINAL - 2018 IAAF World Junior Championships (Tampere, FIN) (99cm)*Koyama (2018) - research on athlete performance and technique- 2018 data book*

date	12-Jul-18	time	2.62	3.66	4.68	5.68	6.69	7.69	8.69	9.71	10.74	11.79	13.33	4 / 2			
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reaction time	0.171	interval	1.04	1.02	1.00	1.01	1.00	1.00	1.02	1.03	1.05	1.54		3.06	3.01	3.10	
wind	0.3 m/s	velocity	5.24	8.79	8.96	9.14	9.05	9.14	9.14	8.96	8.87	8.70	9.10	8.25	8.96	9.11	8.85

Bennett, Sam (GBR) (2001)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2024 NCAA Championships (Eugene, OR) (TV Analysis)													<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>				
date	07-Jun-24	time	2.57	3.70	4.74	5.77	6.81	7.84	8.86	9.91	10.94	12.00		13.45	1 / 6		
reaction time		interval	7 steps	1.13	1.04	1.03	1.04	1.03	1.02	1.05	1.03	1.06	1.45	PB	3.20	3.09	3.14
wind	0.1 m/s	velocity	5.34	8.09	8.79	8.87	8.79	8.87	8.96	8.70	8.87	8.62	9.67	8.18	8.57	8.87	8.73

Bentsen, Jon Yde (DEN) (1985)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2011 Windsprint (Sundsvall, SWE)													<i>Blomkvist (2011) - www.sub13.se</i>				
date	31-Jul-11	time	2.72	3.85	4.95	6.04	7.14	8.25	9.37	10.49	11.64	12.81		14.42	1 / 4		
reaction time		interval		1.13	1.10	1.09	1.10	1.11	1.12	1.12	1.15	1.17	1.61		3.32	3.33	3.44
wind	2.8 m/s	velocity	5.04	8.09	8.31	8.39	8.31	8.23	8.16	8.16	7.95	7.81	8.71	7.63	8.26	8.23	7.97

Berger, Dominic (USA) (1986)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2011 Folksam GP (Göteborg, SWE)													<i>Blomkvist (2011) - www.sub13.se</i>				
date	11-Jun-11	time	2.48	3.56	4.60	5.64	6.68	7.72	8.76	9.80	10.86	11.92		13.49	1 / 2		
reaction time		interval		1.08	1.04	1.04	1.04	1.04	1.04	1.06	1.06	1.57			3.16	3.12	3.16
wind	0.6 m/s	velocity	5.53	8.46	8.79	8.79	8.79	8.79	8.79	8.62	8.62	8.93	8.15		8.68	8.79	8.68
Heat 3 - 2007 USATF National Championships (Indianapolis, IN)													<i>USATF Men's Hurdle Development (2007)</i>				
date	23-Jun-07	time	2.70	3.82	4.90	5.99	7.08	8.16	9.26	10.38	11.48	12.61		14.35	8 / 7		
reaction time		interval		1.12	1.08	1.09	1.09	1.08	1.10	1.12	1.10	1.13	1.74		3.29	3.27	3.35
wind	-3.2 m/s	velocity	5.08	8.16	8.46	8.39	8.39	8.46	8.31	8.16	8.31	8.09	8.06	7.67	8.33	8.39	8.19

Beria, Matteo (ITA) (1996)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2013 Italian National Indoor Youth Championships (Ancona, ITA) (91cm)													<i>FIDAL - Centro Studi & Ricerche (2013) - www.youtube.com/watch?v=Xy9UwFvMj6g</i>				
date	23-Feb-13	time	2.66	3.78	4.87	5.95	7.00							7.99	7 / 2		
reaction time		interval		1.12	1.09	1.08	1.05					0.99			3.29		
		velocity	5.16	8.16	8.39	8.46	8.70					9.82	7.51		8.33		

Biondo, Giuseppe (ITA) (1996)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2013 Italian National Indoor Youth Championships (Ancona, ITA) (91cm)													<i>FIDAL - Centro Studi & Ricerche (2013) - www.youtube.com/watch?v=Xy9UwFvMj6g</i>				
date	23-Feb-13	time	2.66	3.78	4.85	5.90	6.95							7.94	6 / 1		
reaction time		interval		1.12	1.07	1.05	1.05					0.99	PB		3.24		
		velocity	5.16	8.16	8.54	8.70	8.70					9.82	7.56		8.46		

Bitzi, Ivan (SUI) (1975)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Heat 4 - 2006 European Championships (Göteborg, SWE)													<i>Weber (2006) - wettkampauswertung 110m hürden</i>				
date	11-Aug-06	time	2.71	3.77	4.82	5.87	6.91	7.96	9.02	10.12	11.21	12.30		13.68	4 / 4		
reaction time		interval		1.06	1.05	1.05	1.04	1.05	1.06	1.10	1.09	1.09	1.38		3.16	3.15	3.28
wind	-1.1 m/s	velocity	5.06	8.62	8.70	8.70	8.79	8.70	8.62	8.31	8.39	8.39	10.16	8.04	8.68	8.70	8.36

Blake, Arthur (USA) (1966)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 1988 Olympic Games (Seoul, KOR)													<i>Brüggemann (1990) - scientific research project at the games of the XXXIV Olympiad, Seoul 1988</i>				
date	26-Sep-88	time	2.48	3.57	4.61	5.65	6.67	7.68	8.85	10.01	11.21	12.40		13.96	5 / 8		
reaction time	0.160	interval		1.09	1.04	1.04	1.02	1.01	1.17	1.16	1.20	1.19	1.56		3.17	3.20	3.55
wind	1.5 m/s	velocity	5.53	8.39	8.79	8.79	8.96	9.05	7.81	7.88	7.62	7.68	8.99	7.88	8.65	8.57	7.72
Semi-Final 2 - 1988 Olympic Games (Seoul, KOR)													<i>Brüggemann (1990) - scientific research project at the games of the XXXIV Olympiad, Seoul 1988</i>				
date	26-Sep-88	time	2.61	3.65	4.70	5.74	6.78	7.82	8.86	9.95	11.02	12.10		13.52	4 / 2		
reaction time	0.154	interval		1.04	1.05	1.04	1.04	1.04	1.04	1.09	1.07	1.08	1.42		3.13	3.12	3.24
wind	-0.7 m/s	velocity	5.26	8.79	8.70	8.79	8.79	8.79	8.79	8.39	8.54	8.46	9.87	8.14	8.76	8.79	8.46

Blaschek, Thomas (GER) (1981)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2007 European Cup (Munich, GER)													<i>Graubner (2007) - http://www.fgs.uni-halle.de</i>				
date	24-Jun-07	time	2.63	3.67	4.71	5.73	6.75	7.78	8.83	9.89	10.97	12.07		13.51	1 / 3		
reaction time	0.133	interval		1.04	1.04	1.02	1.02	1.03	1.05	1.06	1.08	1.10	1.44		3.10	3.10	3.24
wind	0.4 m/s	velocity	5.22	8.79	8.79	8.96	8.96	8.87	8.70	8.62	8.46	8.31	9.74	8.14	8.85	8.85	8.46

Blaschke, Joakim (SWE) (1977)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2011 Folksam GP (Göteborg, SWE)													<i>Blomkvist (2011) - www.sub13.se</i>				
date	11-Jun-11	time	2.60	3.72	4.84	5.96	7.12	8.28	9.42	10.58	11.76	12.94		14.72	1 / 7		
reaction time		interval		1.12	1.12	1.12	1.16	1.16	1.14	1.16	1.18	1.18	1.78		3.36	3.46	3.52
wind	0.6 m/s	velocity	5.28	8.16	8.16	8.16	7.88	7.88	8.02	7.88	7.75	7.75	7.88	7.47	8.16	7.92	7.79
FINAL - 2011 Landskamp FIN-SWE-NOR (Tampere, FIN)													<i>Blomkvist (2011) - www.sub13.se</i>				
date	05-Feb-11	time	2.60	3.72	4.80	5.90	7.00							8.06	5 / 4		
reaction time		interval		1.12	1.08	1.10	1.10					1.06			3.30		
		velocity	5.28	8.16	8.46	8.31	8.31					9.17	7.44		8.31		

FINAL - 2010 Swedish National Championships (Falun, SWE)

Blomkvist (2010) - www.sub13.se

date	22-Aug-10	time	2.70	3.84	4.97	6.09	7.21	8.35	9.48	10.64	11.82	13.00	14.57	/ 3															
reaction time		interval		1.14	1.13	1.12	1.12	1.14	1.13	1.16	1.18	1.18	1.57		3.39	3.39	3.52												
wind	-0.7 m/s	velocity	5.08	8.02	8.09	8.16	8.16	8.02	8.09	7.88	7.75	7.75	8.93	7.55	8.09	8.09	7.79												
FINAL - 2010 Folksam GP (Sollentuna, SWE)														<i>Blomkvist (2010) - www.sub13.se</i>															
date	01-Jul-10	time	2.53	3.65	4.79								14.55	7 / 8															
reaction time		interval		1.12	1.14												3.44												
wind	0.4 m/s	velocity	5.42	8.16	8.02								7.56				7.97												
Heat 2 - 2010 Samsung Galan (Göteborg, SWE)														<i>Blomkvist (2010) - www.sub13.se</i>															
date	02-Feb-10	time	2.60	3.76	4.90	6.04	7.18						8.29	/ 6															
reaction time		interval		1.16	1.14	1.14	1.14						1.11				3.44												
wind		velocity	5.28	7.88	8.02	8.02	8.02						8.76	7.24			7.97												
FINAL - 2008 Windsprint (Sundsvall, SWE)														<i>(2008) - www.ssg.se/en/Windsprint/Split-times/</i>															
date	06-Jul-08	time	3.84			7.22			10.73				14.64	3 / 3															
reaction time		interval				3.38			3.51				3.91																
wind	0.5 m/s	velocity	5.95			8.11			7.81				8.26	7.51															
FINAL - 2007 Windsprint (Sundsvall, SWE)														<i>(2007) - www.ssg.se/en/Windsprint/Split-times/</i>															
date	24-Jul-07	time	3.87			7.23			10.68				14.79	/ 6															
reaction time		interval				3.36			3.45				4.11																
wind	1.3 m/s	velocity	5.91			8.16			7.95				7.86	7.44															
Bondoreo, Sho (JPN)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2019 Japanese National High School Championships (Okinawa, JPN) (99cm)														<i>Kota (2019) - 72nd high school champs: JAF scientific committee - biomechanics data</i>															
date	08-Aug-19	time	2.78	3.95	5.12	6.27	7.41	8.60	9.78	10.95	12.14	13.33	14.91	2 / 6															
reaction time		interval		1.17	1.17	1.15	1.14	1.19	1.18	1.17	1.19	1.19	1.58				3.49	3.51	3.55										
wind	-3.0 m/s	velocity	4.94	7.81	7.81	7.95	8.02	7.68	7.75	7.81	7.68	7.68	8.87	7.38			7.86	7.81	7.72										
Borisov, Yevgeniy (RUS) (1984)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2010 IAAF World Indoor Championships (Doha, QAT)														<i>Kuitunen (2010) - biomechanical analysis of the 14th IAAF World Indoor championships</i>															
date	14-Mar-10	time	2.53	3.57	4.58	5.59	6.63						7.51	3 / 4															
reaction time	0.167	interval	7 steps	1.04	1.01	1.01	1.04						0.88				3.06												
wind		velocity	5.42	8.79	9.05	9.05	8.79						11.05	7.99			8.96												
Bouanani, Amine (ALG) (1997)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Repechage 2 - 2024 Olympic Games (Paris, FRA)														<i>Paris 2024 Olympic Games - Results Book (2024)</i>															
date	06-Aug-24	time	2.51	3.61	4.65	5.67	6.69	7.72	8.75	9.81	10.87	11.95	13.54	6 / 3															
reaction time	0.187	interval	7 steps	1.10	1.04	1.02	1.02	1.03	1.03	1.06	1.06	1.08	1.59				3.16	3.08	3.20										
wind	-0.5 m/s	velocity	5.47	8.31	8.79	8.96	8.96	8.87	8.87	8.62	8.62	8.46	8.82	8.12			8.68	8.90	8.57										
Heat 2 - 2024 Olympic Games (Paris, FRA)														<i>Paris 2024 Olympic Games - Results Book (2024)</i>															
date	04-Aug-24	time	2.49	3.58	4.63	5.67	6.71	7.74	8.78	9.84	10.91	11.99	13.58	8 / 5															
reaction time	0.163	interval	7 steps	1.09	1.05	1.04	1.04	1.03	1.04	1.06	1.07	1.08	1.59				3.18	3.11	3.21										
wind	1.2 m/s	velocity	5.51	8.39	8.70	8.79	8.79	8.87	8.79	8.62	8.54	8.46	8.82	8.10			8.62	8.82	8.54										
Semi-Final 1 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>															
date	17-Jul-22	time	2.60	3.66	4.70	5.70	6.70	7.76	8.80	9.83	10.87	11.96	13.37	3 / 3															
reaction time	0.130	interval	7 steps	1.06	1.04	1.00	1.00	1.06	1.04	1.03	1.04	1.09	1.41	NR PB			3.10	3.10	3.16										
wind	-0.6 m/s	velocity	5.28	8.62	8.79	9.14	9.14	8.62	8.79	8.87	8.79	8.39	9.94	8.23			8.85	8.85	8.68										
Heat 3 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>															
date	16-Jul-22	time	2.56	3.63	4.63	5.66	6.66	7.70	8.70	9.80	10.86	11.93	13.44	1 / 2															
reaction time	0.134	interval	7 steps	1.07	1.00	1.03	1.00	1.04	1.00	1.10	1.06	1.07	1.51				3.10	3.04	3.23										
wind	0.4 m/s	velocity	5.36	8.54	9.14	8.87	9.14	8.79	9.14	8.31	8.62	8.54	9.28	8.18			8.85	9.02	8.49										
Bouraada, Larbi (ALG) (1988)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Decathlon - Heat 5 - 2009 IAAF World Championships (Berlin, GER)														<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>															
date	20-Aug-09	time	2.74	3.88	5.04	6.18	7.31	8.49	9.64	10.78	11.94	13.12	14.57	5 / 2															
reaction time	0.140	interval		1.14	1.16	1.14	1.13	1.18	1.15	1.14	1.16	1.18	1.45				3.44	3.46	3.48										
wind	0.3 m/s	velocity	5.01	8.02	7.88	8.02	8.09	7.75	7.95	8.02	7.88	7.75	9.67	7.55			7.97	7.92	7.88										
Boussemart, Pascal (FRA) (1959)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 1986 French National Indoor Championships (Lieviv, FRA)														<i>Aubert (1986) - indoor - video - haies, etude des performances</i>															
date	26-Jan-86	time	2.63	3.69	4.83	6.00	7.14						8.11	/ 6															
reaction time		interval		1.06	1.14	1.17	1.14						0.97				3.37												
wind		velocity	5.22	8.62	8.02	7.81	8.02						10.02	7.40			8.14												
Semi-Final ? - 1986 French National Indoor Championships (Lieviv, FRA)														<i>Aubert (1986) - indoor - video - haies, etude des performances</i>															
date	26-Jan-86	time	2.62	3.73	4.83	5.93	7.02						7.94	/ 6															
reaction time		interval		1.11	1.10	1.10	1.09						0.92				3.31												
wind		velocity	5.24	8.23	8.31	8.31	8.39						10.57	7.56			8.28												

Heat ? - 1986 French National Indoor Championships (Lievin, FRA)												<i>Aubert (1986) - indoor - video - haies, etude des performances</i>					
date	25-Jan-86	time	2.64	3.75	4.83	5.91	6.98					7.94	/6				
reaction time		interval	1.11	1.08	1.08	1.07					0.96		3.27				
		velocity	5.20	8.23	8.46	8.46	8.54					10.13	7.56	8.39			
Bownes, Shaun (RSA) (1970)																	
		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Heat 2 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)												<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>					
date	24-Jun-24	time	2.60	3.63	4.66	5.73	6.78	7.83	8.90	9.95	11.03	12.13	13.63	3 / 7			
reaction time		interval	7 steps	1.03	1.03	1.07	1.05	1.05	1.07	1.05	1.08	1.10	1.50				
wind	-0.3 m/s	velocity	5.28	8.87	8.87	8.54	8.70	8.70	8.54	8.70	8.46	8.31	9.35	8.07	3.13	3.17	3.23
Bownes, Shaun (RSA) (1970)																	
		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2002 IAAF World Cup (Madrid, ESP)												<i>Sanchez (2002) - copa del mundo de Madrid '02: análisis de la carreras con villas</i>					
date	21-Sep-02	time	2.58	3.62	4.65	5.66	6.69	7.75	8.83	9.89	10.97	12.07	13.67	1 / 4			
reaction time	0.146	interval	7 steps	1.04	1.03	1.01	1.03	1.06	1.08	1.06	1.08	1.10	1.60				
wind	-2.2 m/s	velocity	5.32	8.79	8.87	9.05	8.87	8.62	8.46	8.62	8.46	8.31	8.76	8.05	3.08	3.17	3.24
Brackins, Johnny (USA) (2003)																	
		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2024 NCAA Championships (Eugene, OR) (TV Analysis)												<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>					
date	07-Jun-24	time	2.53	3.60	4.64	5.71	6.77	7.82	8.91	10.01	11.06	12.18	13.63	7 / 9			
reaction time		interval	7 steps	1.07	1.04	1.07	1.06	1.05	1.09	1.10	1.05	1.12	1.45				
wind	0.1 m/s	velocity	5.42	8.54	8.79	8.54	8.62	8.70	8.39	8.31	8.70	8.16	9.67	8.07	3.18	3.20	3.27
Bramlett, Ron (USA) (1979)																	
		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Heat 3 - 2007 USATF National Championships (Indianapolis, IN)												<i>USATF Men's Hurdle Development (2007)</i>					
date	23-Jun-07	time	2.62	3.67	4.75	5.84	6.89	7.97	9.05	10.13	11.21	12.31	13.81	2 / 3			
reaction time		interval	1.05	1.08	1.09	1.05	1.08	1.08	1.08	1.08	1.10	1.50					
wind	-3.2 m/s	velocity	5.24	8.70	8.46	8.39	8.70	8.46	8.46	8.46	8.46	8.31	9.35	7.97	8.52	8.54	8.41
FINAL - 2005 USATF National Championships (Carson, CA)												<i>USATF Women's Sprint Development (2005)</i>					
date	24-Jun-05	time	2.59	3.62	4.71	5.73	6.74	7.78	8.83	9.87	10.92	12.01	13.58	9 / 9			
reaction time		interval	1.03	1.09	1.02	1.01	1.04	1.05	1.04	1.05	1.09	1.57					
wind	0.2 m/s	velocity	5.30	8.87	8.39	8.96	9.05	8.79	8.70	8.79	8.70	8.39	8.93	8.10	3.14	3.10	3.18
FINAL - 2003 USATF National Championships (Palo Alto, CA)												<i>USATF Women's Sprint Development (2003)</i>					
date	21-Jun-03	time	2.39	3.47	4.51	5.57	6.61	7.66	8.69	9.73	10.83	11.95	13.66	2 / 5			
reaction time		interval	1.08	1.04	1.06	1.04	1.05	1.03	1.04	1.10	1.12	1.71					
wind	-2.4 m/s	velocity	5.74	8.46	8.79	8.62	8.79	8.70	8.87	8.79	8.31	8.16	8.20	8.05	3.18	3.12	3.26
Braithwaite, Ryan (BAR) (1988)																	
		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2012 Memorial Van Damme (Brussels, BEL) (TV Analysis)												<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>					
date	07-Sep-12	time	2.48	3.52	4.56	5.56	6.56	7.56	8.58	9.62	10.70	11.80	13.39	9 / 8			
reaction time	0.156	interval	1.04	1.04	1.00	1.00	1.00	1.02	1.04	1.08	1.10	1.59					
wind	0.3 m/s	velocity	5.53	8.79	8.79	9.14	9.14	9.14	8.96	8.79	8.46	8.31	8.82	8.22	3.08	3.02	3.22
FINAL - 2012 AVIVA Grand Prix (Birmingham, GBR) (TV Analysis)												<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>					
date	26-Aug-12	time	2.52	3.56	4.60	5.62	6.60	7.70	8.74	9.76	10.80	11.86	13.42	7 / 5			
reaction time	0.160	interval	1.04	1.04	1.02	0.98	1.10	1.04	1.02	1.04	1.06	1.56					
wind	-0.9 m/s	velocity	5.44	8.79	8.79	8.96	9.33	8.31	8.79	8.96	8.79	8.62	8.99	8.20	3.10	3.12	3.12
FINAL - 2012 Olympic Games (London, GBR) (TV Analysis)												<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>					
date	08-Aug-12	time	2.48	3.56	4.60	5.62	6.62	7.66	8.70	9.78	10.82	11.90	13.40	8 / 5			
reaction time	0.163	interval	1.08	1.04	1.02	1.00	1.04	1.04	1.04	1.08	1.04	1.08	1.50				
wind	-0.3 m/s	velocity	5.53	8.46	8.79	8.96	9.14	8.79	8.79	8.46	8.79	8.46	9.35	8.21	3.14	3.08	3.20
Semi-Final 2 - 2012 Olympic Games (London, GBR) (TV Analysis)												<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>					
date	08-Aug-12	time	2.48	3.50	4.52	5.52	6.52	7.54	8.56	9.58	10.60	11.70	13.23	4 / 2			
reaction time	0.159	interval	1.02	1.02	1.00	1.00	1.02	1.02	1.02	1.02	1.02	1.10	1.53				
wind	0.1 m/s	velocity	5.53	8.96	8.96	9.14	9.14	8.96	8.96	8.96	8.96	8.31	9.16	8.31	3.04	3.04	3.14
FINAL - 2009 IAAF World Championships (Berlin, GER)												<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>					
date	20-Aug-09	time	2.54	3.60	4.61	5.60	6.59	7.60	8.62	9.65	10.70	11.74	13.14	4 / 1			
reaction time	0.157	interval	1.06	1.01	0.99	0.99	1.01	1.02	1.03	1.05	1.04	1.40	NR				
wind	0.1 m/s	velocity	5.40	8.62	9.05	9.23	9.23	9.05	8.96	8.87	8.70	8.79	10.01	8.37	3.06	3.02	3.12
Semi-Final 2 - 2009 IAAF World Championships (Berlin, GER)												<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>					
date	20-Aug-09	time	2.57	3.59	4.62	5.63	6.63	7.63	8.65	9.69	10.73	11.79	13.18	4 / 1			
reaction time	0.169	interval	1.02	1.03	1.01	1.00	1.00	1.02	1.04	1.04	1.06	1.39	NR				
wind	0.6 m/s	velocity	5.34	8.96	8.87	9.05	9.14	9.14	8.96	8.79	8.79	8.62	10.09	8.35	3.06	3.02	3.14
Heat 4 - 2009 IAAF World Championships (Berlin, GER)												<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>					
date	19-Aug-09	time	2.57	3.62	4.63	5.64	6.65	7.67	8.71	9.80	10.85	11.91	13.35	2 / 1			

reaction time	0.149	interval	1.05	1.01	1.01	1.01	1.02	1.04	1.09	1.05	1.06	1.44		3.07	3.07	3.20		
wind	0.5 m/s	velocity	5.34	8.70	9.05	9.05	8.96	8.79	8.39	8.70	8.62	9.74	8.24	8.93	8.93	8.57		
Brathwaite, Shane (BAR) (1990)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2022 NACAC Championships (Freeport, BAH) (TV Analysis)													<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>					
date	20-Aug-22	time	2.50	3.56	4.56	5.57	6.60	7.60	8.63	9.70	10.76	11.83		13.42	5 / 4			
reaction time		interval		1.06	1.00	1.01	1.03	1.00	1.03	1.07	1.06	1.07	1.59			3.07	3.06	3.20
wind	0.3 m/s	velocity	5.49	8.62	9.14	9.05	8.87	9.14	8.87	8.54	8.62	8.54	8.82	8.20		8.93	8.96	8.57
FINAL - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)													<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>					
date	17-Jul-22	time	2.48	3.56	4.60	5.60	6.63	7.65							dnf	1 / --		
reaction time	0.108	interval	7 steps	1.08	1.04	1.00	1.03	1.02									3.12	
wind	1.2 m/s	velocity	5.53	8.46	8.79	9.14	8.87	8.96									8.79	
Semi-Final 3 - 2022 World Athletics Championships (Eugene, OR)													<i>Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season</i>					
date	17-Jul-22	time	2.55	3.58	4.60	5.60	6.59	7.60	8.63	9.65	10.71	11.76		13.21	8 / 3			
reaction time	0.115	interval	7 steps	1.03	1.02	1.00	0.99	1.01	1.03	1.02	1.06	1.05	1.45			3.05	3.03	3.13
wind	2.5 m/s	velocity	5.38	8.87	8.96	9.14	9.23	9.05	8.87	8.96	8.62	8.70	9.67	8.33		8.99	9.05	8.76
Heat 4 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)													<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>					
date	16-Jul-22	time	2.56	3.66	4.70	5.73	6.73	7.76	8.80	9.83	10.90	11.96		13.47	3 / 4			
reaction time	0.134	interval	7 steps	1.10	1.04	1.03	1.00	1.03	1.04	1.03	1.07	1.06	1.51			3.17	3.07	3.16
wind	0.2 m/s	velocity	5.36	8.31	8.79	8.87	9.14	8.87	8.79	8.87	8.54	8.62	9.28	8.17		8.65	8.93	8.68
FINAL - 2022 New York Grand Prix (New York, NY) (TV Analysis)													<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>					
date	12-Jun-22	time	2.52	3.57	4.60	5.62	6.63	7.63	8.68	9.72	10.78	11.84		13.40	8 / 5			
reaction time	0.133	interval		1.05	1.03	1.02	1.01	1.00	1.05	1.04	1.06	1.06	1.56			3.10	3.06	3.16
wind	1.6 m/s	velocity	5.44	8.70	8.87	8.96	9.05	9.14	8.70	8.79	8.62	8.62	8.99	8.21		8.85	8.96	8.68
FINAL - 2021 Golden Gala Pietro Mennea (Florence, ITA) (TV Analysis)													<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>					
date	10-Jun-21	time	2.50	3.56	4.60	5.64	6.66	7.68	8.74	9.80	10.86	11.94		13.46	1 / 5			
reaction time	0.122	interval		1.06	1.04	1.04	1.02	1.02	1.06	1.06	1.06	1.08	1.52			3.14	3.10	3.20
wind	-0.1 m/s	velocity	5.49	8.62	8.79	8.79	8.96	8.96	8.62	8.62	8.62	8.46	9.22	8.17		8.73	8.85	8.57
FINAL - 2019 IAAF World Championships (Doha, QAT)													<i>CAA Hurdle Development (2019)</i>					
date	02-Oct-19	time	2.62	3.68	4.78	5.85	6.91	7.96	8.99	10.04	11.09	12.15		13.61	1 / 6			
reaction time	0.149	interval		1.06	1.10	1.07	1.06	1.05	1.03	1.05	1.05	1.06	1.46			3.23	3.14	3.16
wind	0.6 m/s	velocity	5.24	8.62	8.31	8.54	8.62	8.70	8.87	8.70	8.70	8.62	9.60	8.08		8.49	8.73	8.68
Semi-Final 1 - 2019 IAAF World Championships (Doha, QAT)													<i>CAA Hurdle Development (2019)</i>					
date	02-Oct-19	time	2.62	3.68	4.70	5.72	6.74	7.76	8.79	9.86	10.92	12.12		14.29	8 / 8 7			
reaction time	0.169	interval		1.06	1.02	1.02	1.02	1.02	1.03	1.07	1.06	1.20	2.17			3.10	3.07	3.33
wind	1.1 m/s	velocity	5.24	8.62	8.96	8.96	8.96	8.96	8.87	8.54	8.62	7.62	6.46	7.70		8.85	8.93	8.23
Heat 2 - 2019 IAAF World Championships (Doha, QAT)													<i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>					
date	30-Sep-19	time	2.62	3.65	4.72	5.73	6.76	7.81	8.84	9.88	10.96	12.04		13.51	3 / 4			
reaction time	0.156	interval		1.03	1.07	1.01	1.03	1.05	1.03	1.04	1.08	1.08	1.47			3.11	3.11	3.20
wind	0.5 m/s	velocity	5.24	8.87	8.54	9.05	8.87	8.70	8.87	8.79	8.46	8.46	9.54	8.14		8.82	8.82	8.57
FINAL - 2019 ISTAF (Berlin, GER) (TV Analysis)													<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>					
date	01-Sep-19	time	2.53	3.58	4.61	5.63	6.65	7.65	8.68	9.75	10.80	11.86		13.36	1 / 3			
reaction time	0.125	interval		1.05	1.03	1.02	1.02	1.00	1.03	1.07	1.05	1.06	1.50			3.10	3.05	3.18
wind	0.8 m/s	velocity	5.42	8.70	8.87	8.96	8.96	9.14	8.87	8.54	8.70	8.62	9.35	8.23		8.85	8.99	8.62
FINAL - 2019 Pan American Games (Lima, PER) (TV Analysis)													<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>					
date	10-Aug-19	time	2.63	3.68	4.72	5.74	6.74	7.77	8.79	9.81	10.84	11.89		13.31	7 / 1			
reaction time	0.153	interval		1.05	1.04	1.02	1.00	1.03	1.02	1.02	1.03	1.05	1.42			3.11	3.05	3.10
wind	1.8 m/s	velocity	5.22	8.70	8.79	8.96	9.14	8.87	8.96	8.96	8.87	8.70	9.87	8.26		8.82	8.99	8.85
FINAL - 2018 Müller Anniversary Games (London, GBR) (TV Analysis)													<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>					
date	22-Jul-18	time	2.56	3.62	4.66	5.68	6.70	7.74	8.78	9.84	10.88	11.96		13.41	9 / 6			
reaction time	0.119	interval	7 steps	1.06	1.04	1.02	1.02	1.04	1.04	1.06	1.04	1.08	1.45			3.12	3.10	3.18
wind	0.2 m/s	velocity	5.36	8.62	8.79	8.96	8.96	8.79	8.79	8.62	8.79	8.46	9.67	8.20		8.79	8.85	8.62
FINAL - 2017 Memorial van Damme (Brussels, BEL) (TV Analysis)													<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>					
date	01-Sep-17	time	2.54	3.60	4.64	5.66	6.70	7.74	8.78	9.84	10.92	12.00		13.49	3 / 8			
reaction time	0.141	interval	7 steps	1.06	1.04	1.02	1.04	1.04	1.04	1.06	1.08	1.08	1.49			3.12	3.12	3.22
wind	0.5 m/s	velocity	5.40	8.62	8.79	8.96	8.79	8.79	8.79	8.62	8.46	8.46	9.41	8.15		8.79	8.79	8.52
FINAL - 2017 IAAF World Championships (London, GBR)													<i>Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles</i>					
date	07-Aug-17	time	2.43	3.47	4.52	5.58	6.61	7.62	8.64	9.67	10.72	11.77		13.32	7 / 6			
reaction time	0.169	interval	7 steps	1.04	1.05	1.06	1.03	1.01	1.02	1.03	1.05	1.05	1.55			3.15	3.06	3.13
wind	0.0 m/s	velocity	5.65	8.79	8.70	8.62	8.87	9.05	8.96	8.87	8.70	8.70	9.05	8.26		8.70	8.96	8.76

Semi-Final 2 - 2017 IAAF World Championships (London, GBR)*Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles*

date	06-Aug-17	time	2.40	3.44	4.46	5.49	6.52	7.53	8.56	9.61	10.65	11.72	13.26	5 / 1				
reaction time	0.179	interval	7 steps	1.04	1.02	1.03	1.03	1.01	1.03	1.05	1.04	1.07	1.54		3.09	3.07	3.16	
wind	0.6 m/s	velocity	5.72	8.79	8.96	8.87	8.87	9.05	8.87	8.70	8.79	8.54	9.10	8.30	8.87	8.93	8.68	

FINAL - 2017 Müller's Anniversary Games (London, GBR) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date	09-Jul-17	time	2.52	3.60	4.60	5.62	6.64	7.66	8.70	9.74	10.80	11.84	13.27	8 / 3			
reaction time	0.135	interval	7 steps	1.08	1.00	1.02	1.02	1.02	1.04	1.04	1.06	1.04	1.43		3.10	3.08	3.14
wind	0.0 m/s	velocity	5.44	8.46	9.14	8.96	8.96	8.96	8.79	8.79	8.62	8.79	9.80	8.29	8.85	8.90	8.73

FINAL - 2017 István Gyulai Memorial (Székesfehérvár, HUN) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date	04-Jul-17	time	2.52	3.56	4.62	5.64	6.66	7.70	8.76	9.80	10.86	11.94	13.39	7 / 7			
reaction time	0.146	interval	7 steps	1.04	1.06	1.02	1.02	1.04	1.06	1.04	1.06	1.08	1.45		3.12	3.12	3.18
wind	0.3 m/s	velocity	5.44	8.79	8.62	8.96	8.96	8.79	8.62	8.79	8.62	8.46	9.67	8.22	8.79	8.79	8.62

FINAL - 2017 Bauhaus Athletics (Stockholm, SWE) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date	18-Jun-17	time	2.48	3.56	4.56	5.58	6.60	7.64	8.66	9.68	10.72	11.78	13.25	1 / 3			
reaction time	0.134	interval	7 steps	1.08	1.00	1.02	1.02	1.04	1.02	1.02	1.04	1.06	1.47		3.10	3.08	3.12
wind	3.5 m/s	velocity	5.53	8.46	9.14	8.96	8.96	8.79	8.96	8.96	8.79	8.62	9.54	8.30	8.85	8.90	8.79

FINAL - 2016 Golden Gala Pietro Mennea (Roma, ITA) (TV Analysis)*Henson (2020) - Athlete First: 2016 year end hurdle report*

date	02-Jun-16	time	2.52	3.58	4.62	5.66	6.70	7.74	8.80	9.86	10.96	12.10	13.64	3 / 4			
reaction time	0.133	interval	7 steps	1.06	1.04	1.04	1.04	1.04	1.06	1.06	1.10	1.14	1.54		3.14	3.14	3.30
wind	0.6 m/s	velocity	5.44	8.62	8.79	8.79	8.79	8.79	8.62	8.62	8.31	8.02	9.10	8.06	8.73	8.73	8.31

Braverman, Josh (USA) (1998)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Semi-Final 1** - 2022 USATF National Championships (Eugene, OR)*USATF (2022) - Results powered by Karmarush.com*

date	26-Jun-22	time	2.49	3.52	4.63	5.59	6.66	7.70	8.73	9.80	10.86	11.89	13.43	8 / 6			
reaction time		interval		1.03	1.11	0.96	1.07	1.04	1.03	1.07	1.06	1.03	1.54		3.10	3.14	3.16
wind	0.4 m/s	velocity	5.51	8.87	8.23	9.52	8.54	8.79	8.87	8.54	8.62	8.87	9.10	8.19	8.85	8.73	8.68

Britt, Jamal (USA) (1998)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Heat 2** - 2024 Meeting de Paris (Paris, FRA)*Omega Timing (2024) - diamond league race analysis*

date	07-Jul-24	time	2.42	3.50	4.53	5.56	6.57	7.60	8.64	9.72	10.88	12.30	15.73	5 / 8			
reaction time	0.153	interval	7 steps	1.08	1.03	1.03	1.01	1.03	1.04	1.08	1.16	1.42	3.43		3.14	3.08	3.66
wind	0.4 m/s	velocity	5.67	8.46	8.87	8.87	9.05	8.87	8.79	8.46	7.88	6.44	4.09	6.99	8.73	8.90	7.49

Heat 4 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)*Henson (2024) - Athlete First: 2024 year end hurdle report*

date	24-Jun-24	time	2.53	3.56	4.62	5.63	6.61	7.60	8.60	9.62	10.64	11.70	13.07	4 / 1			
reaction time		interval	7 steps	1.03	1.06	1.01	0.98	0.99	1.00	1.02	1.02	1.06	1.37	PB	3.10	2.97	3.10
wind	1.2 m/s	velocity	5.42	8.87	8.62	9.05	9.33	9.23	9.14	8.96	8.96	8.62	10.23	8.42	8.85	9.23	8.85

FINAL - 2024 Prefontaine Classic (Eugene, OR)*Omega Timing (2024) - diamond league race analysis*

date	25-May-24	time	2.44	3.50	4.53	5.54	6.55	7.58	8.62	9.67	10.71	11.79	13.36	9 / 8			
reaction time	0.149	interval	7 steps	1.06	1.03	1.01	1.01	1.03	1.04	1.05	1.04	1.08	1.57		3.10	3.08	3.17
wind	-0.1 m/s	velocity	5.62	8.62	8.87	9.05	9.05	8.87	8.79	8.70	8.79	8.46	8.93	8.23	8.85	8.90	8.65

FINAL - 2024 Yangtze River Delta Athletics Diamond Gala (Suzhou, CHN) (TV Analysis)*Omega Timing (2024) - diamond league race analysis*

date	27-Apr-24	time	2.54	3.60	4.67	5.70	6.74	7.77	8.84	9.91	10.96	12.08	13.58	1 / 8			
reaction time	0.128	interval	7 steps	1.06	1.07	1.03	1.04	1.03	1.07	1.07	1.05	1.12	1.50		3.16	3.14	3.24
wind	0.8 m/s	velocity	5.40	8.62	8.54	8.87	8.79	8.87	8.54	8.54	8.70	8.16	9.35	8.10	8.68	8.73	8.46

FINAL - 2023 Prefontaine Classic (Eugene, OR)*Omega Timing (2023) - diamond league race analysis*

date	17-Sep-23	time	2.41	3.49	4.52	5.55	6.58	7.59	8.62	9.66	10.71	11.78	13.36	9 / 8			
reaction time	0.140	interval	7 steps	1.08	1.03	1.03	1.03	1.01	1.03	1.04	1.05	1.07	1.58		3.14	3.07	3.16
wind	0.9 m/s	velocity	5.69	8.46	8.87	8.87	8.87	9.05	8.87	8.79	8.70	8.54	8.87	8.23	8.73	8.93	8.68

FINAL - 2023 London Athletics Meet (London, GBR)*Omega Timing (2023) - diamond league race analysis*

date	23-Jul-23	time	2.39	3.46	4.50	5.50	6.51	7.52	8.54	9.57	10.62	11.68	13.25	6 / 3			
reaction time	0.145	interval	7 steps	1.07	1.04	1.00	1.01	1.01	1.02	1.03	1.05	1.06	1.57		3.11	3.04	3.14
wind	1.3 m/s	velocity	5.74	8.54	8.79	9.14	9.05	9.05	8.96	8.87	8.70	8.62	8.93	8.30	8.82	9.02	8.73

FINAL - 2023 USATF National Championships (Eugene, OR) (TV Analysis)*Henson (2023) - Athlete First: 2023 year end hurdle report*

date	09-Jul-23	time	2.52	3.57	4.60	5.62	6.64	7.66	8.69	9.72	10.76	11.84	13.31	8 / 6			
reaction time		interval	7 steps	1.05	1.03	1.02	1.02	1.02	1.03	1.03	1.04	1.08	1.47		3.10	3.07	3.15
wind	-0.2 m/s	velocity	5.44	8.70	8.87	8.96	8.96	8.96	8.87	8.87	8.79	8.46	9.54	8.26	8.85	8.93	8.70

FINAL - 2023 USATF New York City Grand Prix (Randalls Island, NY) (TV Analysis)*Henson (2023) - Athlete First: 2023 year end hurdle report*

date	24-Jun-23	time	2.52	3.57	4.60	5.61	6.61	7.65	8.67	9.71	10.74	11.79	13.19	7 / 3			
reaction time	0.169	interval	7 steps	1.05	1.03	1.01	1.00	1.04	1.02	1.04	1.03	1.05	1.40		3.09	3.06	3.12
wind	1.6 m/s	velocity	5.44	8.70	8.87	9.05	9.14	8.79	8.96	8.79	8.87	8.70	10.01	8.34	8.87	8.96	8.79

FINAL - 2023 Meeting de Paris (Paris, FRA)

date	09-Jun-23	time	2.37	3.43	4.46	5.46	6.47	7.47	8.48	9.50	10.52	11.57	
reaction time	0.141	interval	7 steps	1.06	1.03	1.00	1.01	1.00	1.01	1.02	1.02	1.05	1.57
wind	-0.5 m/s	velocity	5.79	8.62	8.87	9.14	9.05	9.14	9.05	8.96	8.96	8.70	8.93

Omega Timing (2023) - diamond league race analysis

13.14 5 / 3

3.09 3.02 3.09

8.87 9.08 8.87

Heat 2 - 2023 Meeting de Paris (Paris, FRA)

date	09-Jun-23	time	2.37	3.42	4.45	5.46	6.47	7.49	8.53	9.56	10.61	11.66	
reaction time	0.136	interval	7 steps	1.05	1.03	1.01	1.01	1.02	1.04	1.03	1.05	1.05	1.55
wind	-0.6 m/s	velocity	5.79	8.70	8.87	9.05	9.05	8.96	8.79	8.87	8.70	8.70	9.05

Omega Timing (2023) - diamond league race analysis

13.21 4 / 2

3.09 3.07 3.13

8.87 8.93 8.76

FINAL - 2023 Golden Gala Pietro Mennea (Firenze, ITA) (TV Analysis)

date	02-Jun-23	time	2.48	3.56	4.54	5.56	6.60	7.62	8.65	9.72	10.77	11.83	
reaction time	0.134	interval	7 steps	1.08	0.98	1.02	1.04	1.02	1.03	1.07	1.05	1.06	1.43
wind	-0.2 m/s	velocity	5.53	8.46	9.33	8.96	8.79	8.96	8.87	8.54	8.70	8.62	9.80

Henson (2023) - Athlete First: 2023 year end hurdle report

13.26 7 / 4

3.08 3.09 3.18

8.90 8.87 8.62

FINAL - 2023 USATF Bermuda Grand Prix (Devonshire, BER) (TV Analysis)

date	21-May-23	time	2.50	3.52	4.53	5.53	6.52	7.52	8.53	9.55	10.60	11.65	
reaction time	0.124	interval	7 steps	1.02	1.01	1.00	0.99	1.00	1.01	1.02	1.05	1.05	1.34
wind	4.0 m/s	velocity	5.49	8.96	9.05	9.14	9.23	9.14	9.05	8.96	8.70	8.70	10.46

Henson (2023) - Athlete First: 2023 year end hurdle report

12.99 6 / 1

3.03 3.00 3.12

9.05 9.14 8.79

FINAL - 2023 Adidas Atlanta City Games (Atlanta, GA) (street) (TV Analysis)

date	05-May-23	time	2.52	3.57	4.60	5.60	6.60	7.60	8.62	9.65	10.68	11.73	
reaction time	0.188	interval	7 steps	1.05	1.03	1.00	1.00	1.00	1.02	1.03	1.03	1.05	1.41
wind	0.0 m/s	velocity	5.44	8.70	8.87	9.14	9.14	9.14	8.96	8.87	8.87	8.70	9.94

Henson (2023) - Athlete First: 2023 year end hurdle report

13.14 4 / 3

3.08 3.02 3.11

8.90 9.08 8.82

FINAL - 2022 NACAC Championships (Freeport, BAH) (TV Analysis)

date	20-Aug-22	time	2.48	3.53	4.53	5.55	6.55	7.55	8.57	9.60	10.62	11.67	
reaction time		interval	7 steps	1.05	1.00	1.02	1.00	1.00	1.02	1.03	1.02	1.05	1.41
wind	0.3 m/s	velocity	5.53	8.70	9.14	8.96	9.14	9.14	8.96	8.87	8.96	8.70	9.94

Henson (2022) - Athlete First: 2022 year end hurdle report

13.08 7 / 2

3.07 3.02 3.10

8.93 9.08 8.85

FINAL - 2022 USATF National Championships (Eugene, OR) (TV Analysis)

date	26-Jun-22	time	2.50	3.55	4.55	5.55	6.55	7.55	8.56	9.57	10.62	11.66	
reaction time		interval	7 steps	1.05	1.00	1.00	1.00	1.00	1.01	1.01	1.05	1.04	1.43
wind	1.2 m/s	velocity	5.49	8.70	9.14	9.14	9.14	9.14	9.05	9.05	8.70	8.79	9.80

Henson (2022) - Athlete First: 2022 year end hurdle report

13.09 3 / 4

3.05 3.01 3.10

8.99 9.11 8.85

Semi-Final 2 - 2022 USATF National Championships (Eugene, OR)

date	26-Jun-22	time	2.51	3.53	4.57	5.60	6.61	7.64	8.65	9.72	10.67	11.77	
reaction time		interval	7 steps	1.02	1.04	1.03	1.01	1.03	1.01	1.07	0.95	1.10	1.48
wind	0.1 m/s	velocity	5.47	8.96	8.79	8.87	9.05	8.87	9.05	8.54	9.62	8.31	9.47

USATF (2022) - Results powered by Karmarush.com

13.25 7 / 3

3.09 3.05 3.12

8.87 8.99 8.79

FINAL - 2022 New York Grand Prix (New York, NY) (TV Analysis)

date	12-Jun-22	time	2.43	3.52	4.53	5.55	6.55	7.58	8.62	9.65	10.72	11.76	
reaction time	0.139	interval	7 steps	1.09	1.01	1.02	1.00	1.03	1.04	1.03	1.07	1.04	1.46
wind	1.6 m/s	velocity	5.65	8.39	9.05	8.96	9.14	8.87	8.79	8.87	8.54	8.79	9.60

Henson (2022) - Athlete First: 2022 year end hurdle report

13.22 3 / 4

3.12 3.07 3.14

8.79 8.93 8.73

FINAL - 2020 USA Olympic Trials (Eugene, OR) (TV Analysis)

date	26-Jun-21	time	2.47	3.53	4.57	5.60	6.64	7.67	8.72	9.77	10.85	11.95	
reaction time	0.158	interval	7 steps	1.06	1.04	1.03	1.04	1.03	1.05	1.05	1.08	1.10	1.52
wind	0.4 m/s	velocity	5.55	8.62	8.79	8.87	8.79	8.87	8.70	8.70	8.46	8.31	9.22

Henson (2021) - Athlete First: 2021 year end hurdle report

13.47 7 / 7

3.13 3.12 3.23

8.76 8.79 8.49

Semi-Final 1 - 2020 USA Olympic Trials (Eugene, OR) (TV Analysis)

date	26-Jun-21	time	2.47	3.53	4.55	5.55	6.57	7.58	8.62	9.67	10.73	11.81	
reaction time	0.147	interval	7 steps	1.06	1.02	1.00	1.02	1.01	1.04	1.05	1.06	1.08	1.46
wind	1.8 m/s	velocity	5.55	8.62	8.96	9.14	8.96	9.05	8.79	8.70	8.62	8.46	9.60

Henson (2021) - Athlete First: 2021 year end hurdle report

13.27 3 / 3

3.08 3.07 3.19

8.90 8.93 8.60

FINAL - 2021 NCAA Championships (Eugene, OR) (TV Analysis)

date	11-Jun-21	time	2.57	3.63	4.67	5.70	6.70	7.73	8.77	9.83	10.87	11.97	
reaction time	0.203	interval	7 steps	1.06	1.04	1.03	1.00	1.03	1.04	1.06	1.04	1.10	1.48
wind	-0.6 m/s	velocity	5.34	8.62	8.79	8.87	9.14	8.87	8.79	8.62	8.79	8.31	9.47

Henson (2021) - Athlete First: 2021 year end hurdle report

13.45 8 / 4

3.13 3.07 3.20

8.76 8.93 8.57

Brixey, Sam (USA) (1998)

			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Semi-Final 1 - 2021 USA Olympic Trials (Eugene, OR) (TV Analysis)																		
date	26-Jun-21	time	2.50	3.58	4.67	5.70	6.77	7.86	8.99	10.11	11.21	12.38		13.99	9 / 9			
reaction time	0.148	interval	7 steps	1.08	1.09	1.03	1.07	1.09	1.13	1.12	1.10	1.17	1.61			3.20	3.29	3.39
wind	1.8 m/s	velocity	5.49	8.46	8.39	8.87	8.54	8.39	8.09	8.16	8.31	7.81	8.71	7.86		8.57	8.33	8.09

Henson (2021) - Athlete First: 2021 year end hurdle report

FINAL - 2020 Don Kirby Elite Invitational (Albuquerque, NM) (Altitude)

date	14-Feb-20	time	2.55	3.59	4.64	5.71	6.76								7.72	4 / 1		
reaction time		interval	7 steps	1.04	1.05	1.07	1.05						0.96				3.16	
		velocity	5.38	8.79	8.70	8.54	8.70						10.13	7.77			8.68	

CAA Hurdle Development (2020)

Broadbell, Rasheed (JAM) (2000)

			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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FINAL - 2024 Kamila Skolimowska Memorial (Silesia, POL)																		
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Omega Timing (2024) - diamond league race analysis

date	25-Aug-24	time	2.40	3.46	4.44	5.46	6.46	7.45	8.45	9.49	10.52	11.54		13.05	5 / 2			
reaction time	0.152	interval	7 steps	1.06	0.98	1.02	1.00	0.99	1.00	1.04	1.03	1.02	1.51			3.06	2.99	3.09
wind	1.1 m/s	velocity	5.72	8.62	9.33	8.96	9.14	9.23	9.14	8.79	8.87	8.96	9.28	8.43		8.96	9.17	8.87
FINAL - 2024 Athletissima (Lausanne, SUI)															<i>Omega Timing (2024) - diamond league race analysis</i>			
date	22-Aug-24	time	2.36	3.43	4.45	5.45	6.46	7.47	8.49	9.51	10.53	11.57		13.10	3 / 1			
reaction time	0.138	interval	7 steps	1.07	1.02	1.00	1.01	1.01	1.02	1.02	1.02	1.04	1.53			3.09	3.04	3.08
wind	-0.1 m/s	velocity	5.81	8.54	8.96	9.14	9.05	9.05	8.96	8.96	8.96	8.79	9.16	8.40		8.87	9.02	8.90
FINAL - 2024 Olympic Games (Paris, FRA)															<i>Paris 2024 Olympc Games - Results Book (2024)</i>			
date	08-Aug-24	time	2.40	3.48	4.49	5.50	6.50	7.50	8.52	9.52	10.54	11.57		13.09	5 / 3			
reaction time	0.144	interval	7 steps	1.08	1.01	1.01	1.00	1.00	1.02	1.00	1.02	1.03	1.52			3.10	3.02	3.05
wind	-0.1 m/s	velocity	5.72	8.46	9.05	9.05	9.14	9.14	8.96	9.14	8.96	8.87	9.22	8.40		8.85	9.08	8.99
Semi-Final 2 - 2024 Olympic Games (Paris, FRA)															<i>Paris 2024 Olympc Games - Results Book (2024)</i>			
date	07-Aug-24	time	2.38	3.44	4.48	5.51	6.53	7.54	8.56	9.59	10.64	11.69		13.21	6 / 1			
reaction time	0.151	interval	7 steps	1.06	1.04	1.03	1.02	1.01	1.02	1.03	1.05	1.05	1.52			3.13	3.05	3.13
wind	-0.1 m/s	velocity	5.76	8.62	8.79	8.87	8.96	9.05	8.96	8.87	8.70	8.70	9.22	8.33		8.76	8.99	8.76
Heat 5 - 2024 Olympic Games (Paris, FRA)															<i>Paris 2024 Olympc Games - Results Book (2024)</i>			
date	04-Aug-24	time	2.42	3.51	4.57	5.62	6.65	7.68	8.70	9.73	10.77	11.84		13.42	8 / 2			
reaction time	0.151	interval	7 steps	1.09	1.06	1.05	1.03	1.03	1.02	1.03	1.04	1.07	1.58			3.20	3.08	3.14
wind	0.7 m/s	velocity	5.67	8.39	8.62	8.70	8.87	8.87	8.96	8.87	8.79	8.54	8.87	8.20		8.57	8.90	8.73
FINAL - 2023 Jamaican National Championships (Kingston, JAM) (TV Analysis)															<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>			
date	09-Jul-23	time	2.50	3.55	4.55	5.53	6.53	7.53	8.50	9.50	10.48	11.48		12.94	3 / 1			
reaction time		interval	7 steps	1.05	1.00	0.98	1.00	1.00	0.97	1.00	0.98	1.00	1.46	PB		3.03	2.97	2.98
wind	0.7 m/s	velocity	5.49	8.70	9.14	9.33	9.14	9.14	9.42	9.14	9.33	9.14	9.60	8.50		9.05	9.23	9.20
FINAL - 2023 Meeting International Mohammed VI d'Athlétisme (Rabat, MAR)															<i>Omega Timing (2023) - diamond league race analysis</i>			
date	28-May-23	time	2.41	3.46	4.47	5.48	6.49	7.50	8.51	9.51	10.53	11.55		13.08	5 / 1			
reaction time	0.161	interval	7 steps	1.05	1.01	1.01	1.01	1.01	1.01	1.00	1.02	1.02	1.53			3.07	3.03	3.04
wind	-1.3 m/s	velocity	5.69	8.70	9.05	9.05	9.05	9.05	9.05	9.14	8.96	8.96	9.16	8.41		8.93	9.05	9.02
FINAL - 2022 Weltklasse (Zürich, SUI) (TV Analysis)															<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>			
date	08-Sep-22	time	2.44	3.47	4.48	5.47	6.45	7.48	8.50	9.52	10.61	11.64		13.06	7 / 2			
reaction time	0.149	interval	7 steps	1.03	1.01	0.99	0.98	1.03	1.02	1.02	1.09	1.03	1.42			3.03	3.03	3.14
wind	-1.0 m/s	velocity	5.62	8.87	9.05	9.23	9.33	8.87	8.96	8.96	8.39	8.87	9.87	8.42		9.05	9.05	8.73
FINAL - 2022 Athletissima (Lausanne, SUI) (TV Analysis)															<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>			
date	26-Aug-22	time	2.47	3.50	4.50	5.50	6.50	7.52	8.51	9.52	10.54	11.58		12.99	5 / 1			
reaction time	0.142	interval	7 steps	1.03	1.00	1.00	1.00	1.02	0.99	1.01	1.02	1.04	1.41	PB		3.03	3.01	3.07
wind	0.0 m/s	velocity	5.55	8.87	9.14	9.14	9.14	8.96	9.23	9.05	8.96	8.79	9.94	8.47		9.05	9.11	8.93
Semi-Final 2 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)															<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>			
date	17-Jul-22	time	2.50	3.53	4.60	5.66	6.66	7.66	8.70	9.73	10.83	11.87		13.27	4 / 3			
reaction time	0.129	interval	7 steps	1.03	1.07	1.06	1.00	1.00	1.04	1.03	1.10	1.04	1.40			3.16	3.04	3.17
wind	0.3 m/s	velocity	5.49	8.87	8.54	8.62	9.14	9.14	8.79	8.87	8.31	8.79	10.01	8.29		8.68	9.02	8.65
Heat 1 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)															<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>			
date	16-Jul-22	time	2.46	3.53	4.56	5.56	6.60	7.63	8.73	9.80	10.83	11.86		13.36	8 / 2			
reaction time	0.139	interval	7 steps	1.07	1.03	1.00	1.04	1.03	1.10	1.07	1.03	1.03	1.50			3.10	3.17	3.13
wind	-0.5 m/s	velocity	5.58	8.54	8.87	9.14	8.79	8.87	8.31	8.54	8.87	8.87	9.35	8.23		8.85	8.65	8.76
FINAL - 2021 Müller British Grand Prix (Gateshead, GBR) (TV Analysis)															<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>			
date	13-Jul-21	time	2.60	3.72	4.76	5.82	6.88	7.98	9.04	10.10	11.22	12.32		13.84	2 / 5			
reaction time	0.165	interval	7 steps	1.12	1.04	1.06	1.06	1.10	1.06	1.06	1.12	1.10	1.52			3.22	3.22	3.28
wind	0.8 m/s	velocity	5.28	8.16	8.79	8.62	8.62	8.31	8.62	8.62	8.16	8.31	9.22	7.95		8.52	8.52	8.36
Brockman, Joshua (USA) (2001)																		
Semi-Final 2 - 2022 USATF National Championships (Eugene, OR)															<i>USATF (2022) - Results powered by Karmarush.com</i>			
date	26-Jun-22	time	2.47	3.56	4.60	5.60	6.62	7.69	8.76	9.85	10.92	12.00		13.55	2 / 6			
reaction time		interval		1.09	1.04	1.00	1.02	1.07	1.07	1.09	1.07	1.08	1.55	PB		3.13	3.16	3.24
wind	0.1 m/s	velocity	5.55	8.39	8.79	9.14	8.96	8.54	8.54	8.39	8.54	8.46	9.05	8.12		8.76	8.68	8.46
Brooks, Devon (USA) (1998)																		
Semi-Final 1 - 2020 USA Olympic Trials (Eugene, OR) (TV Analysis)															<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>			
date	26-Jun-21	time	2.62	3.66	4.68	5.70	6.72	7.74	8.77	9.81	10.87	12.01		13.55	1 / 7			
reaction time	0.264	interval	7 steps	1.04	1.02	1.02	1.02	1.02	1.03	1.04	1.06	1.14	1.54			3.08	3.07	3.24
wind	1.8 m/s	velocity	5.24	8.79	8.96	8.96	8.96	8.96	8.87	8.79	8.62	8.02	9.10	8.12		8.90	8.93	8.46
Bronsson, Alexander (SWE) (1990)																		
Heat 1 - 2013 European Indoor Championships (Göteborg, SWE)															<i>Blomkvist (2013) - www.elitlandslag.se/SprintHäck/KortHäck.aspx</i>			

date	01-Mar-13	time	2.60	3.70	4.77	5.84	6.93							7.85	2 / 6				
reaction time	0.156	interval		1.10	1.07	1.07	1.09							0.92			3.24		
		velocity	5.28	8.31	8.54	8.54	8.39							10.57	7.64		8.46		
FINAL - 2012 Windsprint (Sundsvall, SWE)																			
date	17-Jun-12	time	2.67	3.76	4.81	5.89	7.03	8.16	9.26					dnf					<i>Blomkvist (2012) - www.sub13.se</i>
reaction time		interval		1.09	1.05	1.08	1.14	1.13	1.10								3.22	3.37	
wind	1.1 m/s	velocity	5.14	8.39	8.70	8.46	8.02	8.09	8.31								8.52	8.14	
Heat 2 - 2012 Windsprint (Sundsvall, SWE)																			
date	17-Jun-12	time	2.70	3.80	4.87	5.93	7.00	8.08	9.17	10.28	11.38	12.51		13.99					<i>Blomkvist (2012) - www.sub13.se</i>
reaction time		interval		1.10	1.07	1.06	1.07	1.08	1.09	1.11	1.10	1.13	1.48				3.23	3.24	3.34
wind	0.0 m/s	velocity	5.08	8.31	8.54	8.62	8.54	8.46	8.39	8.23	8.31	8.09	9.47	7.86			8.49	8.46	8.21
Brown, Bryce (USA) (1988)																			
		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
FINAL - 2007 USATF National Junior Championships (Indianapolis, IN) (99cm)																			
<i>USATF Men's Hurdle Development (2007)</i>																			
date	21-Jun-07	time	2.67	3.77	4.80	5.82	6.86	7.91	8.94	9.96	11.01	12.08		13.42		1 / 3			
reaction time		interval		1.10	1.03	1.02	1.04	1.05	1.03	1.02	1.05	1.07	1.34				3.15	3.12	3.14
wind	2.7 m/s	velocity	5.14	8.31	8.87	8.96	8.79	8.70	8.87	8.96	8.70	8.54	10.46	8.20			8.70	8.79	8.73
Brown, Darius (USA) (2002)																			
		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
Heat 1 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)																			
<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>																			
date	24-Jun-24	time	2.55	3.66	4.70	5.72	6.76	7.82	8.86	9.95	11.04	12.14		13.56		8 / 6			
reaction time		interval		1.11	1.04	1.02	1.04	1.06	1.04	1.09	1.09	1.10	1.42				3.17	3.14	3.28
wind	0.8 m/s	velocity	5.38	8.23	8.79	8.96	8.79	8.62	8.79	8.39	8.39	8.31	9.87	8.11			8.65	8.73	8.36
Brown, Joel (USA) (1980)																			
		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
FINAL - 2012 AVIVA London Grand Prix (London, GBR) (TV Analysis)																			
<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>																			
date	13-Jul-12	time	2.52	3.60	4.64	5.64	6.68	7.72	8.76	9.80	10.86	11.92		13.39		6 / 5			
reaction time	0.149	interval		1.08	1.04	1.00	1.04	1.04	1.04	1.04	1.06	1.06	1.47				3.12	3.12	3.16
wind	0.6 m/s	velocity	5.44	8.46	8.79	9.14	8.79	8.79	8.79	8.79	8.62	8.62	9.54	8.22			8.79	8.79	8.68
FINAL - 2008 IAAF World Athletics Final (Stuttgart, GER)																			
<i>Graubner (2009) - http://www.fgs.uni-halle.de</i>																			
date	14-Sep-08	time	2.66	3.75	4.83	5.88	6.94	8.02	9.11	10.02	11.29	12.38		13.81		7 / 8			
reaction time	0.139	interval		1.09	1.08	1.05	1.06	1.08	1.09	0.91	1.27	1.09	1.43				3.22	3.23	3.27
wind	-1.3 m/s	velocity	5.16	8.39	8.46	8.70	8.62	8.46	8.39	10.07	7.19	8.39	9.80	7.97			8.52	8.49	8.39
Semi-Final 1 - 2007 USATF National Championships (Indianapolis, IN)																			
<i>USATF Men's Hurdle Development (2007)</i>																			
date	24-Jun-07	time	2.65	3.72	4.77	5.82	6.84	7.91	8.94	9.98	11.03	12.10		13.52		1 / 5			
reaction time		interval		1.07	1.05	1.05	1.02	1.07	1.03	1.04	1.05	1.07	1.42				3.17	3.12	3.16
wind	-0.6 m/s	velocity	5.18	8.54	8.70	8.70	8.96	8.54	8.87	8.79	8.70	8.54	9.87	8.14			8.65	8.79	8.68
Heat 2 - 2007 USATF National Championships (Indianapolis, IN)																			
<i>USATF Men's Hurdle Development (2007)</i>																			
date	23-Jun-07	time	2.75	3.80	4.85	5.92	6.96	8.02	9.08	10.14	11.21	12.33		13.70		3 / 4			
reaction time		interval		1.05	1.05	1.07	1.04	1.06	1.06	1.06	1.07	1.12	1.37				3.17	3.16	3.25
wind	-1.9 m/s	velocity	4.99	8.70	8.70	8.54	8.79	8.62	8.62	8.62	8.54	8.16	10.23	8.03			8.65	8.68	8.44
FINAL - 2005 USATF National Championships (Carson, CA)																			
<i>USATF Women's Sprint Development (2005)</i>																			
date	24-Jun-05	time	2.61	3.67	4.71	5.73	6.74	7.78	8.80	9.81	10.86	11.91		13.28		4 / 4			
reaction time		interval		1.06	1.04	1.02	1.01	1.04	1.02	1.01	1.05	1.05	1.37	PB			3.12	3.07	3.11
wind	0.2 m/s	velocity	5.26	8.62	8.79	8.96	9.05	8.79	8.96	9.05	8.70	8.70	10.23	8.28			8.79	8.93	8.82
Brown, Rasheem (CAY) (2000)																			
		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
FINAL - 2023 NCAA Championships (Austin, TX) (TV Analysis)																			
<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>																			
date	09-Jun-23	time	2.57	3.62	4.67	5.71	6.74	7.78	8.84	9.90	10.96	12.01		13.50		1 / 8			
reaction time		interval		1.05	1.05	1.04	1.03	1.04	1.06	1.06	1.06	1.05	1.49	PB			3.14	3.13	3.17
wind	1.8 m/s	velocity	5.34	8.70	8.70	8.79	8.87	8.79	8.62	8.62	8.62	8.70	9.41	8.15			8.73	8.76	8.65
Brown, Steve (USA) (1969)																			
		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
FINAL - 1996 USA Olympic Trials (Atlanta, GA)																			
<i>McNichols (2000) - Hurdle technique study through video analysis</i>																			
date	23-Jun-96	time	2.40	3.46	4.46	5.44	6.44	7.52	8.58	9.63	10.66	11.72		13.28		8 / 4			
reaction time		interval		1.06	1.00	0.98	1.00	1.08	1.06	1.05	1.03	1.06	1.56				3.04	3.14	3.14
wind	0.9 m/s	velocity	5.72	8.62	9.14	9.33	9.14	8.46	8.62	8.70	8.87	8.62	8.99	8.28			9.02	8.73	8.73
Brown, Tai (USA) (2000)																			
		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
FINAL - 2020 USA Olympic Trials (Eugene, OR) (TV Analysis)																			
<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>																			
date	26-Jun-21	time	2.60	3.63	4.65	5.67	6.67	7.67	8.69	9.72	10.76	11.84		13.32		8 / 5			
reaction time	0.174	interval		1.03	1.02	1.02	1.00	1.00	1.02	1.03	1.04	1.08	1.48	PB			3.07	3.02	3.15
wind	0.4 m/s	velocity	5.28	8.87	8.96	8.96	9.14	9.14	8.96	8.87	8.79	8.46	9.47	8.26			8.93	9.08	8.70
Semi-Final 1 - 2020 USA Olympic Trials (Eugene, OR) (TV Analysis)																			
<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>																			
date	26-Jun-21	time	2.62	3.65	4.67	5.69	6.70	7.69	8.71	9.74	10.78	11.86		13.33		2 / 4			
reaction time	0.173	interval		1.03	1.02	1.02	1.01	0.99	1.02	1.03	1.04	1.08	1.47	PB			3.07	3.02	3.15

wind	1.8 m/s	velocity	5.24	8.87	8.96	8.96	9.05	9.23	8.96	8.87	8.79	8.46	9.54	8.25	8.93	9.08	8.70	
FINAL - 2021 NCAA Championships (Eugene, OR) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>				
date	11-Jun-21	time	2.70	3.77	4.85	5.90	6.93	7.97	9.03	10.07	11.13	12.23		13.89	1 / 9			
reaction time	0.161	interval	1.07	1.08	1.05	1.03	1.04	1.06	1.04	1.06	1.10	1.10	1.66		3.20	3.13	3.20	
wind	-0.6 m/s	velocity	5.08	8.54	8.46	8.70	8.87	8.79	8.62	8.79	8.62	8.31	8.45	7.92	8.57	8.76	8.57	
Brunson, Andrew (USA) (1986)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2008 USA Olympic Trials (Eugene, OR)														<i>USATF Hurdle Development (2008)</i>				
date	06-Jul-08	time	2.57	3.64	4.67	5.72	6.74	7.77	8.81	9.86	10.91	12.00		13.43	7 / 6			
reaction time	0.150	interval	1.07	1.03	1.05	1.02	1.03	1.04	1.05	1.05	1.09	1.43				3.15	3.09	3.19
wind	3.5 m/s	velocity	5.34	8.54	8.87	8.70	8.96	8.87	8.79	8.70	8.70	8.39	9.80	8.19		8.70	8.87	8.60
Bryggare, Arto (FIN) (1958)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 1983 IAAF World Championships (Helsinki, FIN)														<i>Knoke (1984) - the hurdles</i>				
date	12-Aug-83	time	2.53	3.67	4.63	5.62	6.67	7.67	8.81	9.82	10.87	11.95		13.46	7 / 2			
reaction time	0.159	interval	7 steps	1.14	0.96	0.99	1.05	1.00	1.14	1.01	1.05	1.08	1.51			3.09	3.19	3.14
wind	1.3 m/s	velocity	5.42	8.02	9.52	9.23	8.70	9.14	8.02	9.05	8.70	8.46	9.28	8.17		8.87	8.60	8.73
Bucknor, Richard (JAM) (1966)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Semi-Final 1 - 1988 Olympic Games (Seoul, KOR)														<i>Brüggemann (1990) - scientific research project at the games of the XXXIV Olympiad, Seoul 1988</i>				
date	26-Sep-88	time	2.62	3.73	4.82	5.93	7.00	8.09	9.17	10.29	11.41	12.53		13.98	2 / 8			
reaction time	0.166	interval	1.11	1.09	1.11	1.07	1.09	1.08	1.12	1.12	1.12	1.45				3.31	3.24	3.36
wind	0.0 m/s	velocity	5.24	8.23	8.39	8.23	8.54	8.39	8.46	8.16	8.16	8.16	9.67	7.87		8.28	8.46	8.16
Bühler, Matthias (GER) (1986)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Semi-Final 2 - 2017 IAAF World Championships (London, GBR)														<i>Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles</i>				
date	06-Aug-17	time	2.48	3.57	4.64	5.71	6.77	7.82	8.87	9.93	11.00	12.11		13.79	2 / 8			
reaction time	0.158	interval	1.09	1.07	1.07	1.06	1.06	1.05	1.05	1.06	1.07	1.11	1.68			3.23	3.16	3.24
wind	0.6 m/s	velocity	5.53	8.39	8.54	8.54	8.62	8.70	8.70	8.62	8.54	8.23	8.35	7.98		8.49	8.68	8.46
FINAL - 2013 Windsprint (Sundsvall, SWE)														<i>(2013) - www.ssg.se/windsprint/Splittider/</i>				
date	28-Jul-13	time	2.72	3.78	4.84	5.87	6.92	7.95	8.99	10.03	11.07	12.14		13.64	7 / 3			
reaction time		interval	1.06	1.06	1.03	1.05	1.03	1.04	1.04	1.04	1.07	1.50				3.15	3.12	3.15
wind	1.7 m/s	velocity	5.04	8.62	8.62	8.87	8.70	8.87	8.79	8.79	8.79	8.54	9.35	8.06		8.70	8.79	8.70
Heat 6 - 2009 IAAF World Championships (Berlin, GER)														<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>				
date	19-Aug-09	time	2.71	3.79	4.87	5.95	7.00	8.05	9.11	10.19	11.27	12.35		13.75	8 / 6			
reaction time	0.131	interval	1.08	1.08	1.08	1.05	1.05	1.06	1.08	1.08	1.08	1.40				3.24	3.16	3.24
wind	0.1 m/s	velocity	5.06	8.46	8.46	8.46	8.70	8.70	8.62	8.46	8.46	8.46	10.01	8.00		8.46	8.68	8.46
FINAL - 2009 ISTAF (Berlin, GER)														<i>Graubner (2009) - http://www.fgs.uni-halle.de</i>				
date	14-Jun-09	time	2.68	3.77	4.87	5.93	6.98	8.05	9.13	10.21	11.31	12.43		13.87	1 / 9			
reaction time	0.134	interval	1.09	1.10	1.06	1.05	1.07	1.08	1.08	1.10	1.12	1.44				3.25	3.20	3.30
wind	0.7 m/s	velocity	5.12	8.39	8.31	8.62	8.70	8.54	8.46	8.46	8.31	8.16	9.74	7.93		8.44	8.57	8.31
Burt, John (USA) (1997)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2020 Leonard Hilton Memorial Invitational (Houston, TX)														<i>CAA Hurdle Development (2020)</i>				
date	17-Jan-20	time	2.49	3.58	4.65	5.71	6.79							7.88	6 / 2			
reaction time		interval	1.09	1.07	1.06	1.08							1.09			3.22		
		velocity	5.51	8.39	8.54	8.62	8.46						8.92	7.61		8.52		
Cabang, John (PHI) (2001)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Heat 1 - 2024 Olympic Games (Paris, FRA)														<i>Paris 2024 Olympic Games - Results Book (2024)</i>				
date	04-Aug-24	time	2.45	3.53	4.56	5.60	6.63	7.69	8.76	9.84	10.92	12.01		13.66	3 / 6			
reaction time	0.154	interval	1.08	1.03	1.04	1.03	1.06	1.07	1.08	1.08	1.09	1.65				3.15	3.16	3.25
wind	0.1 m/s	velocity	5.60	8.46	8.87	8.79	8.87	8.62	8.54	8.46	8.46	8.39	8.50	8.05		8.70	8.68	8.44
Cabral, Johnathan (CAN) (1992)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2019 Golden Gala Pietro Mennea (Rome, ITA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>				
date	06-Jun-19	time	2.60	3.68	4.71	5.75	6.78	7.83	8.88	9.95	11.00	12.11		13.61	1 / 8			
reaction time	0.142	interval	7 steps	1.08	1.03	1.04	1.03	1.05	1.05	1.07	1.05	1.11	1.50			3.15	3.13	3.23
wind	0.4 m/s	velocity	5.28	8.46	8.87	8.79	8.87	8.70	8.70	8.54	8.70	8.23	9.35	8.08		8.70	8.76	8.49
FINAL - 2019 Seiko Golden Grand Prix (Osaka, JPN)														<i>Shibayama (2019) - race analysis of men's 110m hurdles in the 2019 season</i>				
date	19-May-19	time	2.72	3.83	4.88	5.92	6.95	7.99	9.04	10.10	11.16	12.26		13.74	8 / 7			
reaction time	0.245	interval	7 steps	1.11	1.05	1.04	1.03	1.04	1.05	1.06	1.06	1.10	1.48			3.20	3.12	3.22
wind	2.9 m/s	velocity	5.04	8.23	8.70	8.79	8.87	8.79	8.70	8.62	8.62	8.31	9.47	8.01		8.57	8.79	8.52
FINAL - 2018 Müller Grand Prix (Birmingham, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>				
date	18-Aug-18	time	2.52	3.60	4.64	5.68	6.72	7.76	8.78	9.78	10.88	11.90		13.46	4 / 7			
reaction time	0.117	interval	7 steps	1.08	1.04	1.04	1.04	1.04	1.02	1.00	1.10	1.02	1.56			3.16	3.10	3.12
wind	1.3 m/s	velocity	5.44	8.46	8.79	8.79	8.79	8.79	8.96	9.14	8.31	8.96	8.99	8.17		8.68	8.85	8.79

Semi-Final 3 - 2017 IAAF World Championships (London, GBR)*Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles*

date	06-Aug-17	time	2.51	3.59	4.63	5.67	6.70	7.76	8.86	10.03	11.33	12.77	14.98	8 / 7				
reaction time	0.174	interval	7 steps	1.08	1.04	1.04	1.03	1.06	1.10	1.17	1.30	1.44	2.21		3.16	3.19	3.91	
wind	0.3 m/s	velocity	5.47	8.46	8.79	8.79	8.87	8.62	8.31	7.81	7.03	6.35	6.34	7.34	8.68	8.60	7.01	

FINAL - 2017 Golden Gala Pietro Mennea (Rome, ITA) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date	08-Jun-17	time	2.52	3.58	4.64	5.66	6.70	7.74	8.78	9.86	10.94	12.08	13.60	2 / 7				
reaction time	0.130	interval	7 steps	1.06	1.06	1.02	1.04	1.04	1.04	1.08	1.08	1.14	1.52		3.14	3.12	3.30	
wind	-0.3 m/s	velocity	5.44	8.62	8.62	8.96	8.79	8.79	8.79	8.46	8.46	8.02	9.22	8.09	8.73	8.79	8.31	

FINAL - 2017 Drake Relays (Des Moines, IA) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date	29-Apr-17	time	2.63	3.70	4.73	5.76	6.80	7.80	8.83	9.90	10.98	12.10	13.64	6 / 7				
reaction time		interval	7 steps	1.07	1.03	1.03	1.04	1.00	1.03	1.07	1.08	1.12	1.54		3.13	3.07	3.27	
wind	1.8 m/s	velocity	5.22	8.54	8.87	8.87	8.79	9.14	8.87	8.54	8.46	8.16	9.10	8.06	8.76	8.93	8.39	

FINAL - 2016 Olympic Games (Rio de Janeiro, BRA) (TV Analysis)*Henson (2020) - Athlete First: 2016 year end hurdle report*

date	16-Aug-16	time	2.58	3.64	4.68	5.72	6.74	7.76	8.80	9.84	10.88	11.96	13.40	2 / 6				
reaction time	0.146	interval	7 steps	1.06	1.04	1.04	1.02	1.02	1.04	1.04	1.04	1.08	1.44		3.14	3.08	3.16	
wind	0.2 m/s	velocity	5.32	8.62	8.79	8.79	8.96	8.96	8.79	8.79	8.79	8.46	9.74	8.21	8.73	8.90	8.68	

FINAL - 2016 Prefontaine Classic (Eugene, OR) (TV Analysis)*Henson (2021) - Athlete First: 2016 year end hurdle report*

date	28-May-16	time	2.56	3.68	4.70	5.74	6.78	7.82	8.86	9.90	10.98	12.06	13.57	8 / 7				
reaction time		interval	7 steps	1.12	1.02	1.04	1.04	1.04	1.04	1.04	1.08	1.08	1.51		3.18	3.12	3.20	
wind	0.7 m/s	velocity	5.36	8.16	8.96	8.79	8.79	8.79	8.79	8.79	8.46	8.46	9.28	8.11	8.62	8.79	8.57	

FINAL - 2016 Meeting International Mohammed VI D'Athletisme (Rabat, MAR) (TV Analysis)*Henson (2020) - Athlete First: 2016 year end hurdle report*

date	22-May-16	time	2.54	3.60	4.64	5.66	6.68	7.70	8.74	9.80	10.86	11.94	13.42	5 / 5				
reaction time	0.155	interval	7 steps	1.06	1.04	1.02	1.02	1.02	1.04	1.06	1.06	1.08	1.48		3.12	3.08	3.20	
wind	1.4 m/s	velocity	5.40	8.62	8.79	8.96	8.96	8.96	8.79	8.62	8.62	8.46	9.47	8.20	8.79	8.90	8.57	

Campbell, Jerome (JAM) (2002)*H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10***FINAL - 2024 NCAA Championships (Eugene, OR) (TV Analysis)***Henson (2024) - Athlete First: 2024 year end hurdle report*

date	07-Jun-24	time	2.50	3.58	4.67	5.71	6.77	7.81	8.84	9.91	10.98	12.05	13.49	9 / 7				
reaction time		interval	1.08	1.09	1.04	1.06	1.04	1.03	1.07	1.07	1.07	1.44			3.21	3.13	3.21	
wind	0.1 m/s	velocity	5.49	8.46	8.39	8.79	8.62	8.79	8.87	8.54	8.54	8.54	9.74	8.15	8.54	8.76	8.54	

Campbell, Lafranz (JAM) (1997)*H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10***FINAL - 2024 New Balance Indoor Grand Prix (Boston, MA) (TV Analysis)***Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record*

date	04-Feb-24	time	2.54	3.60	4.62	5.68	6.72						7.66	1 / 6				
reaction time	0.130	interval	7 steps	1.06	1.02	1.06	1.04						7.66		3.14			
		velocity	5.40	8.62	8.96	8.62	8.79						1.83	7.83	8.73			

FINAL - 2022 NCAA Championships (Eugene, OR) (TV Analysis)*Henson (2022) - Athlete First: 2022 year end hurdle report*

date	10-Jun-22	time	2.51	3.55	4.59	5.60	6.64	7.66	8.69	9.74	10.79	11.91	13.45	8 / 5				
reaction time		interval	7 steps	1.04	1.04	1.01	1.04	1.02	1.03	1.05	1.05	1.12	1.54		3.09	3.09	3.22	
wind	0.0 m/s	velocity	5.47	8.79	8.79	9.05	8.79	8.96	8.87	8.70	8.70	8.16	9.10	8.18	8.87	8.87	8.52	

Campbell, Tonie (USA) (1960)*H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10***FINAL - 1988 Olympic Games (Seoul, KOR)***Brüggemann (1990) - scientific research project at the games of the XXXIV Olympiad, Seoul 1988*

date	26-Sep-88	time	2.60	3.66	4.69	5.69	6.69	7.71	8.73	9.78	10.83	11.95	13.38	6 / 3				
reaction time	0.161	interval	7 steps	1.06	1.03	1.00	1.00	1.02	1.02	1.05	1.05	1.12	1.43		3.09	3.04	3.22	
wind	1.5 m/s	velocity	5.28	8.62	8.87	9.14	9.14	8.96	8.96	8.70	8.70	8.16	9.80	8.22	8.87	9.02	8.52	

Semi-Final 1 - 1988 Olympic Games (Seoul, KOR)*Brüggemann (1990) - scientific research project at the games of the XXXIV Olympiad, Seoul 1988*

date	26-Sep-88	time	2.60	3.65	4.68	5.68	6.70	7.73	8.77	9.81	10.89	11.97	13.47	6 / 2				
reaction time	0.163	interval	7 steps	1.05	1.03	1.00	1.02	1.03	1.04	1.04	1.08	1.08	1.50		3.08	3.09	3.20	
wind	0.0 m/s	velocity	5.28	8.70	8.87	9.14	8.96	8.87	8.79	8.79	8.46	8.46	9.35	8.17	8.90	8.87	8.57	

Cao Jin (CHN) (1996)*H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10***Decathlon - Heat 2 - 2021 Chinese National Championships (Chongqing, CHN)***CAA Hurdle Development (2021)*

date	27-Jun-21	time	2.73	3.89	4.99	6.12	7.24	8.37	9.52	10.68	11.86	13.06	14.60	5 / 1				
reaction time	0.185	interval	7 steps	1.16	1.10	1.13	1.12	1.13	1.15	1.16	1.18	1.20	1.54		3.39	3.40	3.54	
wind	-0.2 m/s	velocity	5.03	7.88	8.31	8.09	8.16	8.09	7.95	7.88	7.75	7.62	9.10	7.53	8.09	8.06	7.75	

Decathlon - Heat 1 - 2019 Chinese National Grand Prix Final (Daqing, CHN)*CAA Hurdle Development (2019)*

date	23-Aug-19	time	2.78	3.90	5.04	6.14	7.29	8.41	9.53	10.71	11.86	13.05	14.61	4 / 1				
reaction time	0.209	interval	7 steps	1.12	1.14	1.10	1.15	1.12	1.12	1.18	1.15	1.19	1.56		3.36	3.39	3.52	
wind	?? m/s	velocity	4.94	8.16	8.02	8.31	7.95	8.16	8.16	7.75	7.95	7.68	8.99	7.53	8.16	8.09	7.79	

Decathlon - Heat 1 - 2019 Chinese National Championships (Shenyang, CHN)*CAA Hurdle Development (2019)*

date	11-Jul-19	time	2.72	3.84	4.93	6.02	7.17	8.29	9.46	10.62	11.78	13.00	14.57	5 / 1				
reaction time	0.169	interval	7 steps	1.12	1.09	1.09	1.15	1.12	1.17	1.16	1.16	1.22	1.57		3.30	3.44	3.54	

wind -0.6 m/s velocity 5.04 8.16 8.39 8.39 7.95 8.16 7.81 7.88 7.88 7.49 8.93 7.55 8.31 7.97 7.75

Capetillo, Dayron (CUB) (1987)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Heat 6 - 2009 IAAF World Championships (Berlin, GER)		<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>															
date	19-Aug-09	time	2.63	3.67	4.74	5.77	6.79	7.83	8.87	9.93	11.05	12.15	13.61	4 / 4			
reaction time	0.168	interval	7 steps	1.04	1.07	1.03	1.02	1.04	1.04	1.06	1.12	1.10	1.46		3.14	3.10	3.28
wind	0.1 m/s	velocity	5.22	8.79	8.54	8.87	8.96	8.79	8.79	8.62	8.16	8.31	9.60	8.08	8.73	8.85	8.36

Capouch, Tomáš (CZE) (1997)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Heat 2 - 2014 Czech Republic National U18 Championships (Trinec, CZE) (91cm)		<i>Feher (2014) - Final report from the U18 & U20 Czech Republic national championships</i>															
date	28-Jun-14	time	2.86	4.06	5.27	6.49	7.75	8.98	10.21	11.46	12.67	13.91	15.62	2 / 5			
reaction time	0.193	interval	1.20	1.21	1.22	1.26	1.23	1.23	1.25	1.21	1.24	1.71			3.63	3.72	3.70
wind	-4.1 m/s	velocity	4.80	7.62	7.55	7.49	7.25	7.43	7.43	7.31	7.55	7.37	8.20	7.04	7.55	7.37	7.41

Carda, Jan (CZE) (1989)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2013 Czech Republic National Championships (Tábor, CZE)		<i>Feher (2013) - Final report from the men's & women's Czech Republic national championships</i>															
date	15-Jun-13	time	2.66	3.76	4.84	5.91	6.99	8.09	9.23	10.37	11.51	12.69	14.22	2 / 3			
reaction time	0.135	interval	1.10	1.08	1.07	1.08	1.10	1.14	1.14	1.14	1.18	1.53	PB		3.25	3.32	3.46
wind	0.4 m/s	velocity	5.16	8.31	8.46	8.54	8.46	8.31	8.02	8.02	8.02	7.75	9.16	7.74	8.44	8.26	7.92

Heat 2 - 2013 Czech Republic National Championships (Tábor, CZE)		<i>Feher (2013) - Final report from the men's & women's Czech Republic national championships</i>															
date	15-Jun-13	time	2.70	3.83	4.96	6.05	7.17	8.30	9.48	10.68	11.85	13.08	14.64	5 / 3			
reaction time	0.141	interval	1.13	1.13	1.09	1.12	1.13	1.18	1.20	1.17	1.23	1.56			3.35	3.43	3.60
wind	-0.6 m/s	velocity	5.08	8.09	8.09	8.39	8.16	8.09	7.75	7.62	7.81	7.43	8.99	7.51	8.19	7.99	7.62

Heat 1 - 2012 Czech Republic National Indoor Championships (Praha, CZE)		<i>Feher (2012) - Czech Republic indoor national championships - men's 60m hurdles</i>															
date	25-Feb-12	time	2.76	3.90	5.04	6.16	7.40						8.51	3 / 5			
reaction time	0.157	interval	1.14	1.14	1.12	1.24						1.11			3.40		
		velocity	4.97	8.02	8.02	8.16	7.37					8.76	7.05		8.06		

Caristan, Stéphane (FRA) (1964)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Semi-Final 1 - 1988 Olympic Games (Seoul, KOR)		<i>Brüggemann (1990) - scientific research project at the games of the XXXIV Olympiad, Seoul 1988</i>															
date	26-Sep-88	time	2.60	3.72	4.76	5.80	6.85	7.89	8.96	10.05	11.13	12.25	13.71	3 / 5			
reaction time	0.150	interval	1.12	1.04	1.04	1.05	1.04	1.07	1.09	1.08	1.12	1.46			3.20	3.16	3.29
wind	0.0 m/s	velocity	5.28	8.16	8.79	8.79	8.70	8.79	8.54	8.39	8.46	8.16	9.60	8.02	8.57	8.68	8.33

FINAL - 1986 European Championships (Stuttgart, FRG)		<i>Hommel (1988) - nsa photosequence 4 - 110m hurdles - stephane caristan (FRA)</i>															
date	30-Aug-86	time	2.59	3.62	4.63	5.62	6.63	7.66	8.66	9.72	10.76	11.86	13.20	3 / 1			
reaction time		interval	1.03	1.01	0.99	1.01	1.03	1.00	1.06	1.04	1.10	1.34	CR / NR		3.03	3.04	3.20
wind	2.0 m/s	velocity	5.30	8.87	9.05	9.23	9.05	8.87	9.14	8.62	8.79	8.31	10.46	8.33	9.05	9.02	8.57

Semi-Final 1 - 1986 European Championships (Stuttgart, FRG)		<i>Hommel (1988) - nsa photosequence 4 - 110m hurdles - stephane caristan (FRA)</i>															
date	29-Aug-86	time	2.59	3.59	4.61	5.65	6.67	7.69	8.71	9.75	10.81	11.85	13.28	1 / 1			
reaction time		interval	1.00	1.02	1.04	1.02	1.02	1.02	1.04	1.06	1.04	1.43	CR / NR		3.06	3.06	3.14
wind	0.9 m/s	velocity	5.30	9.14	8.96	8.79	8.96	8.96	8.96	8.79	8.62	8.79	9.80	8.28	8.96	8.96	8.73

FINAL - 1986 French National Indoor Championships (Lievin, FRA)		<i>Aubert (1986) - indoor - video - haies, etude des performances</i>															
date	26-Jan-86	time	2.54	3.61	4.64	5.65	6.66						7.55	1 / 1			
reaction time		interval	1.07	1.03	1.01	1.01						0.89	NR		3.11		
		velocity	5.40	8.54	8.87	9.05	9.05					10.92	7.95		8.82		

Semi-Final ? - 1986 French National Indoor Championships (Lievin, FRA)		<i>Aubert (1986) - indoor - video - haies, etude des performances</i>															
date	26-Jan-86	time	2.63	3.68	4.72	5.73	6.76						7.65	1 / 1			
reaction time		interval	1.05	1.04	1.01	1.03						0.89			3.10		
		velocity	5.22	8.70	8.79	9.05	8.87					10.92	7.84		8.85		

Heat ? - 1986 French National Indoor Championships (Lievin, FRA)		<i>Aubert (1986) - indoor - video - haies, etude des performances</i>															
date	25-Jan-86	time	2.58	3.68	4.72	5.78	6.81						7.69	1 / 1			
reaction time		interval	1.10	1.04	1.06	1.03						0.88			3.20		
		velocity	5.32	8.31	8.79	8.62	8.87					11.05	7.80		8.57		

Carter, Deuce (JAM) (1990)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2016 Jamaican National Championships (Kingston, JAM) (TV Analysis)		<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>															
date	02-Jul-16	time	2.46	3.53	4.51	5.49	6.49	7.47	8.49	9.54	10.58	11.64	13.21	5 / 2			
reaction time		interval	7 steps	1.07	0.98	0.98	1.00	0.98	1.02	1.05	1.04	1.06	1.57		3.03	3.00	3.15
wind	0.4 m/s	velocity	5.58	8.54	9.33	9.33	9.14	9.33	8.96	8.70	8.79	8.62	8.93	8.33	9.05	9.14	8.70

FINAL - 2016 Racers Grand Prix (Kingston, JAM) (TV Analysis)		<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>															
date	11-Jun-16	time	2.46	3.50	4.50	5.50	6.48	7.48	8.50	9.56	10.58	11.66	13.20	2 / 2			
reaction time		interval	7 steps	1.04	1.00	1.00	0.98	1.00	1.02	1.06	1.02	1.08	1.54	PB	3.04	3.00	3.16
wind	0.2 m/s	velocity	5.58	8.79	9.14	9.14	9.33	9.14	8.96	8.62	8.96	8.46	9.10	8.33	9.02	9.14	8.68

Casañas, Alejandro (CUB) (1954)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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FINAL - 1976 Olympic Games (Montreal, CAN)*Ewen (1977) - montreal 1976*

date	28-Jul-76	time	2.6	3.6	4.7	5.7	6.8	7.8	8.8	9.8	10.9	11.9		13.33	7 / 2			
reaction time		interval		1.00	1.10	1.00	1.10	1.00	1.00	1.00	1.10	1.00	1.43	PB		3.10	3.10	3.10
wind	0.0 m/s	velocity	5.28	9.14	8.31	9.14	8.31	9.14	9.14	9.14	8.31	9.14	9.80	8.25		8.85	8.85	8.85

Heat 2 - 1976 Olympic Games (Montreal, CAN)*Lamare (1976) - les jeux de la XXI olympia, Montreal 1976*

date	26-Jul-76	time	2.3		5.5	6.6								13.73	1 / 2			
reaction time		interval			3.18	1.08										3.18		
wind	0.0 m/s	velocity	5.97		8.62	8.46								8.01		8.62		

Chan Chung Wang (HKG) (1991)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2019 Asian Grand Prix 2 (Chongqing, CHN)***CAA Hurdle Development (2019)*

date	07-Jun-19	time	2.70	3.78	4.85	5.91	6.96	8.02	9.07	10.16	11.31	12.49		14.07	7 / 6			
reaction time	0.158	interval		1.08	1.07	1.06	1.05	1.06	1.05	1.09	1.15	1.18	1.58			3.21	3.16	3.42
wind	1.2 m/s	velocity	5.08	8.46	8.54	8.62	8.70	8.62	8.70	8.39	7.95	7.75	8.87	7.82		8.54	8.68	8.02

FINAL - 2019 Asian Grand Prix 1 (Chongqing, CHN)*CAA Hurdle Development (2019)*

date	04-Jun-19	time	2.65	3.73	4.78	5.85	6.89	7.94	9.04	10.11	11.20	12.29		13.75	7 / 3			
reaction time	0.149	interval		1.08	1.05	1.07	1.04	1.05	1.10	1.07	1.09	1.09	1.46			3.20	3.19	3.25
wind	-0.3 m/s	velocity	5.18	8.46	8.70	8.54	8.79	8.70	8.31	8.54	8.39	8.39	9.60	8.00		8.57	8.60	8.44

Charles, Jordan (USA) (1995)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2020 Mountain T's Invitational (Flagstaff AZ) (Altitude)***CAA Hurdle Development (2020)*

date	01-Feb-20	time	2.60	3.70	4.76	5.80	6.85							7.78	5 / 3			
reaction time		interval	7 steps	1.10	1.06	1.04	1.05						0.93	PB		3.20		
wind		velocity	5.28	8.31	8.62	8.79	8.70						10.45	7.71		8.57		

Chaucoy, Eric (FRA) (1963)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 1986 French National Indoor Championships (Lieviv, FRA)***Aubert (1986) - indoor - video - haies, etude des performances*

date	26-Jan-86	time	2.61	3.71	4.78	5.86	6.93							7.89	1 / 3			
reaction time		interval		1.10	1.07	1.08	1.07						0.96			3.25		
wind		velocity	5.26	8.31	8.54	8.46	8.54						10.13	7.60		8.44		

Semi-Final ? - 1986 French National Indoor Championships (Lieviv, FRA)*Aubert (1986) - indoor - video - haies, etude des performances*

date	26-Jan-86	time	2.61	3.72	4.78	5.84	6.93							7.87	1 / 3			
reaction time		interval		1.11	1.06	1.06	1.09						0.94			3.23		
wind		velocity	5.26	8.23	8.62	8.62	8.39						10.34	7.62		8.49		

Chen Jie (CHN) (2002)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Heat 1 - 2021 Chinese National Championships (Chongqing, CHN)***CAA Hurdle Development (2021)*

date	25-Jun-21	time	2.72	3.81	4.93	6.04	7.15	8.27	9.40	10.53	11.68	12.81		14.31	8 / 5			
reaction time	0.151	interval		1.09	1.12	1.11	1.11	1.12	1.13	1.13	1.15	1.13	1.50			3.32	3.36	3.41
wind	-1.0 m/s	velocity	5.04	8.39	8.16	8.23	8.23	8.16	8.09	8.09	7.95	8.09	9.35	7.69		8.26	8.16	8.04

FINAL - 2021 East China District Meeting (Zhaoqing, CHN)*CAA Hurdle Development (2021)*

date	24-Apr-21	time	2.68	3.76	4.89	5.97	7.10	8.19	9.38	10.56	11.76	12.96		14.57	8 / 6			
reaction time	0.171	interval		1.08	1.13	1.08	1.13	1.09	1.19	1.18	1.20	1.20	1.61			3.29	3.41	3.58
wind	-0.3 m/s	velocity	5.12	8.46	8.09	8.46	8.09	8.39	7.68	7.75	7.62	7.62	8.71	7.55		8.33	8.04	7.66

Heat 1 - 2021 East China District Meeting (Zhaoqing, CHN)*CAA Hurdle Development (2021)*

date	24-Apr-21	time	2.73	3.85	4.94	6.04	7.16	8.26	9.38	10.50	11.60	12.75		14.22	7 / 4			
reaction time	0.168	interval		1.12	1.09	1.10	1.12	1.10	1.12	1.12	1.10	1.15	1.47	PB		3.31	3.34	3.37
wind	-1.1 m/s	velocity	5.03	8.16	8.39	8.31	8.16	8.31	8.16	8.16	8.31	7.95	9.54	7.74		8.28	8.21	8.14

Chaverra, Joan Camilo (PUR) (1995)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2020 Meeting Pro Athlé Tour de Marseille (Marseille, FRA) (TV Analysis)***Henson (2020) - Athlete First: 2020 year end hurdle report*

date	03-Sep-20	time	2.62	3.67	4.78	5.79	6.86	7.92	9.00	10.17	11.29	12.42		14.08	8 / 7			
reaction time		interval	7 steps	1.05	1.11	1.01	1.07	1.06	1.08	1.17	1.12	1.13	1.66			3.17	3.21	3.42
wind	-0.3 m/s	velocity	5.24	8.70	8.23	9.05	8.54	8.62	8.46	7.81	8.16	8.09	8.45	7.81		8.65	8.54	8.02

Semi-Final 2 - 2019 IAAF World Championships (Doha, QAT)*CAA Hurdle Development (2019)*

date	02-Oct-19	time	2.60	3.66	4.71	5.74	6.77	7.81	8.85	9.93	11.06	12.19		13.76	3 / 8			
reaction time	0.164	interval	7 steps	1.06	1.05	1.03	1.03	1.04	1.04	1.08	1.13	1.13	1.57			3.14	3.11	3.34
wind	0.9 m/s	velocity	5.28	8.62	8.70	8.87	8.87	8.79	8.79	8.46	8.09	8.09	8.93	7.99		8.73	8.82	8.21

Chen Junyi (CHN) (1999)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Decathlon - Heat 1 - 2021 Chinese National Championships (Chongqing, CHN)***CAA Hurdle Development (2021)*

date	27-Jun-21	time	2.87	4.19	5.45	6.72	8.00	9.29	10.56	11.81	13.11	14.43		16.05	3 / 7			
reaction time	0.187	interval	7 steps	1.32	1.26	1.27	1.28	1.29	1.27	1.25	1.30	1.32	1.62			3.85	3.84	3.87
wind	0.5 m/s	velocity	4.78	6.92	7.25	7.20	7.14	7.09	7.20	7.31	7.03	6.92	8.65	6.85		7.12	7.14	7.09

Decathlon - Heat 1 - 2019 Chinese National Championships (Shenyang, CHN)*CAA Hurdle Development (2019)*

date	11-Jul-19	time	2.95	4.30	5.64	6.94	8.27	9.61	10.96	12.28	13.61	14.95		16.62	2 / 6			
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reaction time	0.190	interval	7 steps	1.35	1.34	1.30	1.33	1.34	1.35	1.32	1.33	1.34	1.67		3.99	4.02	3.99
wind	-0.6 m/s	velocity	4.65	6.77	6.82	7.03	6.87	6.82	6.77	6.92	6.87	6.82	8.40	6.62	6.87	6.82	6.87

Chen Kuei-Ru (TPE) (1993)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2023 Seiko Golden Grand Prix (Yokohama, JPN)													<i>Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season</i>				
date	21-May-23	time	2.60	3.66	4.68	5.70	6.73	7.76	8.82	9.88	10.97	12.07	13.56	8 / 8			
reaction time	0.160	interval	7 steps	1.06	1.02	1.02	1.03	1.03	1.06	1.06	1.09	1.10	1.49		3.10	3.12	3.25
wind	0.8 m/s	velocity	5.28	8.62	8.96	8.96	8.87	8.87	8.62	8.62	8.39	8.31	9.41	8.11	8.85	8.79	8.44
FINAL - 2023 Mikio Oda Memorial (Hiroshima, JPN)													<i>Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season</i>				
date	29-Apr-23	time	2.61	3.68	4.73	5.77	6.81	7.87	8.94	10.01	11.13	12.27	13.82	8 / 7			
reaction time	0.173	interval	7 steps	1.07	1.05	1.04	1.04	1.06	1.07	1.07	1.12	1.14	1.55		3.16	3.17	3.33
wind	0.3 m/s	velocity	5.26	8.54	8.70	8.79	8.79	8.62	8.54	8.54	8.16	8.02	9.05	7.96	8.68	8.65	8.23
FINAL - 2022 Seiko Golden Grand Prix (Tokyo, JPN)													<i>Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season</i>				
date	08-May-22	time	2.58	3.62	4.68	5.70	6.74	7.77	8.82	9.88	10.95	12.02	13.49	2 / 2			
reaction time	0.166	interval	7 steps	1.04	1.06	1.02	1.04	1.03	1.05	1.06	1.07	1.07	1.47		3.12	3.12	3.20
wind	0.1 m/s	velocity	5.32	8.79	8.62	8.96	8.79	8.87	8.70	8.62	8.54	8.54	9.54	8.15	8.79	8.79	8.57
FINAL - 2022 Michitaka Kinami Memorial (Osaka, JPN)													<i>Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season</i>				
date	01-May-22	time	2.59	3.63	4.68	5.71	6.74	7.78	8.84	9.89	10.98	12.07	13.51	7 / 2			
reaction time	0.158	interval	7 steps	1.04	1.05	1.03	1.03	1.04	1.06	1.05	1.09	1.09	1.44		3.12	3.13	3.23
wind	0.8 m/s	velocity	5.30	8.79	8.70	8.87	8.87	8.79	8.62	8.70	8.39	8.39	9.74	8.14	8.79	8.76	8.49
Semi-Final 2 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)													<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>				
date	20-Mar-22	time	2.50	3.58	4.62	5.64	6.66						7.67	7 / 8			
reaction time	0.168	interval	7 steps	1.08	1.04	1.02	1.02					1.01	NR PB		3.14		
		velocity	5.49	8.46	8.79	8.96	8.96					9.62	7.82		8.73		
FINAL - 2021 Ready Steady Tokyo (Tokyo, JPN)													<i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>				
date	09-May-21	time	2.58	3.61	4.65	5.69	6.73	7.77	8.84	9.92	11.02	12.13	13.62	2 / 5			
reaction time	0.161	interval	7 steps	1.03	1.04	1.04	1.04	1.04	1.07	1.08	1.10	1.11	1.49		3.11	3.15	3.29
wind	-0.8 m/s	velocity	5.32	8.87	8.79	8.79	8.79	8.79	8.54	8.46	8.31	8.23	9.41	8.08	8.82	8.70	8.33
Semi-Final 2 - 2019 IAAF World Championships (Doha, QAT)													<i>CAA Hurdle Development (2019)</i>				
date	02-Oct-19	time	2.53	3.59	4.63	5.66	6.70	7.74	8.82	9.89	10.96	12.05	13.52	8 / 5			
reaction time	0.132	interval	7 steps	1.06	1.04	1.03	1.04	1.04	1.08	1.07	1.07	1.09	1.47		3.13	3.16	3.23
wind	0.9 m/s	velocity	5.42	8.62	8.79	8.87	8.79	8.79	8.46	8.54	8.54	8.39	9.54	8.14	8.76	8.68	8.49
FINAL - 2019 Japanese World Championships Trials (Fujiyoshida, JPN)													<i>Shibayama (2019) - race analysis of men's 110m hurdles in the 2019 season</i>				
date	01-Sep-19	time	2.56	3.61	4.65	5.69	6.72	7.75	8.78	9.80	10.85	11.91	13.36	6 / 2			
reaction time		interval	7 steps	1.05	1.04	1.04	1.03	1.03	1.03	1.02	1.05	1.06	1.45		3.13	3.09	3.13
wind	1.4 m/s	velocity	5.36	8.70	8.79	8.79	8.87	8.87	8.87	8.96	8.70	8.62	9.67	8.23	8.76	8.87	8.76
FINAL - 2019 Asian Grand Prix 2 (Chongqing, CHN)													<i>CAA Hurdle Development (2019)</i>				
date	07-Jun-19	time	2.58	3.63	4.67	5.69	6.72	7.75	8.79	9.84	10.91	11.99	13.43	5 / 1			
reaction time	0.164	interval	7 steps	1.05	1.04	1.02	1.03	1.03	1.04	1.05	1.07	1.08	1.44		3.11	3.10	3.20
wind	1.2 m/s	velocity	5.32	8.70	8.79	8.96	8.87	8.87	8.79	8.70	8.54	8.46	9.74	8.19	8.82	8.85	8.57
FINAL - 2019 Asian Grand Prix 1 (Chongqing, CHN)													<i>CAA Hurdle Development (2019)</i>				
date	04-Jun-19	time	2.61	3.67	4.70	5.74	6.79	7.84	8.90	9.96	11.02	12.13	13.58	4 / 1			
reaction time	0.187	interval	7 steps	1.06	1.03	1.04	1.05	1.05	1.06	1.06	1.06	1.11	1.45		3.13	3.16	3.23
wind	-0.3 m/s	velocity	5.26	8.62	8.87	8.79	8.70	8.70	8.62	8.62	8.62	8.23	9.67	8.10	8.76	8.68	8.49
FINAL - 2019 Nanjing World Challenge (Nanjing, CHN)													<i>CAA Hurdle Development (2019)</i>				
date	21-May-19	time	2.56	3.62	4.64	5.66	6.70	7.74	8.80	9.87	10.94	12.01	13.49	2 / 5			
reaction time	0.169	interval	7 steps	1.06	1.02	1.02	1.04	1.04	1.06	1.07	1.07	1.07	1.48		3.10	3.14	3.21
wind	0.1 m/s	velocity	5.36	8.62	8.96	8.96	8.79	8.79	8.62	8.54	8.54	8.54	9.47	8.15	8.85	8.73	8.54
FINAL - 2019 Asian Athletics Championships (Doha, QAT)													<i>CAA Hurdle Development (2019)</i>				
date	24-Apr-19	time	2.53	3.58	4.60	5.63	6.65	7.69	8.74	9.79	10.84	11.94	13.39	5 / 3			
reaction time	0.137	interval	7 steps	1.05	1.02	1.03	1.02	1.04	1.05	1.05	1.05	1.10	1.45	NR = PB	3.10	3.11	3.20
wind	1.7 m/s	velocity	5.42	8.70	8.96	8.87	8.96	8.79	8.70	8.70	8.70	8.31	9.67	8.22	8.85	8.82	8.57
FINAL - 2018 Asian Games (Jakarta, INA)													<i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>				
date	28-Aug-18	time	2.53	3.60	4.62	5.64	6.67	7.69	8.71	9.78	10.83	11.94	13.39	5 / 2			
reaction time	0.165	interval		1.07	1.02	1.02	1.03	1.02	1.02	1.07	1.05	1.11	1.45	NR PB	3.11	3.07	3.23
wind	0.0 m/s	velocity	5.42	8.54	8.96	8.96	8.87	8.96	8.96	8.54	8.70	8.23	9.67	8.22	8.82	8.93	8.49
FINAL - 2018 Seiko Golden Grand Prix (Osaka, JPN)													<i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>				
date	20-May-18	time	2.60	3.66	4.71	5.75	6.78	7.83	8.90	9.96	11.05	12.13	13.49	5 / 1			
reaction time	0.153	interval	7 steps	1.06	1.05	1.04	1.03	1.05	1.07	1.06	1.09	1.08	1.36	NR PB	3.15	3.15	3.23
wind	-0.4 m/s	velocity	5.28	8.62	8.70	8.79	8.87	8.70	8.54	8.62	8.39	8.46	10.31	8.15	8.70	8.70	8.49

Chen Mingjie (CHN) (2000)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2018 Chinese National U20 Championships (Nanchang, CHN) (99.1cm)														<i>Zhang (2019) - comparative analysis characteristics Chinese elite 110m hurdles in different age</i>															
date	13-May-18	time	2.24	3.41	4.52	5.61	6.69	7.77	8.86	9.94	11.06	12.22		14.12	/ 5														
reaction time		interval		1.17	1.11	1.09	1.08	1.08	1.09	1.08	1.12	1.16	1.90			3.37	3.25	3.36											
wind	1.0 m/s	velocity	6.13	7.81	8.23	8.39	8.46	8.46	8.39	8.46	8.16	7.88	7.38	7.79		8.14	8.44	8.16											
Chen Xinghua (CHN) (2002)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Decathlon - Heat 2 - 2021 Chinese National Championships (Chongqing, CHN)														<i>CAA Hurdle Development (2021)</i>															
date	27-Jun-21	time	2.77	3.94	5.07	6.17	7.31	8.46	9.59	10.73	11.94	13.16		14.79	3 / 2														
reaction time		interval		1.17	1.13	1.10	1.14	1.15	1.13	1.14	1.21	1.22	1.63			3.40	3.42	3.57											
wind	-0.2 m/s	velocity	4.95	7.81	8.09	8.31	8.02	7.95	8.09	8.02	7.55	7.49	8.60	7.44		8.06	8.02	7.68											
Decathlon - Heat 2 - 2019 Chinese National Grand Prix Final (Daqing, CHN)														<i>CAA Hurdle Development (2019)</i>															
date	23-Aug-19	time	2.85	4.09	5.29	6.49	7.71	8.91	10.14	11.33	12.58	13.83		15.51	9 / 3														
reaction time	0.196	interval		1.24	1.20	1.20	1.22	1.20	1.23	1.19	1.25	1.25	1.68			3.64	3.65	3.69											
wind	?? m/s	velocity	4.81	7.37	7.62	7.62	7.49	7.62	7.43	7.68	7.31	7.31	8.35	7.09		7.53	7.51	7.43											
Chen Yanhao (CHN) (1972)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2001 Chinese National Games (Guangzhou, CHN)														<i>Huang (2002) - technical research on the men's 110m hurdles at the 9th national games</i>															
date	19-Nov-01	time	2.61	3.67	4.69	5.72	6.73	7.76	8.80	9.85	10.89	11.95		13.42	/ 2														
reaction time		interval		1.06	1.02	1.03	1.01	1.03	1.04	1.05	1.04	1.06	1.47			3.11	3.08	3.15											
wind	0.4 m/s	velocity	5.26	8.62	8.96	8.87	9.05	8.87	8.79	8.70	8.79	8.62	9.54	8.20		8.82	8.90	8.70											
FINAL - 2001 Chinese National Grand Prix (Shanghai, CHN)														<i>Fang (2001) - analysis on technical characteristics in Liu Xiang's 110m hurdles</i>															
date	06-May-01	time	2.64	3.69	4.75	5.78	6.81	7.83	8.86	9.90	10.97	12.02		13.37	/ 2														
reaction time		interval		1.05	1.06	1.03	1.03	1.02	1.03	1.04	1.07	1.05	1.35	PB		3.14	3.08	3.16											
wind	1.9 m/s	velocity	5.20	8.70	8.62	8.87	8.87	8.96	8.87	8.79	8.54	8.70	10.39	8.23		8.73	8.90	8.68											
FINAL - 2001 Chinese National Grand Prix (Ningbo, CHN)														<i>Fang (2001) - analysis on technical characteristics in Liu Xiang's 110m hurdles</i>															
date	28-Apr-01	time	2.66	3.74	4.78	5.83	6.87	7.89	8.93	9.97	11.02	12.06		13.47	/ 2														
reaction time		interval		1.08	1.04	1.05	1.04	1.02	1.04	1.04	1.05	1.04	1.41	PB		3.17	3.10	3.13											
wind	2.5 m/s	velocity	5.16	8.46	8.79	8.70	8.79	8.96	8.79	8.79	8.70	8.79	9.94	8.17		8.65	8.85	8.76											
FINAL - 1998 ??? (Chengdu, CHN)														<i>Yuan (1998) - Chen Yanhao analysis of 110m results</i>															
date	12-May-98	time	2.56	3.60	4.64	5.67	6.70	7.72	8.84	9.87	10.92	11.99		13.50	/ 1														
reaction time		interval		1.04	1.04	1.03	1.03	1.02	1.12	1.03	1.05	1.07	1.51			3.11	3.17	3.15											
wind	???	velocity	5.36	8.79	8.79	8.87	8.87	8.96	8.16	8.87	8.70	8.54	9.28	8.15		8.82	8.65	8.70											
FINAL - 1997 Chinese National Games (Shanghai, CHN)														<i>Zhang (1999) - analysis of 110m hurdles of Chen Yanhao</i>															
date	19-Oct-97	time	2.52	3.57	4.63	5.66	6.67	7.70	8.82	9.84	10.99	11.96		13.41	/ 1														
reaction time		interval		1.05	1.06	1.03	1.01	1.03	1.12	1.02	1.15	0.97	1.45			3.14	3.16	3.14											
wind	0.0 m/s	velocity	5.44	8.70	8.62	8.87	9.05	8.87	8.16	8.96	7.95	9.42	9.67	8.20		8.73	8.68	8.73											
FINAL - 1994 Asian Games (Hiroshima, JPN)														<i>Yuan (1998) - Chen Yanhao analysis of 110m results</i>															
date	15-Oct-94	time	2.58	3.62	4.66	5.68	6.63	7.70	8.74	9.78	10.84	11.92		13.39	/ 2														
reaction time		interval		1.04	1.04	1.02	0.95	1.07	1.04	1.04	1.06	1.08	1.47	PB		3.10	3.06	3.18											
wind	1.6 m/s	velocity	5.32	8.79	8.79	8.96	9.62	8.54	8.79	8.79	8.62	8.46	9.54	8.22		8.85	8.96	8.62											
FINAL - 1993 Chinese National Games (Beijing, CHN)														<i>Yuan (1998) - Chen Yanhao analysis of 110m results</i>															
date	13-Sep-93	time	2.59	3.69	4.77	5.83	6.89	7.93	8.98	10.03	11.11	12.22		13.59	/ 1														
reaction time		interval		1.10	1.08	1.06	1.06	1.04	1.05	1.05	1.08	1.11	1.37	PB		3.24	3.15	3.24											
wind	-0.5 m/s	velocity	5.30	8.31	8.46	8.62	8.62	8.79	8.70	8.70	8.46	8.23	10.23	8.09		8.46	8.70	8.46											
Cherubin, Yves (HAI) (1999)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Semi-Final 2 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>															
date	21-Aug-23	time	2.63	3.70	4.73	5.80	6.83	7.86	8.93	9.98	11.05	12.14		13.66	9 / 7														
reaction time	0.178	interval		1.07	1.03	1.07	1.03	1.03	1.07	1.05	1.07	1.09	1.52			3.17	3.13	3.21											
wind	-0.2 m/s	velocity	5.22	8.54	8.87	8.54	8.87	8.87	8.54	8.70	8.54	8.39	9.22	8.05		8.65	8.76	8.54											
Heat 4 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>															
date	20-Aug-23	time	2.52	3.60	4.64	5.67	6.70	7.72	8.80	9.83	10.93	12.05		13.56	6 / 6														
reaction time	0.180	interval		1.08	1.04	1.03	1.03	1.02	1.08	1.03	1.10	1.12	1.51	PB		3.15	3.13	3.25											
wind	-0.6 m/s	velocity	5.44	8.46	8.79	8.87	8.87	8.96	8.46	8.87	8.31	8.16	9.28	8.11		8.70	8.76	8.44											
Chervanyev, Yuriy (URS) (1958)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 1981 USSR vs. USA (Leningrad, URS)														<i>Chanon (1987) - analyse comparee des caracteristiques des courses de 100m haies et 110m haies</i>															
date	10-Jul-81	time	2.50	3.61	4.65	5.68	6.72	7.78	8.87	10.00	11.17	12.42		13.74	/ 3														
reaction time		interval		1.11	1.04	1.03	1.04	1.06	1.09	1.13	1.17	1.25	1.32			3.18	3.19	3.55											
wind	2.8 m/s	velocity	5.49	8.23	8.79	8.87	8.79	8.62	8.39	8.09	7.81	7.31	10.62	8.01		8.62	8.60	7.72											
FINAL - 1981 USSR vs. GDR (Tbilisi, URS)														<i>Chanon (1987) - analyse comparee des caracteristiques des courses de 100m haies et 110m haies</i>															
date	26-Jun-81	time	2.49	3.62	4.71	5.73	6.75	7.82	8.96	10.12	11.30	12.56		13.93	/ 3														

reaction time	interval	1.13	1.09	1.02	1.02	1.07	1.14	1.16	1.18	1.26	1.37		3.24	3.23	3.60		
wind	???	velocity	5.51	8.09	8.39	8.96	8.96	8.54	8.02	7.88	7.75	7.25	10.23	7.90	8.46	8.49	7.62
Chevallier, Franck (FRA) (1964)																	
Semi-Final ? - 1986 French National Indoor Championships (Lievin, FRA)																	
<i>Aubert (1986) - indoor - video - haies, etude des performances</i>																	
date	26-Jan-86	time	2.72	3.82	4.95	6.05	7.14							8.08	/2		
reaction time	interval	1.10	1.13	1.10	1.09							0.94			3.33		
	velocity	5.04	8.31	8.09	8.31	8.39						10.34	7.43		8.23		
Heat ? - 1986 French National Indoor Championships (Lievin, FRA)																	
<i>Aubert (1986) - indoor - video - haies, etude des performances</i>																	
date	25-Jan-86	time	2.67	3.77	4.88	5.98	7.08							8.05	/2		
reaction time	interval	1.10	1.11	1.10	1.10							0.97			3.31		
	velocity	5.14	8.31	8.23	8.31	8.31						10.02	7.45		8.28		
Chiguer, Adam (SWE) (1991)																	
FINAL - 2010 Swedish National Championships (Falun, SWE)																	
<i>Blomkvist (2010) - www.sub13.se</i>																	
date	22-Aug-10	time	2.83	4.04	5.27	6.53	7.77	9.05	10.31	11.60	12.89	14.20		15.94	/8		
reaction time	interval	1.21	1.23	1.26	1.24	1.28	1.26	1.29	1.29	1.31	1.74				3.70	3.78	3.89
wind	-0.7 m/s	velocity	4.85	7.55	7.43	7.25	7.37	7.14	7.25	7.09	7.09	6.98	8.06	6.90	7.41	7.25	7.05
Chu Pengfei (CHN) (1993)																	
Heat 1 - 2018 Chinese National Championships (Taiyuan, CHN)																	
<i>Henson (2018) - coaching observations</i>																	
date	15-Sep-18	time	2.78	3.92	5.00	6.09	7.17	8.27	9.36	10.46	11.61	12.76		14.27	7 / 5		
reaction time	interval	1.14	1.08	1.09	1.08	1.10	1.09	1.10	1.15	1.15	1.51				3.31	3.27	3.40
wind	-0.2 m/s	velocity	4.94	8.02	8.46	8.39	8.46	8.31	8.39	8.31	7.95	7.95	9.28	7.71	8.28	8.39	8.06
FINAL - 2018 National Grand Prix Final (Guiyang, CHN) (Altitude)																	
<i>Zhang (2019) - comparative analysis characteristics Chinese elite men's 110m hurdles in different age groups</i>																	
date	17-Jun-18	time	2.75	3.86	4.96	6.03	7.10	8.18	9.26	10.35	11.45	12.55		14.03	/5		
reaction time	interval	1.11	1.10	1.07	1.07	1.08	1.08	1.09	1.10	1.10	1.48				3.28	3.23	3.29
wind	-0.3 m/s	velocity	4.99	8.23	8.31	8.54	8.54	8.46	8.46	8.39	8.31	8.31	9.47	7.84	8.36	8.49	8.33
FINAL - 2017 Chinese National Games (Tianjin, CHN)																	
<i>Henson (2017) - coaching observations</i>																	
date	03-Sep-17	time	2.71	3.83	4.89	5.97	7.02	8.09	9.21	10.32	11.43	12.54		14.01	5 / 7		
reaction time	interval	1.12	1.06	1.08	1.05	1.07	1.12	1.11	1.11	1.11	1.47				3.26	3.24	3.33
wind	0.3 m/s	velocity	5.06	8.16	8.62	8.46	8.70	8.54	8.16	8.23	8.23	8.23	9.54	7.85	8.41	8.46	8.23
Clarico, Vincent (FRA) (1966)																	
FINAL - 1997 European Cup (Munich, GER)																	
<i>Jung (2003) - http://www.fgs.uni-halle.de</i>																	
date	22-Jun-97	time	2.66	3.72	4.78	5.82	6.88	7.92	9.00	10.06	11.16	12.28		13.67	/4		
reaction time	interval	1.06	1.06	1.04	1.06	1.04	1.08	1.06	1.10	1.12	1.39				3.16	3.18	3.28
wind	0.2 m/s	velocity	5.16	8.62	8.62	8.79	8.62	8.79	8.46	8.62	8.31	8.16	10.09	8.05	8.68	8.62	8.36
Semi-Final ? - 1986 French National Indoor Championships (Lievin, FRA)																	
<i>Aubert (1986) - indoor - video - haies, etude des performances</i>																	
date	26-Jan-86	time	2.64	3.76	4.86	5.99	7.09							8.03	/3		
reaction time	interval	1.12	1.10	1.13	1.10							0.94			3.35		
	velocity	5.20	8.16	8.31	8.09	8.31						10.34	7.47		8.19		
Heat ? - 1986 French National Indoor Championships (Lievin, FRA)																	
<i>Aubert (1986) - indoor - video - haies, etude des performances</i>																	
date	25-Jan-86	time	2.62	3.76	4.88	6.01	7.12							8.08	/3		
reaction time	interval	1.14	1.12	1.13	1.11							0.96			3.39		
	velocity	5.24	8.02	8.16	8.09	8.23						10.13	7.43		8.09		
Clarke, Lawrence (GBR) (1990)																	
FINAL - 2012 Memorial Van Damme (Brussels, BEL) (TV Analysis)																	
<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>																	
date	07-Sep-12	time	2.50	3.58	4.62	5.68	6.74	7.80	8.84	9.92	11.00	12.14		13.71	7 / 9		
reaction time	0.148	interval	1.08	1.04	1.06	1.06	1.06	1.04	1.08	1.08	1.14	1.57			3.18	3.16	3.30
wind	0.3 m/s	velocity	5.49	8.46	8.79	8.62	8.62	8.79	8.46	8.46	8.02	8.93	8.02		8.62	8.68	8.31
FINAL - 2012 AVIVA Grand Prix (Birmingham, GBR) (TV Analysis)																	
<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>																	
date	26-Aug-12	time	2.45	3.50	4.57	5.60	6.62	7.66	8.72	9.78	10.84	11.94		13.52	6 / 6		
reaction time	0.146	interval	1.05	1.07	1.03	1.02	1.04	1.06	1.06	1.06	1.10	1.58			3.15	3.12	3.22
wind	-0.9 m/s	velocity	5.60	8.70	8.54	8.87	8.96	8.79	8.62	8.62	8.62	8.31	8.87	8.14	8.70	8.79	8.52
FINAL - 2012 Olympic Games (London, GBR) (TV Analysis)																	
<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>																	
date	08-Aug-12	time	2.50	3.54	4.56	5.58	6.62	7.66	8.74	9.78	10.82	11.90		13.39	2 / 4		
reaction time	0.169	interval	1.04	1.02	1.02	1.04	1.04	1.08	1.04	1.04	1.08	1.49			3.08	3.16	3.16
wind	-0.3 m/s	velocity	5.49	8.79	8.96	8.96	8.79	8.79	8.46	8.79	8.79	8.46	9.41	8.22	8.90	8.68	8.68
Semi-Final 1 - 2012 Olympic Games (London, GBR) (TV Analysis)																	
<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>																	
date	08-Aug-12	time	2.48	3.52	4.54	5.54	6.58	7.58	8.62	9.66	10.72	11.80		13.31	4 / 3		
reaction time	0.159	interval	1.04	1.02	1.00	1.04	1.00	1.04	1.04	1.06	1.08	1.51	PB		3.06	3.08	3.18
wind	-0.5 m/s	velocity	5.53	8.79	8.96	9.14	8.79	9.14	8.79	8.79	8.62	8.46	9.28	8.26	8.96	8.90	8.62

FINAL - 2010 Folksam GP (Sollentuna, SWE)

Blomkvist (2010) - www.sub13.se

date	01-Jul-10	time	2.51	3.59	4.67	5.71	6.76	7.90	8.85	9.89	10.99	12.09		13.71		6 / 3			
reaction time		interval		1.08	1.08	1.04	1.05	1.14	0.95	1.04	1.10	1.10	1.62				3.20	3.14	3.24
wind	0.4 m/s	velocity	5.47	8.46	8.46	8.79	8.70	8.02	9.62	8.79	8.31	8.31	8.65	8.02			8.57	8.73	8.46

Cleve, Moritz (GER) (1987)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

Decathlon - Heat 3 - 2009 IAAF World Championships (Berlin, GER)

Graubner (2009) - biomechanical analyses at the 12th IAAF world championships

date	20-Aug-09	time	2.77	3.87	5.05	6.17	7.28	8.37	9.49	10.67	11.81	12.99		14.54		5 / 6			
reaction time	0.162	interval		1.10	1.18	1.12	1.11	1.09	1.12	1.18	1.14	1.18	1.55				3.40	3.32	3.50
wind	-0.1 m/s	velocity	4.95	8.31	7.75	8.16	8.23	8.39	8.16	7.75	8.02	7.75	9.05	7.57			8.06	8.26	7.83

Coertzen, Willem (RSA) (1982)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

Decathlon - Heat 3 - 2009 IAAF World Championships (Berlin, GER)

Graubner (2009) - biomechanical analyses at the 12th IAAF world championships

date	20-Aug-09	time	2.75	3.86	4.97	6.08	7.17	8.27	9.39	10.49	11.63	12.79		14.26		6 / 2			
reaction time	0.152	interval		1.11	1.11	1.11	1.09	1.10	1.12	1.10	1.14	1.16	1.47	PB			3.33	3.31	3.40
wind	-0.1 m/s	velocity	4.99	8.23	8.23	8.23	8.39	8.31	8.16	8.31	8.02	7.88	9.54	7.71			8.23	8.28	8.06

Coghlan, Peter (IRL) (1975)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

Semi-Final 1 - 1999 IAAF World Championships (Sevilla, ESP)

Sanchez (1999) - Sevilla '99: análisis de la carreras con villas

date	24-Aug-99	time	2.59	3.62	4.67	5.67	6.70	7.72	8.72	9.78	10.86	11.97		13.35		1 / 5			
reaction time	0.161	interval		1.03	1.05	1.00	1.03	1.02	1.00	1.06	1.08	1.11	1.38				3.08	3.05	3.25
wind	0.0 m/s	velocity	5.30	8.87	8.70	9.14	8.87	8.96	9.14	8.62	8.46	8.23	10.16	8.24			8.90	8.99	8.44

Constantino, Gabriel (BRA) (1995)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

FINAL - 2021 Meeting Elite en Salle de L'Eure (Val-de-Reuil, FRA) (TV Analysis)

Henson (2021) - men's 60m hurdles world record season - Grant Holloway

date	14-Feb-21	time	2.50	3.56	4.60	5.62	6.66								7.65		4 / 2		
reaction time	0.166	interval	7 steps	1.06	1.04	1.02	1.04						0.99					3.12	
		velocity		5.49	8.62	8.79	8.96	8.79					9.82	7.84				8.79	

Heat 1 - 2021 Meeting Elite en Salle de L'Eure (Val-de-Reuil, FRA) (TV Analysis)

Henson (2021) - men's 60m hurdles world record season - Grant Holloway

date	14-Feb-21	time	2.54	3.58	4.62	5.66	6.68								7.68		5 / 2		
reaction time	0.185	interval	7 steps	1.04	1.04	1.04	1.02						1.00					3.12	
		velocity		5.40	8.79	8.79	8.79	8.96					9.72	7.81				8.79	

FINAL - 2020 Doha Diamond League (Doha, QAT) (TV Analysis)

Henson (2020) - Athlete First: 2020 year end hurdle report

date	25-Sep-20	time	2.44	3.48	4.52	5.54	6.56	7.60	8.64	9.68	10.74	11.94		13.60		7 / 4			
reaction time	0.122	interval	7 steps	1.04	1.04	1.02	1.02	1.04	1.04	1.04	1.06	1.20	1.66					3.10	3.10
wind	0.3 m/s	velocity		5.62	8.79	8.79	8.96	8.96	8.79	8.79	8.62	7.62	8.45	8.09				8.85	8.85

FINAL - 2020 Golden Gala Pietro Mennea (Rome, ITA) (TV Analysis)

Henson (2020) - Athlete First: 2020 year end hurdle report

date	17-Sep-20	time	2.54	3.58	4.62	5.66	6.70	7.76	8.82	9.92	11.04	12.16		13.67		2 / 8			
reaction time	0.161	interval	7 steps	1.04	1.04	1.04	1.04	1.06	1.06	1.10	1.12	1.12	1.51					3.12	3.16
wind	0.1 m/s	velocity		5.40	8.79	8.79	8.79	8.79	8.62	8.62	8.31	8.16	8.16	9.28	8.05			8.79	8.68

FINAL - 2019 Meeting International Mohammed VI d'Athlétisme (Rabat, MAR) (TV Analysis)

Henson (2020) - Athlete First: 2019 year end hurdle report

date	16-Jun-19	time	2.54	3.58	4.60	5.64	6.68	7.70	8.72	9.76	10.82	11.90		13.41		2 / 3			
reaction time	0.177	interval	7 steps	1.04	1.02	1.04	1.04	1.02	1.02	1.04	1.06	1.08	1.51					3.10	3.08
wind	0.3 m/s	velocity		5.40	8.79	8.96	8.79	8.79	8.96	8.96	8.79	8.62	8.46	9.28	8.20			8.85	8.90

FINAL - 2019 Golden Gala Pietro Mennea (Rome, ITA) (TV Analysis)

Henson (2020) - Athlete First: 2019 year end hurdle report

date	06-Jun-19	time	2.55	3.60	4.62	5.63	6.66	7.70	8.75	9.80	10.88	11.98		13.50		4 / 4			
reaction time	0.160	interval	7 steps	1.05	1.02	1.01	1.03	1.04	1.05	1.05	1.08	1.10	1.52					3.08	3.12
wind	0.4 m/s	velocity		5.38	8.70	8.96	9.05	8.87	8.79	8.70	8.70	8.46	8.31	9.22	8.15			8.90	8.79

FINAL - 2019 Müller Indoor Grand Prix (Birmingham, GBR) (TV Analysis)

Henson (2020) - Athlete First: 2019 year end hurdle report

date	16-Feb-19	time	2.54	3.54	4.58	5.62	6.66								7.62		5 / 4		
reaction time	0.136	interval	7 steps	1.00	1.04	1.04	1.04						0.96					3.08	
		velocity		5.40	9.14	8.79	8.79	8.79					10.13	7.87				8.90	

FINAL - 2018 Müller Grand Prix (Birmingham, GBR) (TV Analysis)

Henson (2020) - Athlete First: 2018 year end hurdle report

date	18-Aug-18	time	2.48	3.52	4.56	5.58	6.60	7.62	8.66	9.70	10.78	11.88		13.41		8 / 6			
reaction time	0.126	interval	7 steps	1.04	1.04	1.02	1.02	1.02	1.04	1.04	1.08	1.10	1.53					3.10	3.08
wind	1.3 m/s	velocity		5.53	8.79	8.79	8.96	8.96	8.96	8.79	8.79	8.46	8.31	9.16	8.20			8.85	8.90

FINAL - 2018 Meeting International de Montreuil (Montreuil, FRA) (TV Analysis)

Henson (2020) - Athlete First: 2018 year end hurdle report

date	19-Jun-18	time	2.64	3.66	4.68	5.68	6.68	7.68	8.70	9.74	10.78	11.86		13.23		1 / 2			
reaction time	0.165	interval	7 steps	1.02	1.02	1.00	1.00	1.00	1.02	1.04	1.04	1.08	1.37	AR PB				3.04	3.02
wind	0.5 m/s	velocity		5.20	8.96	8.96	9.14	9.14	8.96	8.79	8.79	8.46	10.23	8.31				9.02	9.08

FINAL - 2018 IAAF World Indoor Championships (Birmingham, GBR) Walker (2019). Biomechanical Report for the IAAF World Indoor Championships 2018: 60 Metres Hurdles Men

date	04-Mar-18	time	2.58	3.65	4.71	5.74	6.79								7.71		2 / 6		
reaction time	0.176	interval	7 steps	1.07	1.06	1.03	1.05						0.92					3.16	
		velocity		5.32	8.54	8.62	8.87	8.70					10.57	7.78				8.68	

		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Contreras, Yidiel (ESP) (1992)																		
Semi-Final 2 - 2017 IAAF World Championships (London, GBR)												<i>Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles</i>						
date	06-Aug-17	time	2.40	3.46	4.52	5.57	6.65	7.67	8.73	9.80	10.88	12.00	13.65	8 / 7				
reaction time	0.157	interval	7 steps	1.06	1.06	1.05	1.08	1.02	1.06	1.07	1.08	1.12	1.65		3.17	3.16	3.27	
wind	0.6 m/s	velocity	5.72	8.62	8.62	8.70	8.46	8.96	8.62	8.54	8.46	8.16	8.50	8.06		8.65	8.68	8.39
FINAL - 2016 Spanish National Championships (Gijón, ESP) (TV Analysis)												<i>Henson (2021) - Athlete First: 2016 year end hurdle report</i>						
date	24-Jul-16	time	2.44	3.56	4.57	5.58	6.60	7.62	8.66	9.71	10.80	11.90	13.45	5 / 2				
reaction time		interval	7 steps	1.12	1.01	1.01	1.02	1.02	1.04	1.05	1.09	1.10	1.55		3.14	3.08	3.24	
wind	1.0 m/s	velocity	5.62	8.16	9.05	9.05	8.96	8.96	8.79	8.70	8.39	8.31	9.05	8.18		8.73	8.90	8.46
FINAL - 2016 Meeting International Mohammed VI D'Athletisme (Rabat, MAR) (TV Analysis)												<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>						
date	22-May-16	time	2.54	3.66	4.76	5.80							dnf	8 / --				
reaction time	0.147	interval	7 steps	1.12	1.10	1.04									3.26			
wind	1.4 m/s	velocity	5.40	8.16	8.31	8.79									8.41			
Cooper, Jermaine (USA) (1980)																		
Semi-Final 1 - 2007 USATF National Championships (Indianapolis, IN)												<i>USATF Men's Hurdle Development (2007)</i>						
date	24-Jun-07	time	2.60	3.67	4.74	5.79	6.84	7.89	8.98	10.06	11.16	12.26	13.75	2 / 6				
reaction time		interval		1.07	1.07	1.05	1.05	1.05	1.09	1.08	1.10	1.10	1.49		3.19	3.19	3.28	
wind	-0.6 m/s	velocity	5.28	8.54	8.54	8.70	8.70	8.70	8.39	8.46	8.31	8.31	9.41	8.00		8.60	8.60	8.36
Heat 1 - 2007 USATF National Championships (Indianapolis, IN)												<i>USATF Men's Hurdle Development (2007)</i>						
date	23-Jun-07	time	2.58	3.67	4.74	5.82	6.87	7.92	8.99	10.04	11.18	12.27	13.75	2 / 5				
reaction time		interval		1.09	1.07	1.08	1.05	1.05	1.07	1.05	1.14	1.09	1.48		3.24	3.17	3.28	
wind	0.1 m/s	velocity	5.32	8.39	8.54	8.46	8.70	8.70	8.54	8.70	8.02	8.39	9.47	8.00		8.46	8.65	8.36
Cowling, Larry (USA) (1960)																		
FINAL - 1981 USSR vs. USA (Leningrad, URS)												<i>Chanon (1987) - analyse comparee des caracteristiques des courses de 100m haies et 110m haies</i>						
date	10-Jul-81	time	2.48	3.59	4.62	5.65	6.68	7.75	8.82	9.94	11.06	12.21	13.53	/ 2				
reaction time		interval		1.11	1.03	1.03	1.03	1.07	1.07	1.12	1.12	1.15	1.32		3.17	3.17	3.39	
wind	2.8 m/s	velocity	5.53	8.23	8.87	8.87	8.87	8.54	8.54	8.16	8.16	7.95	10.62	8.13		8.65	8.65	8.09
Craddock, Kevin (USA) (1987)																		
FINAL - 2012 Golden Grand Prix (Shanghai, CHN) (TV Analysis)												<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>						
date	19-May-12	time	2.44	3.52	4.54	5.56	6.58	7.62	8.68	9.76	10.84	11.94	13.51	9 / 6				
reaction time	0.167	interval	7 steps	1.08	1.02	1.02	1.02	1.04	1.06	1.08	1.08	1.10	1.57		3.12	3.12	3.26	
wind	0.4 m/s	velocity	5.62	8.46	8.96	8.96	8.96	8.79	8.62	8.46	8.46	8.31	8.93	8.14		8.79	8.79	8.41
FINAL - 2003 USATF National Junior Championships (Indianapolis, IN) (99cm)												<i>USATF Women's Sprint Development (2003)</i>						
date	22-Jun-03	time	2.60	3.72	4.86	5.94	7.07	8.19	9.31	10.44	11.56	12.73	14.36	6 / 5				
reaction time		interval		1.12	1.14	1.08	1.13	1.12	1.12	1.13	1.12	1.17	1.63		3.34	3.37	3.42	
wind	-0.4 m/s	velocity	5.28	8.16	8.02	8.46	8.09	8.16	8.16	8.09	8.16	7.81	8.60	7.66		8.21	8.14	8.02
Crear, Mark (USA) (1968)																		
FINAL - 2003 USATF National Championships (Palo Alto, CA)												<i>USATF Women's Sprint Development (2003)</i>						
date	21-Jun-03	time	2.44	3.54	4.59	5.66	6.69	7.70	8.73	9.78	10.83	11.93	13.68	8 / 6				
reaction time		interval		1.10	1.05	1.07	1.03	1.01	1.03	1.05	1.05	1.10	1.75		3.22	3.07	3.20	
wind	-2.4 m/s	velocity	5.62	8.31	8.70	8.54	8.87	9.05	8.87	8.70	8.70	8.31	8.01	8.04		8.52	8.93	8.57
FINAL - 1997 IAAF World Championships (Athens, GRE)												<i>Hommel (1997) - biomechanical research project at the VI th world championships in athletics, Athens 1997</i>						
date	07-Aug-97	time	2.60	3.64	4.65	5.66	6.66	7.76	8.78	9.86	10.92	12.06	13.55	8 / 7				
reaction time	0.134	interval		1.04	1.01	1.01	1.00	1.10	1.02	1.08	1.06	1.14	1.49		3.06	3.12	3.28	
wind	0.0 m/s	velocity	5.28	8.79	9.05	9.05	9.14	8.31	8.96	8.46	8.62	8.02	9.41	8.12		8.96	8.79	8.36
FINAL - 1996 Olympic Games (Atlanta, GA)												<i>Butler (2016) - IAAF statistics handbook- special edition: Games of the XXXI Olympiad- Rio 2016</i>						
date	26-Jul-96	time	2.35	3.38	4.37	5.39	6.39	7.41	8.46	9.47	10.51	11.56	13.09	8 / 2				
reaction time	0.124	interval		1.03	0.99	1.02	1.00	1.02	1.05	1.01	1.04	1.05	1.53		3.04	3.07	3.10	
wind	0.8 m/s	velocity	5.84	8.87	9.23	8.96	9.14	8.96	8.70	9.05	8.79	8.70	9.16	8.40		9.02	8.93	8.85
FINAL - 1996 USA Olympic Trials (Atlanta, GA)												<i>McNichols (2000) - Hurdle technique study through video analysis</i>						
date	23-Jun-96	time	2.38	3.40	4.73	5.40	6.42	7.39	8.42	9.38	10.46	11.52	13.05	4 / 2				
reaction time		interval		1.02	1.33	0.67	1.02	0.97	1.03	0.96	1.08	1.06	1.53		3.02	3.02	3.10	
wind	0.9 m/s	velocity	5.76	8.96	6.87	13.64	8.96	9.42	8.87	9.52	8.46	8.62	9.16	8.43		9.08	9.08	8.85
Crews, Jerome (GER) (1977)																		
FINAL - 2001 ISTAF (Berlin, GER)												<i>Graubner (2009) - http://www.fgs.uni-halle.de</i>						
date	31-Aug-09	time	2.66	3.74	4.80	5.85	6.91	7.98	9.04	10.14	11.24	12.35	13.70	7 / 6				
reaction time	0.180	interval		1.08	1.06	1.05	1.06	1.07	1.06	1.10	1.10	1.11	1.35		3.19	3.19	3.31	
wind	1.0 m/s	velocity	5.16	8.46	8.62	8.70	8.62	8.54	8.62	8.31	8.31	8.23	10.39	8.03		8.60	8.60	8.28
Crittenden, Freddie (USA) (1994)																		

FINAL - 2024 Memorial van damme (Brussels, BEL)

date	13-Sep-24	time	2.41	3.49	4.51	5.54	6.57	7.56	8.59	9.61	10.65	11.71	13.24	3 / 3			
reaction time	0.141	interval		1.08	1.02	1.03	1.03	0.99	1.03	1.02	1.04	1.06	1.53		3.13	3.05	3.12
wind	0.4 m/s	velocity	5.69	8.46	8.96	8.87	8.87	9.23	8.87	8.96	8.79	8.62	9.16	8.31	8.76	8.99	8.79

Omega Timing (2024) - diamond league race analysis

FINAL - 2024 Weltklasse (Zürich, SUI)

date	05-Sep-24	time	2.39	3.44	4.44	5.44	6.45	7.47	8.49	9.50	10.54	11.59	13.15	7 / 3			
reaction time	0.127	interval		1.05	1.00	1.00	1.01	1.02	1.02	1.01	1.04	1.05	1.56		3.05	3.05	3.10
wind	-0.3 m/s	velocity	5.74	8.70	9.14	9.14	9.05	8.96	8.96	9.05	8.79	8.70	8.99	8.37	8.99	8.99	8.85

Omega Timing (2024) - diamond league race analysis

FINAL - 2024 Olympic Games (Paris, FRA)

date	08-Aug-24	time	2.41	3.49	4.53	5.55	6.57	7.59	8.61	9.65	10.69	11.75	13.32	8 / 6			
reaction time	0.161	interval		1.08	1.04	1.02	1.02	1.02	1.02	1.04	1.04	1.06	1.57		3.14	3.06	3.14
wind	-0.1 m/s	velocity	5.69	8.46	8.79	8.96	8.96	8.96	8.96	8.79	8.79	8.62	8.93	8.26	8.73	8.96	8.73

Paris 2024 Olympc Games - Results Book (2024)

Semi-Final 2 - 2024 Olympic Games (Paris, FRA)

date	07-Aug-24	time	2.37	3.43	4.47	5.49	6.50	7.52	8.56	9.58	10.63	11.66	13.23	2 / 2			
reaction time	0.139	interval		1.06	1.04	1.02	1.01	1.02	1.04	1.02	1.05	1.03	1.57		3.12	3.07	3.10
wind	-0.1 m/s	velocity	5.79	8.62	8.79	8.96	9.05	8.96	8.79	8.96	8.70	8.87	8.93	8.31	8.79	8.93	8.85

Paris 2024 Olympc Games - Results Book (2024)

Repechage 1 - 2024 Olympic Games (Paris, FRA)

date	06-Aug-24	time	2.43	3.53	4.60	5.63	6.66	7.69	8.72	9.76	10.80	11.85	13.42	2 / 1			
reaction time	0.154	interval		1.10	1.07	1.03	1.03	1.03	1.03	1.04	1.04	1.05	1.57		3.20	3.09	3.13
wind	0.2 m/s	velocity	5.65	8.31	8.54	8.87	8.87	8.87	8.87	8.79	8.79	8.70	8.93	8.20	8.57	8.87	8.76

Paris 2024 Olympc Games - Results Book (2024)

Heat 2 - 2024 Olympic Games (Paris, FRA)

date	04-Aug-24	time	2.69	3.98	5.31	6.84	8.39	9.92	11.41	12.93	14.42	15.94	18.27	3 / 8			
reaction time	0.157	interval		1.29	1.33	1.53	1.55	1.53	1.49	1.52	1.49	1.52	2.33		4.15	4.57	4.53
wind	1.2 m/s	velocity	5.10	7.09	6.87	5.97	5.90	5.97	6.13	6.01	6.13	6.01	6.02	6.02	6.61	6.00	6.05

Paris 2024 Olympc Games - Results Book (2024)

FINAL - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)

date	28-Jun-24	time	2.54	3.56	4.54	5.54	6.54	7.52	8.52	9.51	10.52	11.56	12.93	7 / 2			
reaction time		interval		1.02	0.98	1.00	1.00	0.98	1.00	0.99	1.01	1.04	1.37	PB	3.00	2.98	3.04
wind	2.0 m/s	velocity	5.40	8.96	9.33	9.14	9.14	9.33	9.14	9.23	9.05	8.79	10.23	8.51	9.14	9.20	9.02

Henson (2024) - Athlete First: 2024 year end hurdle report

Semi-Final 2 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)

date	27-Jun-24	time	2.53	3.56	4.56	5.57	6.56	7.55	8.56	9.56	10.58	11.62	13.05	7 / 1			
reaction time		interval		1.03	1.00	1.01	0.99	0.99	1.01	1.00	1.02	1.04	1.43		3.04	2.99	3.06
wind	-0.2 m/s	velocity	5.42	8.87	9.14	9.05	9.23	9.23	9.05	9.14	8.96	8.79	9.80	8.43	9.02	9.17	8.96

Henson (2024) - Athlete First: 2024 year end hurdle report

Heat 2 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)

date	24-Jun-24	time	2.56	3.58	4.58	5.58	6.60	7.60	8.63	9.64	10.67	11.72	13.16	2 / 1			
reaction time		interval		1.02	1.00	1.00	1.02	1.00	1.03	1.01	1.03	1.05	1.44		3.02	3.05	3.09
wind	-0.3 m/s	velocity	5.36	8.96	9.14	9.14	8.96	9.14	8.87	9.05	8.87	8.70	9.74	8.36	9.08	8.99	8.87

Henson (2024) - Athlete First: 2024 year end hurdle report

FINAL - 2024 Prefontaine Classic (Eugene, OR)

date	25-May-24	time	2.42	3.47	4.48	5.47	6.47	7.48	8.50	9.53	10.57	11.62	13.16	8 / 3			
reaction time	0.140	interval		1.05	1.01	0.99	1.00	1.01	1.02	1.03	1.04	1.05	1.54		3.05	3.03	3.12
wind	-0.1 m/s	velocity	5.67	8.70	9.05	9.23	9.14	9.05	8.96	8.87	8.79	8.70	9.10	8.36	8.99	9.05	8.79

Omega Timing (2024) - diamond league race analysis

FINAL - 2024 Xiamen Diamond League (Xiamen, CHN)

date	20-Apr-24	time	2.44	3.49	4.51	5.54	6.54	7.56	8.58	9.61	10.67	11.73	13.30	7 / 4			
reaction time	0.166	interval		1.05	1.02	1.03	1.00	1.02	1.02	1.03	1.06	1.06	1.57		3.10	3.04	3.15
wind	-0.3 m/s	velocity	5.62	8.70	8.96	8.87	9.14	8.96	8.96	8.87	8.62	8.62	8.93	8.27	8.85	9.02	8.70

Omega Timing (2024) - diamond league race analysis

FINAL - 2024 USATF National Indoor Championships (Albuquerque, NM) (Altitude) (TV Analysis)

date	16-Feb-24	time	2.60	3.64	4.65	5.67	6.71						7.58	7 / 7			
reaction time	0.158	interval		1.04	1.01	1.02	1.04						7.58		3.07		
		velocity	5.28	8.79	9.05	8.96	8.79						1.85	7.92	8.93		

Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record

Heat 1 - 2024 USATF National Indoor Championships (Albuquerque, NM) (Altitude) (TV Analysis)

date	16-Feb-24	time	2.57	3.61	4.64	5.65	6.69						7.59	3 / 4			
reaction time	0.149	interval		1.04	1.03	1.01	1.04						7.59		3.08		
		velocity	5.34	8.79	8.87	9.05	8.79						1.85	7.91	8.90		

Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record

FINAL - 2023 Prefontaine Classic (Eugene, OR)

date	17-Sep-23	time	2.39	3.45	4.46	5.46	6.47	7.47	8.47	9.49	10.54	11.60	13.15	4 / 6			
reaction time	0.146	interval		1.06	1.01	1.00	1.01	1.00	1.00	1.02	1.05	1.06	1.55		3.07	3.01	3.13
wind	0.9 m/s	velocity	5.74	8.62	9.05	9.14	9.05	9.14	9.14	8.96	8.70	8.62	9.05	8.37	8.93	9.11	8.76

Omega Timing (2023) - diamond league race analysis

FINAL - 2023 Xiamen Diamond League (Xiamen, CHN)

date	02-Sep-23	time	2.42	3.48	4.49	5.49	6.50	7.51	8.53	9.56	10.61	11.66	13.26	7 / 6			
reaction time	0.148	interval		1.06	1.01	1.00	1.01	1.01	1.02	1.03	1.05	1.05	1.60		3.07	3.04	3.13

Omega Timing (2023) - diamond league race analysis

wind	0.0 m/s	velocity	5.67	8.62	9.05	9.14	9.05	9.05	8.96	8.87	8.70	8.70	8.76	8.30	8.93	9.02	8.76	
FINAL - 2023 World Athletics Championships (Budapest, HUN)														<i>Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season</i>				
date	21-Aug-23	time	2.54	3.57	4.59	5.59	6.61	7.62	8.64	9.68	10.71	11.76		13.16	4 / 4			
reaction time	0.140	interval		1.03	1.02	1.00	1.02	1.01	1.02	1.04	1.03	1.05	1.40		3.05	3.05	3.12	
wind	0.0 m/s	velocity	5.40	8.87	8.96	9.14	8.96	9.05	8.96	8.79	8.87	8.70	10.01	8.36	8.99	8.99	8.79	
Semi-Final 3 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>				
date	21-Aug-23	time	2.54	3.58	4.58	5.58	6.61	7.60	8.63	9.68	10.68	11.73		13.17	6 / 1			
reaction time	0.156	interval		1.04	1.00	1.00	1.03	0.99	1.03	1.05	1.00	1.05	1.44		3.04	3.05	3.10	
wind	-0.1 m/s	velocity	5.40	8.79	9.14	9.14	8.87	9.23	8.87	8.70	9.14	8.70	9.74	8.35	9.02	8.99	8.85	
Heat 3 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>				
date	20-Aug-23	time	2.56	3.60	4.63	5.65	6.66	7.72	8.75	9.80	10.86	11.95		13.40	3 / 2			
reaction time	0.148	interval		1.04	1.03	1.02	1.01	1.06	1.03	1.05	1.06	1.09	1.45		3.09	3.10	3.20	
wind	0.0 m/s	velocity	5.36	8.79	8.87	8.96	9.05	8.62	8.87	8.70	8.62	8.39	9.67	8.21	8.87	8.85	8.57	
FINAL - 2023 London Athletics Meet (London, GBR)														<i>Omega Timing (2023) - diamond league race analysis</i>				
date	23-Jul-23	time	2.39	3.44	4.47	5.50	6.53	7.61	8.78	10.04	11.35	12.67		14.83	2 / 7			
reaction time	0.132	interval		1.05	1.03	1.03	1.03	1.08	1.17	1.26	1.31	1.32	2.16		3.11	3.28	3.89	
wind	1.3 m/s	velocity	5.74	8.70	8.87	8.87	8.87	8.46	7.81	7.25	6.98	6.92	6.49	7.42	8.82	8.36	7.05	
FINAL - 2023 USATF National Championships (Eugene, OR) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>				
date	09-Jul-23	time	2.53	3.57	4.60	5.60	6.60	7.61	8.63	9.66	10.73	11.77		13.23	7 / 3			
reaction time		interval		1.04	1.03	1.00	1.00	1.01	1.02	1.03	1.07	1.04	1.46		3.07	3.03	3.14	
wind	-0.2 m/s	velocity	5.42	8.79	8.87	9.14	9.14	9.05	8.96	8.87	8.54	8.79	9.60	8.31	8.93	9.05	8.73	
FINAL - 2023 Meeting de Paris (Paris, FRA)														<i>Omega Timing (2023) - diamond league race analysis</i>				
date	09-Jun-23	time	2.37	3.43	4.46	5.48	6.49	7.52	8.55	9.58	10.62	11.68		13.26	2 / 6			
reaction time	0.136	interval		1.06	1.03	1.02	1.01	1.03	1.03	1.03	1.04	1.06	1.58		3.11	3.07	3.13	
wind	-0.5 m/s	velocity	5.79	8.62	8.87	8.96	9.05	8.87	8.87	8.87	8.79	8.62	8.87	8.30	8.82	8.93	8.76	
Heat 2 - 2023 Meeting de Paris (Paris, FRA)														<i>Omega Timing (2023) - diamond league race analysis</i>				
date	09-Jun-23	time	2.36	3.43	4.46	5.47	6.48	7.50	8.54	9.59	10.66	11.73		13.34	7 / 4			
reaction time	0.136	interval		1.07	1.03	1.01	1.01	1.02	1.04	1.05	1.07	1.07	1.61		3.11	3.07	3.19	
wind	-0.6 m/s	velocity	5.81	8.54	8.87	9.05	9.05	8.96	8.79	8.70	8.54	8.54	8.71	8.25	8.82	8.93	8.60	
FINAL - 2023 FBK Games (Hengelo, NED) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>				
date	04-Jun-23	time	2.60	3.65	4.70	5.72	6.74	7.76	8.78	9.80	10.86	11.95		13.33	4 / 4			
reaction time	0.145	interval		1.05	1.05	1.02	1.02	1.02	1.02	1.02	1.06	1.09	1.38		3.12	3.06	3.17	
wind	0.4 m/s	velocity	5.28	8.70	8.70	8.96	8.96	8.96	8.96	8.96	8.62	8.39	10.16	8.25	8.79	8.96	8.65	
FINAL - 2023 Golden Gala Pietro Mennea (Firenze, ITA) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>				
date	02-Jun-23	time	2.54	3.57	4.58	5.60	6.62	7.66	8.68	9.74	10.80	11.90		13.38	4 / 6			
reaction time	0.132	interval		1.03	1.01	1.02	1.02	1.04	1.02	1.06	1.06	1.10	1.48		3.06	3.08	3.22	
wind	-0.2 m/s	velocity	5.40	8.87	9.05	8.96	8.96	8.79	8.96	8.62	8.62	8.31	9.47	8.22	8.96	8.90	8.52	
FINAL - 2023 Meeting International Mohammed VI d'Athlétisme (Rabat, MAR)														<i>Omega Timing (2023) - diamond league race analysis</i>				
date	28-May-23	time	2.39	3.44	4.49	5.52	6.55	7.57	8.62	9.67	10.73	11.80		13.43	7 / 5			
reaction time	0.166	interval		1.05	1.05	1.03	1.03	1.02	1.05	1.05	1.06	1.07	1.63		3.13	3.10	3.18	
wind	-1.3 m/s	velocity	5.74	8.70	8.70	8.87	8.87	8.96	8.70	8.70	8.62	8.54	8.60	8.19	8.76	8.85	8.62	
FINAL - 2023 Adidas Atlanta City Games (Atlanta, GA) (street) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>				
date	05-May-23	time	2.62	3.68	4.72	5.75	6.75	7.78	8.80	9.85	10.93	12.01		13.43	5 / 5			
reaction time	0.159	interval		1.06	1.04	1.03	1.00	1.03	1.02	1.05	1.08	1.08	1.42		3.13	3.05	3.21	
wind	0.0 m/s	velocity	5.24	8.62	8.79	8.87	9.14	8.87	8.96	8.70	8.46	8.46	9.87	8.19	8.76	8.99	8.54	
FINAL - 2022 ISTAF (Berlin, GER) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
date	04-Sep-22	time	2.48	3.50	4.50	5.50	6.50	7.52	8.52	9.54	10.58	11.62		13.07	5 / 2			
reaction time	0.142	interval		1.02	1.00	1.00	1.00	1.02	1.00	1.02	1.04	1.04	1.45		3.02	3.02	3.10	
wind	0.6 m/s	velocity	5.53	8.96	9.14	9.14	9.14	8.96	9.14	8.96	8.79	8.79	9.67	8.42	9.08	9.08	8.85	
FINAL - 2022 NACAC Championships (Freeport, BAH) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
date	20-Aug-22	time	2.43	3.45	4.44	5.43	6.40	7.40	8.40	9.43	10.47	11.52		13.00	4 / 1			
reaction time		interval		1.02	0.99	0.99	0.97	1.00	1.00	1.03	1.04	1.05	1.48	PB	3.00	2.97	3.12	
wind	0.3 m/s	velocity	5.65	8.96	9.23	9.23	9.42	9.14	9.14	8.87	8.79	8.70	9.47	8.46	9.14	9.23	8.79	
FINAL - 2022 USATF National Championships (Eugene, OR) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
date	26-Jun-22	time	2.53	3.53	4.55	5.57	6.57	7.57	8.57	9.61	10.64	11.68		13.14	2 / 5			
reaction time		interval		1.00	1.02	1.02	1.00	1.00	1.00	1.04	1.03	1.04	1.46	PB	3.04	3.00	3.11	
wind	1.2 m/s	velocity	5.42	9.14	8.96	8.96	9.14	9.14	9.14	8.79	8.87	8.79	9.60	8.37	9.02	9.14	8.82	
Semi-Final 2 - 2022 USATF National Championships (Eugene, OR)														<i>USATF (2022) - Results powered by Karmarush.com</i>				

date	26-Jun-22	time	2.50	3.57	4.60	5.64	6.70	7.69	8.70	9.77	10.78	11.86	13.35	4 / 4			
reaction time		interval		1.07	1.03	1.04	1.06	0.99	1.01	1.07	1.01	1.08	1.49		3.14	3.06	3.16
wind	0.1 m/s	velocity	5.49	8.54	8.87	8.79	8.62	9.23	9.05	8.54	9.05	8.46	9.41	8.24	8.73	8.96	8.68
FINAL - 2022 New Balance Indoor Grand Prix (Staten Island, NY) (TV Analysis)														<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>			
date	06-Feb-22	time	2.57	3.62	4.67	5.69	6.71						7.71	2 / 5			
reaction time	0.169	interval		1.05	1.05	1.02	1.02						1.00		3.12		
wind		velocity	5.34	8.70	8.70	8.96	8.96						9.72	7.78	8.79		
Semi-Final 2 - 2020 USA Olympic Trials (Eugene, OR) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>			
date	26-Jun-21	time	2.56	3.60	4.63	5.70	6.74	7.77	8.80	9.90	10.99	12.07	13.63	2 / 7 6			
reaction time	0.175	interval		1.04	1.03	1.07	1.04	1.03	1.03	1.10	1.09	1.08	1.56		3.14	3.10	3.27
wind	1.2 m/s	velocity	5.36	8.79	8.87	8.54	8.79	8.87	8.87	8.31	8.39	8.46	8.99	8.07	8.73	8.85	8.39
FINAL - 2020 Golden Gala Pietro Mennea (Rome, ITA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2020 year end hurdle report</i>			
date	17-Sep-20	time	2.48	3.52	4.56	5.58	6.62	7.64	8.68	9.72	10.76	11.82	13.31	6 / 3			
reaction time	0.139	interval		1.04	1.04	1.02	1.04	1.02	1.04	1.04	1.04	1.06	1.49		3.10	3.10	3.14
wind	0.1 m/s	velocity	5.53	8.79	8.79	8.96	8.79	8.96	8.79	8.79	8.79	8.62	9.41	8.26	8.85	8.85	8.73
FINAL - 2020 István Gyulai Memorial (Székesfehérvár, HUN) (TV Analysis)														<i>Henson (2020) - Athlete First: 2020 year end hurdle report</i>			
date	19-Aug-20	time	2.47	3.50	4.52	5.54	6.57		8.64	9.68	10.74	11.78	13.30	8 / 3			
reaction time	0.146	interval		1.03	1.02	1.02	1.03		2.07	1.04	1.06	1.04	1.52		3.07	3.10	3.14
wind	0.3 m/s	velocity	5.55	8.87	8.96	8.96	8.87		8.83	8.79	8.62	8.79	9.22	8.27	8.93	8.85	8.73
FINAL - 2019 The Match - Europe v USA (Minsk, BLR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>			
date	10-Sep-19	time	2.60	3.63	4.66	5.71	6.73	7.77	8.77	9.77	10.88	11.90	13.43	4 / 3			
reaction time	0.161	interval		1.03	1.03	1.05	1.02	1.04	1.00	1.00	1.11	1.02	1.53		3.11	3.06	3.13
wind	0.1 m/s	velocity	5.28	8.87	8.87	8.70	8.96	8.79	9.14	9.14	8.23	8.96	9.16	8.19	8.82	8.96	8.76
FINAL - 2019 AG Memorial van Damme (Brussels, BEL) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>			
date	06-Sep-19	time	2.52	3.56	4.60	5.62	6.62	7.64	8.68	9.70	10.74	11.80	13.35	6 / 4			
reaction time	0.144	interval		1.04	1.04	1.02	1.00	1.02	1.04	1.02	1.04	1.06	1.55		3.10	3.06	3.12
wind	0.0 m/s	velocity	5.44	8.79	8.79	8.96	9.14	8.96	8.79	8.96	8.79	8.62	9.05	8.24	8.85	8.96	8.79
FINAL - 2019 ISTAF (Berlin, GER) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>			
date	01-Sep-19	time	2.53	3.53	4.63	5.65	6.67	7.68	8.73	9.80	10.84	11.88	13.38	6 / 4			
reaction time	0.137	interval		1.00	1.10	1.02	1.02	1.01	1.05	1.07	1.04	1.04	1.50		3.12	3.08	3.15
wind	0.8 m/s	velocity	5.42	9.14	8.31	8.96	8.96	9.05	8.70	8.54	8.79	8.79	9.35	8.22	8.79	8.90	8.70
FINAL - 2019 Meeting de Paris (Paris, FRA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>			
date	24-Aug-19	time	2.52	3.54	4.56	5.56	6.56	7.58	8.58	9.62	10.66	11.70	13.17	1 / 3			
reaction time	0.150	interval		1.02	1.02	1.00	1.00	1.02	1.00	1.04	1.04	1.04	1.47	PB	3.04	3.02	3.12
wind	0.8 m/s	velocity	5.44	8.96	8.96	9.14	9.14	8.96	9.14	8.79	8.79	8.79	9.54	8.35	9.02	9.08	8.79
FINAL - 2019 Müller Grand Prix (Birmingham, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>			
date	18-Aug-19	time	2.54	3.58	4.62	5.65	6.63	7.65	8.67	9.69	10.72	11.78	13.31	4 / 2			
reaction time	0.116	interval		1.04	1.04	1.03	0.98	1.02	1.02	1.02	1.03	1.06	1.53		3.11	3.02	3.11
wind	-0.2 m/s	velocity	5.40	8.79	8.79	8.87	9.33	8.96	8.96	8.96	8.87	8.62	9.16	8.26	8.82	9.08	8.82
FINAL - 2019 Pan American Games (Lima, PER) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>			
date	10-Aug-19	time	2.63	3.67	4.68	5.70	6.70	7.72	8.76	9.79	10.84	11.89	13.32	6 / 2			
reaction time	0.140	interval		1.04	1.01	1.02	1.00	1.02	1.04	1.03	1.05	1.05	1.43		3.07	3.06	3.13
wind	1.8 m/s	velocity	5.22	8.79	9.05	8.96	9.14	8.96	8.79	8.87	8.70	8.70	9.80	8.26	8.93	8.96	8.76
FINAL - 2019 USATF National Championships (Des Moines, IA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>			
date	28-Jul-19	time	2.60	3.67	4.70	5.70	6.73	7.73	8.74	9.77	10.84	11.88	13.39	6 / 4			
reaction time		interval		1.07	1.03	1.00	1.03	1.00	1.01	1.03	1.07	1.04	1.51		3.10	3.04	3.14
wind	-0.8 m/s	velocity	5.28	8.54	8.87	9.14	8.87	9.14	9.05	8.87	8.54	8.79	9.28	8.22	8.85	9.02	8.73
FINAL - 2019 Prefontaine Classic (Stanford, CA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>			
date	30-Jun-19	time	2.60	3.63	4.66	5.66	6.70	7.73	8.78	9.82	10.85	11.92	13.38	8 / 7			
reaction time	0.220	interval		1.03	1.03	1.00	1.04	1.03	1.05	1.04	1.03	1.07	1.46		3.06	3.12	3.14
wind	0.3 m/s	velocity	5.28	8.87	8.87	9.14	8.79	8.87	8.70	8.79	8.87	8.54	9.60	8.22	8.96	8.79	8.73
FINAL - 2019 Nanjing World Challenge (Nanjing, CHN)														<i>CAA Hurdle Development (2019)</i>			
date	21-May-19	time	2.55	3.59	4.64	5.69	6.71	7.74	8.78	9.83	10.88	11.96	13.37	9 / 3			
reaction time	0.137	interval		1.04	1.05	1.05	1.02	1.03	1.04	1.05	1.05	1.08	1.41		3.14	3.09	3.18
wind	0.1 m/s	velocity	5.38	8.79	8.70	8.70	8.96	8.87	8.79	8.70	8.70	8.46	9.94	8.23	8.73	8.87	8.62
FINAL - 2019 Shanghai Diamond League (Shanghai, CHN)														<i>CAA Hurdle Development (2019)</i>			
date	18-May-19	time	2.58	3.64	4.68	5.70	6.72	7.76	8.78	9.82	10.86	11.94	13.36	8 / 5			
reaction time	0.151	interval		1.06	1.04	1.02	1.02	1.04	1.02	1.04	1.04	1.08	1.42		3.12	3.08	3.16
wind	0.7 m/s	velocity	5.32	8.62	8.79	8.96	8.96	8.79	8.96	8.79	8.79	8.46	9.87	8.23	8.79	8.90	8.68

FINAL - 2019 Kinami Memorial (Osaka, JPN)*Matsubayashi (2019) - research on athlete performance and technique- 2019 data book*

date	06-May-19	time	2.58	3.62	4.65	5.67	6.70	7.72	8.75	9.81	10.86	11.95	13.38	4 / 1			
reaction time		interval		1.04	1.03	1.02	1.03	1.02	1.03	1.06	1.05	1.09	1.43		3.09	3.08	3.20
wind	0.3 m/s	velocity	5.32	8.79	8.87	8.96	8.87	8.96	8.87	8.62	8.70	8.39	9.80	8.22	8.87	8.90	8.57

FINAL - 2019 PSD Bank Meeting (Düsseldorf, GER) (TV Analysis)*Henson (2020) - Athlete First: 2019 year end hurdle report*

date	20-Feb-19	time	2.42	3.44	4.48	5.52	6.54							7.60	5 / 3		
reaction time	0.156	interval		1.02	1.04	1.04	1.02						1.06			3.10	
		velocity	5.67	8.96	8.79	8.79	8.96						9.17	7.89		8.85	

FINAL - 2019 Müller Indoor Grand Prix (Birmingham, GBR) (TV Analysis)*Henson (2020) - Athlete First: 2019 year end hurdle report*

date	16-Feb-19	time	2.50	3.52	4.55	5.55	6.56							7.53	8 / 2		
reaction time	0.146	interval		1.02	1.03	1.00	1.01					0.97				3.05	
		velocity	5.49	8.96	8.87	9.14	9.05					10.02	7.97			8.99	

FINAL - 2018 AG Memorial van Damme (Brussels, BEL) (TV Analysis)*Henson (2020) - Athlete First: 2018 year end hurdle report*

date	31-Aug-18	time	2.52	3.56	4.60	5.62	6.66	7.68	8.72	9.76	10.82	11.90	13.39	8 / 5			
reaction time	0.151	interval		1.04	1.04	1.02	1.04	1.02	1.04	1.04	1.06	1.08	1.49		3.10	3.10	3.18
wind	-0.1 m/s	velocity	5.44	8.79	8.79	8.96	8.79	8.96	8.79	8.79	8.62	8.46	9.41	8.22	8.85	8.85	8.62

FINAL - 2018 Müller Grand Prix (Birmingham, GBR) (TV Analysis)*Henson (2020) - Athlete First: 2018 year end hurdle report*

date	18-Aug-18	time	2.46	3.50	4.54	5.56	6.58	7.60	8.60	9.62	10.66	11.74	13.27	2 / 4			
reaction time	0.128	interval		1.04	1.04	1.02	1.02	1.02	1.00	1.02	1.04	1.08	1.53	PB		3.10	3.04
wind	1.3 m/s	velocity	5.58	8.79	8.79	8.96	8.96	8.96	9.14	8.96	8.79	8.46	9.16	8.29		8.85	9.02

FINAL - 2018 Müller Anniversary Games (London, GBR) (TV Analysis)*Henson (2020) - Athlete First: 2018 year end hurdle report*

date	22-Jul-18	time	2.50	3.54	4.58	5.62	6.66	7.70	8.72	9.82	10.84	11.92	13.33	2 / 3			
reaction time	0.137	interval		1.04	1.04	1.04	1.04	1.04	1.02	1.10	1.02	1.08	1.41		3.12	3.10	3.20
wind	0.2 m/s	velocity	5.49	8.79	8.79	8.79	8.79	8.79	8.96	8.31	8.96	8.46	9.94	8.25	8.79	8.85	8.57

Cunningham, Trey (USA) (1998)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2024 Herculis Meeting International d'Athlétisme (Monaco, MON)***Omega Timing (2024) - diamond league race analysis*

date	12-Jul-24	time	2.38	3.41	4.40	5.39	6.39	7.40	8.43	9.47	10.51	11.56	13.13	4 / 4			
reaction time	0.134	interval	7 steps	1.03	0.99	0.99	1.00	1.01	1.03	1.04	1.04	1.05	1.57		3.01	3.04	3.13
wind	-0.7 m/s	velocity	5.76	8.87	9.23	9.23	9.14	9.05	8.87	8.79	8.79	8.70	8.93	8.38	9.11	9.02	8.76

FINAL - 2024 Meeting de Paris (Paris, FRA)*Omega Timing (2024) - diamond league race analysis*

date	07-Jul-24	time	2.35	3.38	4.39	5.38	6.39	7.41	8.43	9.46	10.52	11.59	13.15	5 / 2			
reaction time	0.148	interval	7 steps	1.03	1.01	0.99	1.01	1.02	1.02	1.03	1.06	1.07	1.56		3.03	3.05	3.16
wind	-0.6 m/s	velocity	5.84	8.87	9.05	9.23	9.05	8.96	8.96	8.87	8.62	8.54	8.99	8.37	9.05	8.99	8.68

Heat 1 - 2024 Meeting de Paris (Paris, FRA)*Omega Timing (2024) - diamond league race analysis*

date	07-Jul-24	time	2.42	3.48	4.51	5.52	6.52	7.53	8.56	9.59	10.63	11.69	13.20	4 / 2			
reaction time	0.165	interval	7 steps	1.06	1.03	1.01	1.00	1.01	1.03	1.03	1.04	1.06	1.51		3.10	3.04	3.13
wind	0.1 m/s	velocity	5.67	8.62	8.87	9.05	9.14	9.05	8.87	8.87	8.79	8.62	9.28	8.33	8.85	9.02	8.76

FINAL - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)*Henson (2024) - Athlete First: 2024 year end hurdle report*

date	28-Jun-24	time	2.54	3.54	4.56	5.54	6.58	7.61	8.68	9.69	10.76	11.85	13.39	2 / 9			
reaction time		interval	7 steps	1.00	1.02	0.98	1.04	1.03	1.07	1.01	1.07	1.09	1.54		3.00	3.14	3.17
wind	2.0 m/s	velocity	5.40	9.14	8.96	9.33	8.79	8.87	8.54	9.05	8.54	8.39	9.10	8.22	9.14	8.73	8.65

Semi-Final 2 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)*Henson (2024) - Athlete First: 2024 year end hurdle report*

date	27-Jun-24	time	2.53	3.56	4.58	5.57	6.59	7.59	8.63	9.68	10.73	11.83	13.26	4 / 3			
reaction time		interval	7 steps	1.03	1.02	0.99	1.02	1.00	1.04	1.05	1.05	1.10	1.43		3.04	3.06	3.20
wind	-0.2 m/s	velocity	5.42	8.87	8.96	9.23	8.96	9.14	8.79	8.70	8.70	8.31	9.80	8.30	9.02	8.96	8.57

Heat 3 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)*Henson (2024) - Athlete First: 2024 year end hurdle report*

date	24-Jun-24	time	2.50	3.56	4.54	5.54	6.54	7.55	8.57	9.59	10.62	11.73	13.12	3 / 1			
reaction time		interval	7 steps	1.06	0.98	1.00	1.00	1.01	1.02	1.02	1.03	1.11	1.39		3.04	3.03	3.16
wind	1.8 m/s	velocity	5.49	8.62	9.33	9.14	9.14	9.05	8.96	8.96	8.87	8.23	10.09	8.38	9.02	9.05	8.68

FINAL - 2024 Prefontaine Classic (Eugene, OR)*Omega Timing (2024) - diamond league race analysis*

date	25-May-24	time	2.40	3.44	4.45	5.45	6.46	7.48	8.51	9.57	10.63	11.72	13.29	2 / 5			
reaction time	0.134	interval	7 steps	1.04	1.01	1.00	1.01	1.02	1.03	1.06	1.06	1.09	1.57		3.05	3.06	3.21
wind	-0.1 m/s	velocity	5.72	8.79	9.05	9.14	9.05	8.96	8.87	8.62	8.62	8.39	8.93	8.28	8.99	8.96	8.54

FINAL - 2024 World Athletics Indoor Championships (Glasgow, GBR) (TV Analysis)*Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record*

date	02-Mar-24	time	2.57	3.60	4.62	5.62	6.61						7.53	3 / 6			
reaction time	0.168	interval	7 steps	1.03	1.02	1.00	0.99						7.53		3.05		
		velocity	5.34	8.87	8.96	9.14	9.23						1.86	7.97	8.99		

FINAL - 2024 USATF National Indoor Championships (Albuquerque, NM) (Altitude) (TV Analysis)*Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record*

date	02-Mar-24	time	2.57	3.60	4.62	5.62	6.61						7.53	3 / 6			
reaction time	0.168	interval	7 steps	1.03	1.02	1.00	0.99						7.53		3.05		
		velocity	5.34	8.87	8.96	9.14	9.23						1.86	7.97	8.99		

WR=World Rec. AR=Area Rec. OR=Olympic Rec. CR=Championship Rec. NR=National Rec. PB=Personal Best DQ=Disqualified DV=Drug Violation

FINAL - 2022 NCAA Championships (Eugene, OR) (TV Analysis)*Henson (2022) - Athlete First: 2022 year end hurdle report*

date	10-Jun-22	time	2.44	3.45	4.44	5.42	6.40	7.44	8.44	9.46	10.51	11.56	13.00	5 / 1				
reaction time		interval	7 steps	1.01	0.99	0.98	0.98	1.04	1.00	1.02	1.05	1.05	1.44	PB	2.98	3.02	3.12	
wind	0.0 m/s	velocity	5.62	9.05	9.23	9.33	9.33	8.79	9.14	8.96	8.70	8.70	9.74	8.46	9.20	9.08	8.79	

FINAL - 2022 NCAA East Region Preliminary (Bloomington, IN) (TV Analysis)*Henson (2022) - Athlete First: 2022 year end hurdle report*

date	27-May-22	time	2.50	3.53	4.53	5.53	6.53	7.53	8.54	9.56	10.61	11.66	13.07	5 / 1				
reaction time		interval	7 steps	1.03	1.00	1.00	1.00	1.00	1.01	1.02	1.05	1.05	1.41	PB	3.03	3.01	3.12	
wind	-1.5 m/s	velocity	5.49	8.87	9.14	9.14	9.14	9.14	9.05	8.96	8.70	8.70	9.94	8.42	9.05	9.11	8.79	

FINAL - 2022 New Balance Indoor Grand Prix (Staten Island, NY) (TV Analysis)*Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record*

date	06-Feb-22	time	2.48	3.50	4.51	5.51	6.55						7.47	4 / 2				
reaction time	0.189	interval	7 steps	1.02	1.01	1.00	1.04						0.92		3.03			
		velocity	5.53	8.96	9.05	9.14	8.79						10.57	8.03	9.05			

FINAL - 2020 USA Olympic Trials (Eugene, OR) (TV Analysis)*Henson (2021) - Athlete First: 2021 year end hurdle report*

date	26-Jun-21	time	2.43	3.47	4.47	5.47	6.47	7.49	8.52	9.56	10.62	11.70	13.21	3 / 4				
reaction time	0.165	interval	7 steps	1.04	1.00	1.00	1.00	1.02	1.03	1.04	1.06	1.08	1.51	=PB	3.04	3.05	3.18	
wind	0.4 m/s	velocity	5.65	8.79	9.14	9.14	9.14	8.96	8.87	8.79	8.62	8.46	9.28	8.33	9.02	8.99	8.62	

Semi-Final 1 - 2020 USA Olympic Trials (Eugene, OR) (TV Analysis)*Henson (2021) - Athlete First: 2021 year end hurdle report*

date	26-Jun-21	time	2.46	3.48	4.49	5.47	6.48	7.52	8.56	9.59	10.66	11.72	13.21	6 / 2				
reaction time	0.169	interval	7 steps	1.02	1.01	0.98	1.01	1.04	1.04	1.03	1.07	1.06	1.49	PB	3.01	3.09	3.16	
wind	1.8 m/s	velocity	5.58	8.96	9.05	9.33	9.05	8.79	8.79	8.87	8.54	8.62	9.41	8.33	9.11	8.87	8.68	

Heat 2 - 2020 USA Olympic Trials (Eugene, OR) (TV Analysis)*Henson (2021) - Athlete First: 2021 year end hurdle report*

date	25-Jun-21	time	2.43	3.46	4.50	5.50	6.50	7.50	8.56	9.60	10.66	11.73	13.23	3 / 2				
reaction time	0.162	interval	7 steps	1.03	1.04	1.00	1.00	1.00	1.06	1.04	1.06	1.07	1.50	PB	3.07	3.06	3.17	
wind	1.5 m/s	velocity	5.65	8.87	8.79	9.14	9.14	9.14	8.62	8.79	8.62	8.54	9.35	8.31	8.93	8.96	8.65	

FINAL - 2019 USATF National Championships (Des Moines, IA) (TV Analysis)*Henson (2020) - Athlete First: 2019 year end hurdle report*

date	28-Jul-19	time	2.51	3.57	4.60	5.63	6.67	7.70	8.76	9.85	10.94	12.11	13.72	2 / 8				
reaction time		interval	7 steps	1.06	1.03	1.03	1.04	1.03	1.06	1.09	1.09	1.17	1.61		3.12	3.13	3.35	
wind	-0.8 m/s	velocity	5.47	8.62	8.87	8.87	8.79	8.87	8.62	8.39	8.39	7.81	8.71	8.02	8.79	8.76	8.19	

FINAL - 2019 NCAA National Indoor Championships (Birmingham, AL) (TV Analysis)*Henson (2020) - Athlete First: 2019 year end hurdle report*

date	9-Mar-19	time	2.56	3.61	4.64	5.71	6.73						7.64	5 / 3				
reaction time	0.179	interval	7 steps	1.05	1.03	1.07	1.02						0.91		3.15			
		velocity	5.36	8.70	8.87	8.54	8.96						10.68	7.85	8.70			

FINAL - 2018 USATF Championships (Des Moines, IA) (TV Analysis)*Henson (2020) - Athlete First: 2018 year end hurdle report*

date	24-Jun-18	time	2.50	3.57	4.63	5.67	6.72	7.77	8.84	9.94	11.04	12.14	13.71	1 / 5				
reaction time		interval		1.07	1.06	1.04	1.05	1.05	1.07	1.10	1.10	1.10	1.57		3.17	3.17	3.30	
wind	-1.8 m/s	velocity	5.49	8.54	8.62	8.79	8.70	8.70	8.54	8.31	8.31	8.31	8.93	8.02	8.65	8.65	8.31	

FINAL - 2018 NCAA Championships (Eugene, OR) (TV Analysis)*Henson (2020) - Athlete First: 2018 year end hurdle report*

date	08-Jun-18	time	2.58	3.65	4.68	5.72	6.76	7.80	8.85	9.90	11.00	12.08	13.64	8 / 4				
reaction time		interval		1.07	1.03	1.04	1.04	1.04	1.05	1.05	1.10	1.08	1.56		3.14	3.13	3.23	
wind	-1.1 m/s	velocity	5.32	8.54	8.87	8.79	8.79	8.79	8.70	8.70	8.31	8.46	8.99	8.06	8.73	8.76	8.49	

Cuypers, Alain (BEL) (1967)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Semi-Final 1 - 1988 Olympic Games (Seoul, KOR)***Brüggemann (1990) - scientific research project at the games of the XXXIV Olympiad, Seoul 1988*

date	26-Sep-88	time	2.69	3.80	4.86	5.95	7.01	8.09	9.16	10.29	11.38	12.50	13.92	8 / 7				
reaction time	0.169	interval		1.11	1.06	1.09	1.06	1.08	1.07	1.13	1.09	1.12	1.42		3.26	3.21	3.34	
wind	0.0 m/s	velocity	5.10	8.23	8.62	8.39	8.62	8.46	8.54	8.09	8.39	8.16	9.87	7.90	8.41	8.54	8.21	

Czykier, Damian (POL) (1992)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Repechage 2 - 2024 Olympic Games (Paris, FRA)***Paris 2024 Olympic Games - Results Book (2024)*

date	06-Aug-24	time	2.43	3.52	4.57	5.59	6.63	7.67	8.75	9.84	10.95	12.06	13.71	4 / 5				
reaction time	0.152	interval	7 steps	1.09	1.05	1.02	1.04	1.04	1.08	1.09	1.11	1.11	1.65		3.16	3.16	3.31	
wind	-0.5 m/s	velocity	5.65	8.39	8.70	8.96	8.79	8.79	8.46	8.39	8.23	8.23	8.50	8.02	8.68	8.68	8.28	

Heat 4 - 2024 Olympic Games (Paris, FRA)*Paris 2024 Olympic Games - Results Book (2024)*

date	04-Aug-24	time	2.47	3.56	4.62	5.63	6.68	7.73	8.80	9.90	11.05	12.20	13.99	4 / 8				
reaction time	0.153	interval	7 steps	1.09	1.06	1.01	1.05	1.05	1.07	1.10	1.15	1.15	1.79		3.16	3.17	3.40	
wind	0.3 m/s	velocity	5.55	8.39	8.62	9.05	8.70	8.70	8.54	8.31	7.95	7.95	7.83	7.86	8.68	8.65	8.06	

Heat 2 - 2024 Meeting de Paris (Paris, FRA)*Omega Timing (2024) - diamond league race analysis*

date	07-Jul-24	time	2.43	3.53	4.56	5.59	6.62	7.67	8.72	9.80	10.89	12.00	13.67	1 / 7				
reaction time	0.152	interval	7 steps	1.10	1.03	1.03	1.03	1.05	1.05	1.08	1.09	1.11	1.67		3.16	3.13	3.28	
wind	0.4 m/s	velocity	5.65	8.31	8.87	8.87	8.87	8.70	8.70	8.46	8.39	8.23	8.40	8.05	8.68	8.76	8.36	

FINAL - 2024 European Athletics Championships (Roma, ITA) (TV Analysis)

date	08-Jun-24	time	2.56	3.60	4.60	5.60	6.67	7.70											
reaction time	0.151	interval	7 steps	1.04	1.00	1.00	1.07	1.03											3.04
wind	0.6 m/s	velocity	5.36	8.79	9.14	9.14	8.54	8.87											9.02

Henson (2024) - Athlete First: 2024 year end hurdle report

dnf 9 / --

Heat 2 - 2024 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)

date	10-Feb-24	time	2.60	3.64	4.68	5.70	6.72												
reaction time	0.168	interval	7 steps	1.04	1.04	1.02	1.02												3.10
wind		velocity	5.28	8.79	8.79	8.96	8.96												8.85

Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record

7.65 2 / 4

1.83 7.84 8.85

FINAL - 2023 Weltklasse (Zürich, SUI)

date	31-Aug-23	time	2.42	3.52	4.56	5.59	6.62	7.66	8.73	9.81	10.90	12.01							
reaction time	0.144	interval	7 steps	1.10	1.04	1.03	1.03	1.04	1.07	1.08	1.09	1.11	1.63						3.17 3.14 3.28
wind	-0.1 m/s	velocity	5.67	8.31	8.79	8.87	8.87	8.79	8.54	8.46	8.39	8.23	8.60	8.06					8.65 8.73 8.36

Omega Timing (2023) - diamond league race analysis

13.64 7 / 6

Semi-Final 1 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)

date	21-Aug-23	time	2.58	3.62	4.65	5.66	6.68	7.68	8.80	9.92	11.13	12.26							
reaction time	0.162	interval	7 steps	1.04	1.03	1.01	1.02	1.00	1.12	1.12	1.21	1.13	1.71						3.08 3.14 3.46
wind	-0.2 m/s	velocity	5.32	8.79	8.87	9.05	8.96	9.14	8.16	8.16	7.55	8.09	8.20	7.87					8.90 8.73 7.92

Henson (2023) - Athlete First: 2023 year end hurdle report

13.97 3 / 7

Heat 3 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)

date	20-Aug-23	time	2.56	3.60	4.62	5.63	6.65	7.70	8.73	9.82	10.92	12.00							
reaction time	0.152	interval	7 steps	1.04	1.02	1.01	1.02	1.05	1.03	1.09	1.10	1.08	1.49						3.07 3.10 3.27
wind	0.0 m/s	velocity	5.36	8.79	8.96	9.05	8.96	8.70	8.87	8.39	8.31	8.46	9.41	8.15					8.93 8.85 8.39

Henson (2023) - Athlete First: 2023 year end hurdle report

13.49 7 / 3

Heat 1 - 2023 Kamila Skolimowska Memorial (Silesia, POL)

date	16-Jul-23	time	2.48	3.57	4.62	5.65	6.70	7.75	8.80	9.85	10.93	12.03							
reaction time	0.154	interval	7 steps	1.09	1.05	1.03	1.05	1.05	1.05	1.05	1.08	1.10	1.62						3.17 3.15 3.23
wind	0.3 m/s	velocity	5.53	8.39	8.70	8.87	8.70	8.70	8.70	8.46	8.31	8.65	8.06						8.65 8.70 8.49

Omega Timing (2023) - diamond league race analysis

13.65 7 / 9

FINAL - 2023 Meeting International Mohammed VI d'Athlétisme (Rabat, MAR)

date	28-May-23	time	2.48	3.56	4.62	5.67	6.73	7.79	8.86	9.94	11.02	12.14							
reaction time	0.193	interval	7 steps	1.08	1.06	1.05	1.06	1.06	1.07	1.08	1.08	1.12	1.69						3.19 3.19 3.28
wind	-1.3 m/s	velocity	5.53	8.46	8.62	8.70	8.62	8.62	8.54	8.46	8.46	8.16	8.30	7.95					8.60 8.60 8.36

Omega Timing (2023) - diamond league race analysis

13.83 9 / 9

FINAL - 2022 Weltklasse (Zürich, SUI) (TV Analysis)

date	08-Sep-22	time	2.60	3.67	4.70	5.74	6.77	7.81	8.84	9.88	11.01	12.11							
reaction time	0.142	interval	7 steps	1.07	1.03	1.04	1.03	1.04	1.03	1.04	1.13	1.10	1.54						3.14 3.10 3.27
wind	-1.0 m/s	velocity	5.28	8.54	8.87	8.79	8.87	8.79	8.87	8.79	8.09	8.31	9.10	8.06					8.73 8.85 8.39

Henson (2022) - Athlete First: 2022 year end hurdle report

13.65 1 / 7

FINAL - 2022 Athletissima (Lausanne, SUI) (TV Analysis)

date	26-Aug-22	time	2.64	3.70	4.74	5.74	6.77	7.81	8.87	9.94	11.01	12.11							
reaction time	0.166	interval	7 steps	1.06	1.04	1.00	1.03	1.04	1.06	1.07	1.07	1.10	1.47						3.10 3.13 3.24
wind	0.0 m/s	velocity	5.20	8.62	8.79	9.14	8.87	8.79	8.62	8.54	8.54	8.31	9.54	8.10					8.85 8.76 8.46

Henson (2022) - Athlete First: 2022 year end hurdle report

13.58 8 / 6

FINAL - 2022 Herculis Meeting International d'Athlétisme (Monaco, MON) (TV Analysis)

date	10-Aug-22	time	2.53	3.56	4.56	5.60	6.63	7.66	8.73	9.76	10.83	11.93							
reaction time	0.156	interval	7 steps	1.03	1.00	1.04	1.03	1.03	1.07	1.03	1.07	1.10	1.53						3.07 3.13 3.20
wind	0.6 m/s	velocity	5.42	8.87	9.14	8.79	8.87	8.87	8.54	8.87	8.54	8.31	9.16	8.17					8.93 8.76 8.57

Henson (2022) - Athlete First: 2022 year end hurdle report

13.46 7 / 7

FINAL - 2022 World Athletics Championships (Eugene, OR)

date	17-Jul-22	time	2.61	3.64	4.64	5.64	6.68	7.68	8.71	9.75	10.81	11.89							
reaction time	0.140	interval	7 steps	1.03	1.00	1.00	1.04	1.00	1.03	1.04	1.06	1.08	1.43						3.03 3.07 3.18
wind	1.2 m/s	velocity	5.26	8.87	9.14	9.14	8.79	9.14	8.87	8.79	8.62	8.46	9.80	8.26					9.05 8.93 8.62

Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season

13.32 2 / 4

Semi-Final 3 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)

date	17-Jul-22	time	2.56	3.58	4.60	5.60	6.60	7.58	8.60	9.63	10.70	11.78							
reaction time	0.135	interval	7 steps	1.02	1.02	1.00	1.00	0.98	1.02	1.03	1.07	1.08	1.44						3.04 3.00 3.18
wind	2.5 m/s	velocity	5.36	8.96	8.96	9.14	9.14	9.33	8.96	8.87	8.54	8.46	9.74	8.32					9.02 9.14 8.62

Henson (2022) - Athlete First: 2022 year end hurdle report

13.22 6 / 4

Heat 2 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)

date	16-Jul-22	time	2.56	3.58	4.60	5.60	6.63	7.66	8.70	9.73	10.76	11.86							
reaction time	0.146	interval	7 steps	1.02	1.02	1.00	1.03	1.03	1.04	1.03	1.03	1.10	1.51						3.04 3.10 3.16
wind	0.4 m/s	velocity	5.36	8.96	8.96	9.14	8.87	8.87	8.79	8.87	8.87	8.31	9.28	8.23					9.02 8.85 8.68

Henson (2022) - Athlete First: 2022 year end hurdle report

13.37 3 / 2

FINAL - 2022 Meeting de Paris (Paris, FRA) (TV Analysis)

date	18-Jun-22	time	2.52	3.54	4.58	5.60	6.62	7.64	8.66	9.70	10.74	11.80							
reaction time	0.144	interval	7 steps	1.02	1.04	1.02	1.02	1.02	1.02	1.04	1.04	1.06	1.51						3.08 3.06 3.14
wind	-0.2 m/s	velocity	5.44	8.96	8.79	8.96	8.96	8.96	8.96	8.79	8.79	8.62	9.28	8.26					8.90 8.96 8.73

Henson (2022) - Athlete First: 2022 year end hurdle report

13.31 7 / 4

FINAL - 2022 Müller Birmingham Diamond League (Birmingham, GBR) (TV Analysis)

date	21-May-22	time	2.49	3.52	4.53	5.53	6.55	7.57	8.59	9.65	10.72	11.77							
reaction time	0.158	interval	7 steps	1.03	1.01	1.00	1.02	1.02	1.02	1.06	1.07	1.05	1.55						3.04 3.06 3.18

Henson (2022) - Athlete First: 2022 year end hurdle report

13.32 1 / 4

wind	0.7 m/s	velocity	5.51	8.87	9.05	9.14	8.96	8.96	8.96	8.62	8.54	8.70	9.05	8.26	9.02	8.96	8.62		
Semi-Final 2 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis) <i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>																			
date	20-Mar-22	time	2.50	3.54	4.58	5.60	6.64								7.61	5 / 5			
reaction time	0.157	interval	7 steps	1.04	1.04	1.02	1.04								0.97		3.10		
		velocity	5.49	8.79	8.79	8.96	8.79								10.02	7.88	8.85		
FINAL - 2021 European Indoor Championships (Toruń, POL) (TV Analysis) <i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>																			
date	07-Mar-21	time	2.46	3.48	4.48	5.46	6.60								7.63	4 / 6			
reaction time	0.148	interval	7 steps	1.02	1.00	0.98	1.14								1.03		3.00		
		velocity	5.58	8.96	9.14	9.33	8.02								9.44	7.86	9.14		
FINAL - 2021 Copernicus Cup (Toruń, POL) (TV Analysis) <i>Henson (2021) - men's 60m hurdles world record season - Grant Holloway</i>																			
date	17-Feb-21	time	2.54	3.59	4.60	5.60	6.67								7.63	7 / 4			
reaction time	0.149	interval	7 steps	1.05	1.01	1.00	1.07								0.96		3.06		
		velocity	5.40	8.70	9.05	9.14	8.54								10.13	7.86	8.96		
FINAL - 2021 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis) <i>Henson (2021) - men's 60m hurdles world record season - Grant Holloway</i>																			
date	09-Feb-21	time	2.55	3.58	4.60	5.60	6.62								7.59	3 / 5			
reaction time	0.161	interval	7 steps	1.03	1.02	1.00	1.02								0.97		3.05		
		velocity	5.38	8.87	8.96	9.14	8.96								10.02	7.91	8.99		
Heat 2 - 2021 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis) <i>Henson (2021) - men's 60m hurdles world record season - Grant Holloway</i>																			
date	09-Feb-21	time	2.45	3.50	4.53	5.53	6.53								7.63	6 / 2			
reaction time	0.155	interval	7 steps	1.05	1.03	1.00	1.00								1.10		3.08		
		velocity	5.60	8.70	8.87	9.14	9.14								8.84	7.86	8.90		
Semi-Final 2 - 2017 IAAF World Championships (London, GBR) <i>Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles</i>																			
date	06-Aug-17	time	2.45	3.52	4.57	5.62	6.65	7.64	8.65	9.71	10.77	11.84			13.42	9 / 5			
reaction time	0.183	interval	7 steps	1.07	1.05	1.05	1.03	0.99	1.01	1.06	1.06	1.07	1.58			3.17	3.03	3.19	
wind	0.6 m/s	velocity	5.60	8.54	8.70	8.70	8.87	9.23	9.05	8.62	8.62	8.54	8.87	8.20			8.65	9.05	8.60
FINAL - 2017 Golden Spike (Ostrava, CZE) (TV Analysis) <i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>																			
date	28-Jun-17	time	2.56	3.62	4.68	5.70	6.72	7.78	8.82	9.88	10.96	12.06			13.56	7 / 7			
reaction time	0.177	interval	7 steps	1.06	1.06	1.02	1.02	1.06	1.04	1.06	1.08	1.10	1.50			3.14	3.12	3.24	
wind	0.6 m/s	velocity	5.36	8.62	8.62	8.96	8.96	8.62	8.79	8.62	8.46	8.31	9.35	8.11			8.73	8.79	8.46
FINAL - 2017 Bauhaus Athletics (Stockholm, SWE) (TV Analysis) <i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>																			
date	18-Jun-17	time	2.54	3.62	4.64	5.64	6.66	7.70	8.72	9.74	10.78	11.86			13.36	7 / 5			
reaction time	0.164	interval	7 steps	1.08	1.02	1.00	1.02	1.04	1.02	1.02	1.04	1.08	1.50			3.10	3.08	3.14	
wind	3.5 m/s	velocity	5.40	8.46	8.96	9.14	8.96	8.79	8.96	8.96	8.79	8.46	9.35	8.23			8.85	8.90	8.73
FINAL - 2016 Herculis Meeting International d'Athlétisme (Monaco, MON) (TV Analysis) <i>Henson (2021) - Athlete First: 2016 year end hurdle report</i>																			
date	15-Jul-16	time	2.56	3.58	4.62	5.66	6.70	7.72	8.80	9.88	10.96	12.08			13.64	1 / 6			
reaction time	0.157	interval	7 steps	1.02	1.04	1.04	1.04	1.02	1.08	1.08	1.08	1.12	1.56			3.10	3.14	3.28	
wind	0.0 m/s	velocity	5.36	8.96	8.79	8.79	8.79	8.96	8.46	8.46	8.46	8.16	8.99	8.06			8.85	8.73	8.36
Dabó, Rasul (POR) (1989)																			
			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Race 1 - 2011 European Team Championships (Stockholm, SWE) <i>Blomkvist (2011) - www.sub13.se</i>																			
date	19-Jun-11	time	2.60	3.72	4.80	5.86	6.96	8.03	9.12	10.28	11.40	12.56			14.14	2 / 5			
reaction time	0.148	interval		1.12	1.08	1.06	1.10	1.07	1.09	1.16	1.12	1.16	1.58			3.26	3.26	3.44	
wind	-0.8 m/s	velocity	5.28	8.16	8.46	8.62	8.31	8.54	8.39	7.88	8.16	7.88	8.87	7.78			8.41	8.41	7.97
Dal Molin, Paolo (ITA) (1987)																			
			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2022 Bislett Games (Oslo, NOR) (TV Analysis) <i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>																			
date	16-Jun-22	time	2.52	3.60	4.66	5.72	6.76	7.84	8.94	10.02	11.12	12.26			13.76	8 / 6			
reaction time	0.122	interval	7 steps	1.08	1.06	1.06	1.04	1.08	1.10	1.08	1.10	1.14	1.50			3.20	3.22	3.32	
wind	-1.2 m/s	velocity	5.44	8.46	8.62	8.62	8.79	8.46	8.31	8.46	8.31	8.02	9.35	7.99			8.57	8.52	8.26
FINAL - 2021 Weltklasse (Zürich, SUI) (TV Analysis) <i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>																			
date	09-Sep-21	time	2.54	3.54	4.56	5.60	6.64	7.68	8.76	9.80	10.86	11.96			13.43	2 / 5			
reaction time	0.135	interval	7 steps	1.00	1.02	1.04	1.04	1.04	1.08	1.04	1.06	1.10	1.47			3.06	3.16	3.20	
wind	0.6 m/s	velocity	5.40	9.14	8.96	8.79	8.79	8.79	8.46	8.79	8.62	8.31	9.54	8.19			8.96	8.68	8.57
FINAL - 2021 Müller British Grand Prix (Gateshead, GBR) (TV Analysis) <i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>																			
date	13-Jul-21	time	2.52	3.60	4.64	5.74	6.86	7.96	9.04	10.16	11.24	12.36			13.97	8 / 7			
reaction time	0.150	interval	7 steps	1.08	1.04	1.10	1.12	1.10	1.08	1.12	1.08	1.12	1.61			3.22	3.30	3.32	
wind	0.8 m/s	velocity	5.44	8.46	8.79	8.31	8.16	8.31	8.46	8.16	8.46	8.16	8.71	7.87			8.52	8.31	8.26
FINAL - 2021 Golden Gala Pietro Mennea (Florence, ITA) (TV Analysis) <i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>																			
date	10-Jun-21	time	2.48	3.54	4.60	5.68	6.72	7.80	8.86	9.94	11.00	12.12			13.64	2 / 7			
reaction time	0.142	interval	7 steps	1.06	1.06	1.08	1.04	1.08	1.06	1.08	1.06	1.12	1.52			3.20	3.18	3.26	
wind	-0.1 m/s	velocity	5.53	8.62	8.62	8.46	8.79	8.46	8.62	8.46	8.62	8.16	9.22	8.06			8.57	8.62	8.41

FINAL - 2021 European Indoor Championships (Toruń, POL) (TV Analysis)

date	07-Mar-21	time	2.40	3.46	4.50	5.54	6.58
reaction time	0.133	interval	7 steps	1.06	1.04	1.04	1.04
		velocity	5.72	8.62	8.79	8.79	8.79

Henson (2021) - Athlete First: 2021 year end hurdle report

	7.56	7 / 3
	0.98	3.14
	9.92	7.94
		8.73

FINAL - 2021 Villa de Madrid (Madrid, ESP) (TV Analysis)

date	24-Feb-21	time	2.37	3.43	4.47	5.50	6.54
reaction time		interval	7 steps	1.06	1.04	1.03	1.04
		velocity	5.79	8.62	8.79	8.87	8.79

Henson (2021) - men's 60m hurdles world record season - Grant Holloway

	7.57	5 / 3
	1.03	3.13
	9.44	7.93
		8.76

Heat 2 - 2021 Villa de Madrid (Madrid, ESP) (TV Analysis)

date	24-Feb-21	time	2.47	3.53	4.63	5.72	6.78
reaction time	0.134	interval	7 steps	1.06	1.10	1.09	1.06
		velocity	5.55	8.62	8.31	8.39	8.62

Henson (2021) - men's 60m hurdles world record season - Grant Holloway

	7.71	5 / 2
	0.93	3.25
	10.45	7.78
		8.44

FINAL - 2021 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)

date	09-Feb-21	time	2.43	3.49	4.55	5.57	6.60
reaction time	0.126	interval	7 steps	1.06	1.06	1.02	1.03
		velocity	5.65	8.62	8.62	8.96	8.87

Henson (2021) - men's 60m hurdles world record season - Grant Holloway

	7.55	2 / 3
	0.95	3.14
	10.23	7.95
		8.73

Heat 1 - 2021 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)

date	09-Feb-21	time	2.40	3.48	4.53	5.55	6.58
reaction time	0.134	interval	7 steps	1.08	1.05	1.02	1.03
		velocity	5.72	8.46	8.70	8.96	8.87

Henson (2021) - men's 60m hurdles world record season - Grant Holloway

	7.65	7 / 4
	1.07	3.15
	9.08	7.84
		8.70

FINAL - 2020 Golden Gala Pietro Mennea (Rome, ITA) (TV Analysis)

date	17-Sep-20	time	2.50	3.52	4.60	5.66	6.70	7.78	8.88	9.96	11.06	12.18
reaction time	0.134	interval	7 steps	1.02	1.08	1.06	1.04	1.08	1.10	1.08	1.10	1.12
wind	0.1 m/s	velocity	5.49	8.96	8.46	8.62	8.79	8.46	8.31	8.46	8.31	8.16

Henson (2020) - Athlete First: 2020 year end hurdle report

	13.70	1 / 9
		3.16
		3.22
		3.30
		8.68
		8.52
		8.31

FINAL - 2020 Herculis Meeting International d'Athlétisme (Monaco, MON) (TV Analysis)

date	14-Aug-20	time	2.50	3.57	4.64	5.70	6.77	7.80	8.87	9.97	11.04	12.14
reaction time	0.123	interval	7 steps	1.07	1.07	1.06	1.07	1.03	1.07	1.10	1.07	1.10
wind	0.8 m/s	velocity	5.49	8.54	8.54	8.62	8.54	8.87	8.54	8.31	8.54	8.31

Henson (2020) - Athlete First: 2020 year end hurdle report

	13.61	8 / 5
		3.20
		3.17
		3.27
		8.57
		8.65
		8.39

Heat 2 - 2014 European Championships (Zurich, SUI)

date	13-Aug-14	time	2.55	3.64	4.67	5.73	6.77	7.80	8.90	9.97	11.05	12.14
reaction time	0.138	interval		1.09	1.03	1.06	1.04	1.03	1.10	1.07	1.08	1.09
wind	0.4 m/s	velocity	5.38	8.39	8.87	8.62	8.79	8.87	8.31	8.54	8.46	8.39

Incalza (2014) - https://www.youtube.com/watch?v=nliXgBWbl_k&list=UU7691fXeyNFIMROfkJ-WWUg

	13.54	6 / 4
		3.18
		3.17
		3.24
		8.62
		8.65
		8.46

FINAL - 2014 Italian National Indoor Championships (Ancona, ITA)

date	22-Feb-14	time	2.56	3.63	4.68	5.69	6.72
reaction time		interval		1.07	1.05	1.01	1.03
		velocity	5.36	8.54	8.70	9.05	8.87

FIDAL - Centro Studi & Ricerche (2014) - www.youtube.com/watch?v=bF4QEgq7shU

	7.60	3 / 1
	0.88	3.13
	11.05	7.89
		8.76

FINAL - 2013 European Indoor Championships (Göteborg, SWE)

date	01-Mar-13	time	2.51	3.55	4.60	5.62	6.66
reaction time	0.138	interval		1.04	1.05	1.02	1.04
		velocity	5.47	8.79	8.70	8.96	8.79

Blomkvist (2013) - www.elitlandslag.se/SprintHäck/KortHäck.aspx

	7.51	4 / 2
	0.85	3.11
	11.44	7.99
		8.82

FINAL - 2012 Italian National Indoor Championships (Ancona, ITA)

date	25-Feb-12	time	2.60	3.66	4.71	5.75	6.82
reaction time		interval		1.06	1.05	1.04	1.07
		velocity	5.28	8.62	8.70	8.79	8.54

FIDAL - Centro Studi & Ricerche (2012) - www.youtube.com/watch?v=SIDALf6RdBY

	7.75	6 / 1
	0.93	3.15
	10.45	7.74
		8.70

Darien, Daniel (FRA) (1961)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

FINAL - 1986 French National Indoor Championships (Liévin, FRA)

date	26-Jan-86	time	2.60	3.70	4.79	5.90	7.00
reaction time		interval		1.10	1.09	1.11	1.10
		velocity	5.28	8.31	8.39	8.23	8.31

Aubert (1986) - indoor - video - haies, etude des performances

	7.91	4
	0.91	3.30
	10.68	7.59
		8.31

Semi-Final ? - 1986 French National Indoor Championships (Liévin, FRA)

date	26-Jan-86	time	2.67	3.76	4.85	5.95	7.04
reaction time		interval		1.09	1.09	1.10	1.09
		velocity	5.14	8.39	8.39	8.31	8.39

Aubert (1986) - indoor - video - haies, etude des performances

	7.94	4
	0.90	3.28
	10.80	7.56
		8.36

Darien, Garfield (FRA) (1987)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

FINAL - 2018 Shanghai Diamond League (Shanghai, CHN) (TV Analysis)

date	12-May-18	time	2.56	3.62	4.68	5.74	6.76	7.84	8.92	10.00	11.08	12.20
reaction time	0.144	interval	7 steps	1.06	1.06	1.06	1.02	1.08	1.08	1.08	1.08	1.12
wind	0.2 m/s	velocity	5.36	8.62	8.62	8.62	8.96	8.46	8.46	8.46	8.46	8.16

Henson (2020) - Athlete First: 2018 year end hurdle report

	13.74	3 / 7
		3.18
		3.18
		3.28
		8.62
		8.62
		8.36

FINAL - 2017 Memorial van Damme (Brussels, BEL) (TV Analysis)

date	01-Sep-17	time	2.54	3.62	4.66	5.68	6.70	7.72	8.76	9.80	10.86	11.92	<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>					
reaction time	0.138	interval	7 steps	1.08	1.04	1.02	1.02	1.02	1.04	1.04	1.06	1.06	1.50	13.42	9 / 6	3.14	3.08	3.16
wind	0.5 m/s	velocity	5.40	8.46	8.79	8.96	8.96	8.96	8.79	8.79	8.62	8.62	9.35	8.20		8.73	8.90	8.68

FINAL - 2017 IAAF World Championships (London, GBR)

date	07-Aug-17	time	2.38	3.44	4.46	5.48	6.52	7.54	8.56	9.58	10.62	11.72	<i>Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles</i>					
reaction time	0.115	interval	7 steps	1.06	1.02	1.02	1.04	1.02	1.02	1.02	1.04	1.10	1.58	13.30	6 / 4	3.10	3.08	3.16
wind	0.0 m/s	velocity	5.76	8.62	8.96	8.96	8.79	8.96	8.96	8.96	8.79	8.31	8.87	8.27		8.85	8.90	8.68

Semi-Final 1 - 2017 IAAF World Championships (London, GBR)

date	06-Aug-17	time	2.34	3.39	4.41	5.43	6.45	7.45	8.45	9.48	10.52	11.57	<i>Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles</i>					
reaction time	0.125	interval	7 steps	1.05	1.02	1.02	1.02	1.00	1.00	1.03	1.04	1.05	1.60	13.17	6 / 2	3.09	3.02	3.12
wind	0.2 m/s	velocity	5.86	8.70	8.96	8.96	8.96	9.14	9.14	8.87	8.79	8.70	8.76	8.35		8.87	9.08	8.79

FINAL - 2017 Meeting de Paris (Paris, FRA) (TV Analysis)

date	01-Jul-17	time	2.50	3.54	4.56	5.56	6.54	7.58	8.58	9.60	10.62	11.68	<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>					
reaction time	0.121	interval	7 steps	1.04	1.02	1.00	0.98	1.04	1.00	1.02	1.02	1.06	1.47	13.15	7 / 3	3.06	3.02	3.10
wind	-0.1 m/s	velocity	5.49	8.79	8.96	9.14	9.33	8.79	9.14	8.96	8.96	8.62	9.54	8.37		8.96	9.08	8.85

FINAL - 2017 Golden Spike (Ostrava, CZE) (TV Analysis)

date	28-Jun-17	time	2.48	3.50	4.52	5.52	6.52	7.54	8.54	9.56	10.58	11.62	<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>					
reaction time	0.151	interval	7 steps	1.02	1.02	1.00	1.00	1.02	1.00	1.02	1.02	1.04	1.47	13.09	5 / 1	3.04	3.02	3.08
wind	0.6 m/s	velocity	5.53	8.96	8.96	9.14	9.14	8.96	9.14	8.96	8.96	8.79	9.54	8.40		9.02	9.08	8.90

FINAL - 2017 Golden Gala Pietro Mennea (Rome, ITA) (TV Analysis)

date	08-Jun-17	time	2.52	3.56	4.58	5.60	6.72							<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>				
reaction time	0.148	interval	7 steps	1.04	1.02	1.02	1.12							15.64	8 / 9	3.08		
wind	-0.3 m/s	velocity	5.44	8.79	8.96	8.96	8.16							7.03		8.90		

FINAL - 2015 IAAF World Championships (Beijing, CHN) (TV Analysis)

date	28-Aug-15	time	2.52	3.58	4.64	5.66	6.68	7.68	8.72	9.76	10.80	11.86	<i>Henson (2021) - Athlete First: major championships report</i>					
reaction time	0.178	interval	7 steps	1.06	1.06	1.02	1.02	1.00	1.04	1.04	1.04	1.06	1.48	13.34	3 / 8	3.14	3.06	3.14
wind	0.2 m/s	velocity	5.44	8.62	8.62	8.96	8.96	9.14	8.79	8.79	8.79	8.62	9.47	8.25		8.73	8.96	8.73

FINAL - 2012 Herculis Meeting International D'Athlétisme (Monaco, MON) (TV Analysis)

date	20-Jul-12	time	2.48	3.54	4.54	5.56	6.56	7.58	8.60	9.64	10.71	11.81	<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>					
reaction time	0.161	interval		1.06	1.00	1.02	1.00	1.02	1.02	1.04	1.07	1.10	1.46	13.27	2 / 6	3.08	3.04	3.21
wind	0.0 m/s	velocity	5.53	8.62	9.14	8.96	9.14	8.96	8.96	8.79	8.54	8.31	9.60	8.29		8.90	9.02	8.54

Heat 3 - 2009 IAAF World Championships (Berlin, GER)

date	19-Aug-09	time	2.67	3.71	4.75	5.80	6.83	7.87	8.93	9.99	11.07	12.15	<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>					
reaction time	0.149	interval		1.04	1.04	1.05	1.03	1.04	1.06	1.06	1.08	1.08	1.41	13.56	2 / 1	3.13	3.13	3.22
wind	0.2 m/s	velocity	5.14	8.79	8.79	8.70	8.87	8.79	8.62	8.62	8.46	8.46	9.94	8.11		8.76	8.76	8.52

Davenport, Willie (USA) (1943)

			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
<i>Ewen (1977) - montreal 1976</i>																		
date	28-Jul-76	time	2.6	3.6	4.6	5.7	6.7	7.7	8.8	9.8	10.9	11.9		13.38	3 / 3			
reaction time		interval		1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.10	1.00	1.48			3.10	3.10	3.10
wind	0.0 m/s	velocity	5.28	9.14	9.14	8.31	9.14	9.14	8.31	9.14	8.31	9.14	9.47	8.22		8.85	8.85	8.85

FINAL - 1972 Olympic Games (Munich, FRG)

date	07-Sep-72	time	2.5	3.5	4.6	5.6	6.6	7.6	8.7	9.8	10.9	11.9	<i>Kay (1972) - BAAB Munich Technical Report</i>					
reaction time		interval		1.00	1.10	1.00	1.00	1.00	1.10	1.10	1.10	1.00	1.60	13.50	1 / 4	3.10	3.10	3.20
wind	0.3 m/s	velocity	5.49	9.14	8.31	9.14	9.14	9.14	8.31	8.31	8.31	9.14	8.76	8.15		8.85	8.85	8.57

de los Santos, Miguel (ESP) (1973)

			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
<i>Jung (2003) - http://www.fgs.uni-halle.de</i>																		
date	22-Jun-97	time	2.77	3.87	4.94	6.02	7.08	8.17	9.29	10.40	11.52	12.70		14.16	/ 8			
reaction time		interval		1.10	1.07	1.08	1.06	1.09	1.12	1.11	1.12	1.18	1.46			3.25	3.27	3.41
wind	0.2 m/s	velocity	4.95	8.31	8.54	8.46	8.62	8.39	8.16	8.23	8.16	7.75	9.60	7.77		8.44	8.39	8.04

de Oliveira, João Vítor (BRA) (1992)

			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>																		
date	22-May-16	time	2.54	3.62	4.68	5.72	6.78	7.82	8.94	10.00	11.10	12.24		13.90	2 / 7			
reaction time	0.101	interval		1.08	1.06	1.04	1.06	1.04	1.12	1.06	1.10	1.14	1.66			3.18	3.22	3.30
wind	1.4 m/s	velocity	5.40	8.46	8.62	8.79	8.62	8.79	8.16	8.62	8.31	8.02	8.45	7.91		8.62	8.52	8.31

FINAL - 2016 Seiko Golden Grand Prix (Kawasaki, JPN)

date	08-May-16	time	2.64	3.72	4.78	5.81	6.87	7.92	8.99	10.07	11.17	12.30	<i>Kota (2016) - race analysis of japanese top-ranked men 110m and women 100m hurdlers</i>					
reaction time	0.128	interval		1.08	1.06	1.03	1.06	1.05	1.07	1.08	1.10	1.13	1.51	13.81	7 / 5	3.17	3.18	3.31
wind	-0.6 m/s	velocity	5.20	8.46	8.62	8.87	8.62	8.70	8.54	8.46	8.31	8.09	9.28	7.97		8.65	8.62	8.28

		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
de Vries, Ruan (RSA) (1986)																		
FINAL - 2013 Windsprint (Sundsvall, SWE)															<i>(2013) - www.ssg.se/windsprint/Splittider/</i>			
date	28-Jul-13	time	2.68	3.77	4.83	5.89	6.95	8.00	9.04	10.10	11.16	12.24		13.70	6 / 4			
reaction time		interval		1.09	1.06	1.06	1.06	1.05	1.04	1.06	1.06	1.08	1.46			3.21	3.15	3.20
wind	1.7 m/s	velocity	5.12	8.39	8.62	8.62	8.62	8.70	8.79	8.62	8.62	8.46	9.60	8.03		8.54	8.70	8.57
FINAL - 2012 Windsprint (Sundsvall, SWE)															<i>Blomkvist (2012) - www.sub13.se</i>			
date	17-Jun-12	time	2.71	3.81	4.89	5.97	7.04	8.10	9.17	10.24	11.32	12.41		13.90	6 / 4			
reaction time		interval		1.10	1.08	1.08	1.07	1.06	1.07	1.07	1.08	1.09	1.49			3.26	3.20	3.24
wind	1.1 m/s	velocity	5.06	8.31	8.46	8.46	8.54	8.62	8.54	8.54	8.46	8.39	9.41	7.91		8.41	8.57	8.46
Decker, Jan (CZE) (1995)																		
FINAL - 2014 Czech Republic National U20 Championships (Trinec, CZE) (99cm)															<i>Feher (2014) - Final report from the U18 & U20 Czech Republic national championships</i>			
date	28-Jun-14	time	2.86	4.07	5.28	6.46	7.66	8.87	10.07	11.26	12.50	13.73		15.40	8 / 8			
reaction time	0.235	interval		1.21	1.21	1.18	1.20	1.21	1.20	1.19	1.24	1.23	1.67			3.60	3.61	3.66
wind	-2.2 m/s	velocity	4.80	7.55	7.55	7.75	7.62	7.55	7.62	7.68	7.37	7.43	8.40	7.14		7.62	7.60	7.49
Heat 1 - 2014 Czech Republic National U20 Championships (Trinec, CZE) (99cm)															<i>Feher (2014) - Final report from the U18 & U20 Czech Republic national championships</i>			
date	28-Jun-14	time	2.78	3.95	5.12	6.30	7.48	8.69	9.90	11.10	12.34	13.60		15.34	6 / 3			
reaction time	0.206	interval		1.17	1.17	1.18	1.18	1.21	1.21	1.20	1.24	1.26	1.74			3.52	3.60	3.70
wind	-1.6 m/s	velocity	4.94	7.81	7.81	7.75	7.75	7.55	7.55	7.62	7.37	7.25	8.06	7.17		7.79	7.62	7.41
Dees, Tony (USA) (1963)																		
FINAL - 1999 IAAF World Championships (Sevilla, ESP)															<i>Sanchez (1999) - Sevilla '99: análisis de la carreras con villas</i>			
date	25-Aug-99	time	2.47	3.51	4.53	5.52	6.53	7.53	8.56	9.58	10.64	11.72		13.22	8 / 4			
reaction time	0.148	interval		1.04	1.02	0.99	1.01	1.00	1.03	1.02	1.06	1.08	1.50			3.05	3.04	3.16
wind	1.0 m/s	velocity	5.55	8.79	8.96	9.23	9.05	9.14	8.87	8.96	8.62	8.46	9.35	8.32		8.99	9.02	8.68
Semi-Final 2 - 1999 IAAF World Championships (Sevilla, ESP)															<i>Sanchez (1999) - Sevilla '99: análisis de la carreras con villas</i>			
date	24-Aug-99	time	2.43	3.45	4.49	5.49	6.50	7.51	8.54	9.60	10.70	11.81		13.30	4 / 3			
reaction time	0.123	interval		1.02	1.04	1.00	1.01	1.01	1.03	1.06	1.10	1.11	1.49			3.06	3.05	3.27
wind	0.0 m/s	velocity	5.65	8.96	8.79	9.14	9.05	9.05	8.87	8.62	8.31	8.23	9.41	8.27		8.96	8.99	8.39
FINAL - 1996 USA Olympic Trials (Atlanta, GA)															<i>McNichols (2000) - Hurdle technique study through video analysis</i>			
date	23-Jun-96	time	2.45	3.47	4.52	5.51	6.57	7.62	8.68	9.80	10.88	12.01		13.67	2 / 6			
reaction time		interval		1.02	1.05	0.99	1.06	1.05	1.06	1.12	1.08	1.13	1.66			3.06	3.17	3.33
wind	0.9 m/s	velocity	5.60	8.96	8.70	9.23	8.62	8.70	8.62	8.16	8.46	8.09	8.45	8.05		8.96	8.65	8.23
FINAL - 1992 Olympic Games (Barcelona, ESP)															<i>Knight (1992) - 1992 Olympic report: the hurdling events</i>			
date	03-Aug-92	time	2.53	3.56	4.56	5.57	6.59	7.60	8.64	9.69	10.78	11.85		13.24	7 / 2			
reaction time	0.159	interval		1.03	1.00	1.01	1.02	1.01	1.04	1.05	1.09	1.07	1.39			3.04	3.07	3.21
wind	0.8 m/s	velocity	5.42	8.87	9.14	9.05	8.96	9.05	8.79	8.70	8.39	8.54	10.09	8.31		9.02	8.93	8.54
Dehelt, Adrien (BEL) (1985)																		
FINAL - 2007 European Cup (Munich, GER)															<i>Graubner (2007) - http://www.fgs.uni-halle.de</i>			
date	24-Jun-07	time	2.65	3.71	4.75	5.80	6.85	7.91	8.96	10.03	11.13	12.23		13.67	/ 6			
reaction time	0.149	interval		1.06	1.04	1.05	1.05	1.06	1.05	1.07	1.10	1.10	1.44	PB		3.15	3.16	3.27
wind	0.4 m/s	velocity	5.18	8.62	8.79	8.70	8.70	8.62	8.70	8.54	8.31	8.31	9.74	8.05		8.70	8.68	8.39
Degughi, Masaya (JPN)																		
FINAL - 2017 Nambu Memorial (Sapporo, JPN)															<i>(2017) - tfdata-store.com/2017/07/12/post-1025/</i>			
date	09-Jul-17	time	2.76	3.87	5.04	6.18	7.37	8.53	9.71	10.90	12.09	13.33		14.85	1 / 9			
reaction time		interval		1.11	1.17	1.14	1.19	1.16	1.18	1.19	1.19	1.24	1.52			3.42	3.53	3.62
wind	2.7 m/s	velocity	4.97	8.23	7.81	8.02	7.68	7.88	7.75	7.68	7.68	7.37	9.22	7.41		8.02	7.77	7.57
Demidyuk, Serhiy (UKR) (1982)																		
FINAL - 2007 IAAF World Athletics Final (Stuttgart, GER)															<i>Graubner (2007) - http://www.fgs.uni-halle.de</i>			
date	23-Sep-07	time	2.68	3.72	4.76	5.79	6.81	7.83	8.86	9.90	10.95	12.01		13.37	8 / 7			
reaction time	0.214	interval		1.04	1.04	1.03	1.02	1.02	1.03	1.04	1.05	1.06	1.36			3.11	3.07	3.15
wind	0.0 m/s	velocity	5.12	8.79	8.79	8.87	8.96	8.96	8.87	8.79	8.70	8.62	10.31	8.23		8.82	8.93	8.70
Desensky, Lukáš (CZE) (1998)																		
FINAL - 2015 Czech Republic National U18 Indoor Championships (Praha, CZE) (91cm)															<i>Feher (2015) - Final report U18 & U20 Czech Republic indoor national champs</i>			
date	14-Feb-15	time	2.71	3.83	4.96	6.06	7.17							8.11	2 / 2			
reaction time	0.195	interval		1.12	1.13	1.10	1.11					0.94				3.35		
		velocity	5.06	8.16	8.09	8.31	8.23					10.34	7.40			8.19		
Heat 3 - 2014 Czech Republic National U18 Championships (Trinec, CZE) (91cm)															<i>Feher (2014) - Final report from the U18 & U20 Czech Republic national championships</i>			
date	28-Jun-14	time	2.77	3.95	5.12	6.32	7.49	8.70	9.88	11.08	12.28	13.53		15.20	2 / 4			
reaction time	0.201	interval		1.18	1.17	1.20	1.17	1.21	1.18	1.20	1.20	1.25	1.67			3.55	3.56	3.65
wind	-1.6 m/s	velocity	4.95	7.75	7.81	7.62	7.81	7.55	7.75	7.62	7.62	7.31	8.40	7.24		7.72	7.70	7.51
Díaz, Yunior (CUB) (1987)																		

Decathlon - Heat 1 - 2009 IAAF World Championships (Berlin, GER)*Graubner (2009) - biomechanical analyses at the 12th IAAF world championships*

date	20-Aug-09	time	2.69	3.86	5.00	6.13	7.26	8.38	9.51	10.86	11.86	13.08	14.56	6 / 2			
reaction time	0.155	interval		1.17	1.14	1.13	1.13	1.12	1.13	1.35	1.00	1.22	1.48		3.44	3.38	3.57
wind	0.3 m/s	velocity	5.10	7.81	8.02	8.09	8.09	8.16	8.09	6.77	9.14	7.49	9.47	7.55	7.97	8.11	7.68

Dickson, Michael (USA) (1997)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Heat 2 - 2024 Meeting de Paris (Paris, FRA)***Omega Timing (2024) - diamond league race analysis*

date	07-Jul-24	time	2.45	3.54	4.58	5.61	6.66	7.70	8.75	9.83	10.90	11.99	13.60	2 / 6			
reaction time	0.192	interval	7 steps	1.09	1.04	1.03	1.05	1.04	1.05	1.08	1.07	1.09	1.61		3.16	3.14	3.24
wind	0.4 m/s	velocity	5.60	8.39	8.79	8.87	8.70	8.79	8.70	8.46	8.54	8.39	8.71	8.09	8.68	8.73	8.46

FINAL - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)*Henson (2024) - Athlete First: 2024 year end hurdle report*

date	28-Jun-24	time	2.54	3.60	4.64	5.64	6.64	7.66	8.68	9.71	10.75	11.80	13.21	5 / 7			
reaction time		interval	7 steps	1.06	1.04	1.00	1.00	1.02	1.02	1.03	1.04	1.05	1.41		3.10	3.04	3.12
wind	2.0 m/s	velocity	5.40	8.62	8.79	9.14	9.14	8.96	8.96	8.87	8.79	8.70	9.94	8.33	8.85	9.02	8.79

Heat 3 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)*Henson (2024) - Athlete First: 2024 year end hurdle report*

date	24-Jun-24	time	2.53	3.60	4.63	5.64	6.66	7.70	8.73	9.75	10.78	11.93	13.36	2 / 4			
reaction time		interval	7 steps	1.07	1.03	1.01	1.02	1.04	1.03	1.02	1.03	1.15	1.43		3.11	3.09	3.20
wind	1.8 m/s	velocity	5.42	8.54	8.87	9.05	8.96	8.79	8.87	8.96	8.87	7.95	9.80	8.23	8.82	8.87	8.57

FINAL - 2024 Atlanta City Games (Atlanta, GA) (Street Race) (TV Analysis)*Henson (2024) - Athlete First: 2024 year end hurdle report*

date	18-May-24	time	2.58	3.65	4.68	5.75	6.77	7.79	8.82	9.88	10.95	12.01	13.50	4 / 3			
reaction time		interval	7 steps	1.07	1.03	1.07	1.02	1.02	1.03	1.06	1.07	1.06	1.49		3.17	3.07	3.19
wind	-0.7 m/s	velocity	5.32	8.54	8.87	8.54	8.96	8.96	8.87	8.62	8.54	8.62	9.41	8.15	8.65	8.93	8.60

FINAL - 2024 USATF National Indoor Championships (Albuquerque, NM) (Altitude) (TV Analysis)*Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record*

date	16-Feb-24	time	2.57	3.63	4.65	5.67	6.67						7.57	7.57	1 / 5		
reaction time	0.181	interval	7 steps	1.06	1.02	1.02	1.00						7.57	7.93		3.10	
		velocity	5.34	8.62	8.96	8.96	9.14						1.85	7.93		8.85	

FINAL - 2024 New Balance Indoor Grand Prix (Boston, MA) (TV Analysis)*Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record*

date	04-Feb-24	time	2.56	3.60	4.60	5.62	6.67						7.57	7.57	2 / 5		
reaction time	0.194	interval	7 steps	1.04	1.00	1.02	1.05						7.57	7.93		3.06	
		velocity	5.36	8.79	9.14	8.96	8.70						1.85	7.93		8.96	

Heat 2 - 2023 Kamila Skolimowska Memorial (Silesia, POL)*Omega Timing (2023) - diamond league race analysis*

date	16-Jul-23	time	2.46	3.55	4.60	5.65	6.69	7.74	8.81	9.87	10.93	12.01	13.57	8 / 6			
reaction time	0.183	interval	7 steps	1.09	1.05	1.05	1.04	1.05	1.07	1.06	1.06	1.08	1.56		3.19	3.16	3.20
wind	-0.2 m/s	velocity	5.58	8.39	8.70	8.70	8.79	8.70	8.54	8.62	8.62	8.46	8.99	8.11	8.60	8.68	8.57

FINAL - 2023 USATF New York City Grand Prix (Randalls Island, NY) (TV Analysis)*Henson (2023) - Athlete First: 2023 year end hurdle report*

date	24-Jun-23	time	2.53	3.59	4.61	5.63	6.64	7.67	8.71	9.74	10.78	11.85	13.26	1 / 5			
reaction time	0.212	interval	7 steps	1.06	1.02	1.02	1.01	1.03	1.04	1.03	1.04	1.07	1.41		3.10	3.08	3.14
wind	1.6 m/s	velocity	5.42	8.62	8.96	8.96	9.05	8.87	8.79	8.87	8.79	8.54	9.94	8.30	8.85	8.90	8.73

FINAL - 2023 USATF Bermuda Grand Prix (Devonshire, BER) (TV Analysis)*Henson (2023) - Athlete First: 2023 year end hurdle report*

date	21-May-23	time	2.56	3.69	4.73	5.76	6.82	7.87	8.90	9.93	11.02	12.06	13.48	7 / 6			
reaction time	0.190	interval	7 steps	1.13	1.04	1.03	1.06	1.05	1.03	1.03	1.09	1.04	1.42		3.20	3.14	3.16
wind	4.0 m/s	velocity	5.36	8.09	8.79	8.87	8.62	8.70	8.87	8.87	8.39	8.79	9.87	8.16	8.57	8.73	8.68

Semi-Final 1 - 2022 USATF National Championships (Eugene, OR)*USATF (2022) - Results powered by Karmarush.com*

date	26-Jun-22	time	2.53	3.68	4.52	5.60	6.61	7.69	8.70	9.77	10.84	11.94	13.52	3 / 7			
reaction time		interval		1.15	0.84	1.08	1.01	1.08	1.01	1.07	1.07	1.10	1.58		3.07	3.10	3.24
wind	0.4 m/s	velocity	5.42	7.95	10.88	8.46	9.05	8.46	9.05	8.54	8.54	8.31	8.87	8.14	8.93	8.85	8.46

Heat 2 - 2022 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)*Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record*

date	17-Feb-22	time	2.46	3.55	4.58	5.60	6.63						7.64	6 / 4			
reaction time	0.183	interval	7 steps	1.09	1.03	1.02	1.03						1.01		3.14		
		velocity	5.58	8.39	8.87	8.96	8.87						9.62	7.85		8.73	

FINAL - 2020 USA Olympic Trials (Eugene, OR) (TV Analysis)*Henson (2021) - Athlete First: 2021 year end hurdle report*

date	26-Jun-21	time	2.50	3.55	4.60	5.62	6.64	7.67	8.71	9.74	10.78	11.85	13.34	2 / 6			
reaction time	0.201	interval	7 steps	1.05	1.05	1.02	1.02	1.03	1.04	1.03	1.04	1.07	1.49		3.12	3.09	3.14
wind	0.4 m/s	velocity	5.49	8.70	8.70	8.96	8.96	8.87	8.79	8.87	8.79	8.54	9.41	8.25	8.79	8.87	8.73

Semi-Final 2 - 2020 USA Olympic Trials (Eugene, OR) (TV Analysis)*Henson (2021) - Athlete First: 2021 year end hurdle report*

date	26-Jun-21	time	2.50	3.60	4.57	5.60	6.63	7.67	8.67	9.71	10.74	11.86	13.29	6 / 3			
reaction time	0.173	interval	7 steps	1.10	0.97	1.03	1.03	1.04	1.00	1.04	1.03	1.12	1.43		3.10	3.07	3.19
wind	1.2 m/s	velocity	5.49	8.31	9.42	8.87	8.87	8.79	9.14	8.79	8.87	8.16	9.80	8.28	8.85	8.93	8.60

Heat 3 - 2020 USA Olympic Trials (Eugene, OR) (TV Analysis)*Henson (2021) - Athlete First: 2021 year end hurdle report*

date	25-Jun-21	time	2.53	3.57	4.60	5.66	6.66	7.66	8.70	9.73	10.73	11.78	13.26	2 / 2			
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reaction time	0.208	interval	7 steps	1.04	1.03	1.06	1.00	1.00	1.04	1.03	1.00	1.05	1.48	PB	3.13	3.04	3.08
wind	0.5 m/s	velocity	5.42	8.79	8.87	8.62	9.14	9.14	8.79	8.87	9.14	8.70	9.47	8.30	8.76	9.02	8.90

FINAL - 2021 American Track League 1 (Fayetteville, AR) (TV Analysis)*Henson (2021) - men's 60m hurdles world record season - Grant Holloway*

date	24-Jan-21	time	2.50	3.55	4.59	5.62	6.62							7.54	3 / 2		
reaction time	0.186	interval	7 steps	1.05	1.04	1.03	1.00						0.92	PB		3.12	
		velocity	5.49	8.70	8.79	8.87	9.14						10.57	7.96		8.79	

FINAL - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)*CAA Hurdle Development (2020)*

date	15-Feb-20	time	2.58	3.65	4.72	5.74	6.79							7.69	6 / 6		
reaction time	0.171	interval	1.07	1.07	1.02	1.05							0.90			3.16	
		velocity	5.32	8.54	8.54	8.96	8.70						10.80	7.80		8.68	

Semi-Final 2 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)*CAA Hurdle Development (2020)*

date	15-Feb-20	time	2.57	3.62	4.69	5.74	6.79							7.69	5 / 2		
reaction time	0.126	interval	1.05	1.07	1.05	1.05							0.90			3.17	
		velocity	5.34	8.70	8.54	8.70	8.70						10.80	7.80		8.65	

Heat 1 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)*CAA Hurdle Development (2020)*

date	14-Feb-20	time	2.60	3.67	4.72	5.75	6.79							7.68	3 / 2		
reaction time	0.159	interval	1.07	1.05	1.03	1.04							0.89			3.15	
		velocity	5.28	8.54	8.70	8.87	8.79						10.92	7.81		8.70	

FINAL - 2020 Millrose Games (New York, NY) (TV Analysis)*Henson (2020) - Athlete First: 2020 year end hurdle report*

date	08-Feb-20	time	2.60	3.67	4.74	5.80	6.84							7.83	7 / 5		
reaction time	0.231	interval	1.07	1.07	1.06	1.04							0.99			3.20	
		velocity	5.28	8.54	8.54	8.62	8.79						9.82	7.66		8.57	

FINAL - 2019 The Match - Europe v USA (Minsk, BLR) (TV Analysis)*Henson (2020) - Athlete First: 2019 year end hurdle report*

date	10-Sep-19	time	2.60	3.68	4.72	5.78	6.86	7.93	8.96	10.10	11.16	12.23		13.70	6 / 5		
reaction time	0.189	interval	1.08	1.04	1.06	1.08	1.07	1.03	1.14	1.06	1.07	1.47				3.18	3.18
wind	0.1 m/s	velocity	5.28	8.46	8.79	8.62	8.46	8.54	8.87	8.02	8.62	8.54	9.54	8.03		8.62	8.62

FINAL - 2019 USATF National Championships (Des Moines, IA) (TV Analysis)*Henson (2020) - Athlete First: 2019 year end hurdle report*

date	28-Jul-19	time	2.56	3.60	4.67	5.70	6.74	7.77	8.80	9.85	10.94	12.00		13.45	3 / 5		
reaction time		interval	1.04	1.07	1.03	1.04	1.03	1.03	1.05	1.09	1.06	1.45		PB		3.14	3.10
wind	-0.8 m/s	velocity	5.36	8.79	8.54	8.87	8.79	8.87	8.87	8.70	8.39	8.62	9.67	8.18		8.73	8.85

Diessl, Enzo (AUT) (2004)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Repechage 1 - 2024 Olympic Games (Paris, FRA)***Paris 2024 Olympc Games - Results Book (2024)*

date	06-Aug-24	time	2.43	3.53	4.56	5.60	6.63	7.67	8.72	9.78	10.86	11.94		13.56	7 / 4		
reaction time	0.109	interval	7 steps	1.10	1.03	1.04	1.03	1.04	1.05	1.06	1.08	1.08	1.62			3.17	3.12
wind	0.2 m/s	velocity	5.65	8.31	8.87	8.79	8.87	8.79	8.70	8.62	8.46	8.46	8.65	8.11		8.65	8.79

Heat 2 - 2024 Olympic Games (Paris, FRA)*Paris 2024 Olympc Games - Results Book (2024)*

date	04-Aug-24	time	2.50	3.60	4.65	5.69	6.75	7.79	8.84	9.91	10.96	12.04		13.63	2 / 6		
reaction time	0.203	interval	7 steps	1.10	1.05	1.04	1.06	1.04	1.05	1.07	1.05	1.08	1.59			3.19	3.15
wind	1.2 m/s	velocity	5.49	8.31	8.70	8.79	8.62	8.79	8.70	8.54	8.70	8.46	8.82	8.07		8.60	8.70

Dinga, Libor (CZE) (1984)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Heat 1 - 2014 Czech Republic National Championships (Ostrava, CZE)***Feher (2014) - Final report from the Czech Republic national championships*

date	02-Aug-14	time	2.83	4.08	5.30	6.51	7.72	8.95	10.19	11.47	12.73	13.99		15.66	1 / 6		
reaction time	0.152	interval	1.25	1.22	1.21	1.21	1.23	1.24	1.28	1.26	1.26	1.67				3.68	3.68
wind	-1.6 m/s	velocity	4.85	7.31	7.49	7.55	7.55	7.43	7.37	7.14	7.25	7.25	8.40	7.02		7.45	7.45

Heat 2 - 2013 Czech Republic National Championships (Tábor, CZE)*Feher (2013) - Final report from the men's & women's Czech Republic national championships*

date	15-Jun-13	time	2.95	4.18	5.37	6.48	7.80	9.00	10.25	11.46	12.73	14.02		15.61	2 / 5		
reaction time	0.166	interval	1.23	1.19	1.11	1.32	1.20	1.25	1.21	1.27	1.29	1.59				3.53	3.77
wind	-0.6 m/s	velocity	4.65	7.43	7.68	8.23	6.92	7.62	7.31	7.55	7.20	7.09	8.82	7.05		7.77	7.27

Heat 3 - 2012 Czech Republic National Indoor Championships (Praha, CZE)*Feher (2012) - Czech Republic indoor national championships - men's 60m hurdles*

date	25-Feb-12	time	2.92	4.15	5.38	6.60	7.85							8.92	8 / 8		
reaction time	0.174	interval	1.23	1.23	1.22	1.25							1.07			3.68	
		velocity	4.70	7.43	7.43	7.49	7.31						9.08	6.73		7.45	

Dittmer, Paul (GER) (1987)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2006 German National Junior Championships (Watterscheid, GER) (99cm)***Killing (2006) - Werrmann und Dittmer im vergleich*

date	22-Jul-06	time	2.64	3.73	4.79	5.85	6.91	7.97	9.05	10.13	11.23	12.34		13.83	1 / 1		
reaction time		interval	1.09	1.06	1.06	1.06	1.06	1.08	1.08	1.10	1.11	1.49		PB		3.21	3.20
wind	0.8 m/s	velocity	5.20	8.39	8.62	8.62	8.62	8.62	8.46	8.46	8.31	8.23	9.41	7.95		8.54	8.57

Dittrich, Thomas (GDR) (1954)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 1981 USSR vs. GDR (Tbilisi, URS)***Chanon (1987) - analyse comparee des caracteristiques des courses de 100m haies et 110m haies*

date	26-Jun-81	time	2.50	3.65	4.78	5.80	6.82	7.89	9.04	10.19	11.39	12.64	13.94	/ 4			
reaction time		interval		1.15	1.13	1.02	1.02	1.07	1.15	1.15	1.20	1.25	1.30		3.30	3.24	3.60
wind	???	velocity	5.49	7.95	8.09	8.96	8.96	8.54	7.95	7.95	7.62	7.31	10.78	7.89	8.31	8.46	7.62

Doležal, Jan (CZE) (1996)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2014 Czech Republic National U20 Championships (Trinec, CZE) (99cm)										<i>Feher (2014) - Final report from the U18 & U20 Czech Republic national championships</i>							
date	28-Jun-14	time	2.74	3.89	4.99	6.09	7.20	8.34	9.45	10.58	11.75	12.96	14.52	3 / 3			
reaction time	0.157	interval		1.15	1.10	1.10	1.11	1.14	1.11	1.13	1.17	1.21	1.56		3.35	3.36	3.51
wind	-2.2 m/s	velocity	5.01	7.95	8.31	8.31	8.23	8.02	8.23	8.09	7.81	7.55	8.99	7.58	8.19	8.16	7.81

Heat 3 - 2014 Czech Republic National U20 Championships (Trinec, CZE) (99cm)										<i>Feher (2014) - Final report from the U18 & U20 Czech Republic national championships</i>							
date	28-Jun-14	time	2.75	3.87	4.97	6.07	7.19	8.33	9.45	10.60	11.77	12.92	14.52	3 / 1			
reaction time	0.254	interval		1.12	1.10	1.10	1.12	1.14	1.12	1.15	1.17	1.15	1.60		3.32	3.38	3.47
wind	-2.5 m/s	velocity	4.99	8.16	8.31	8.31	8.16	8.02	8.16	7.95	7.81	7.95	8.76	7.58	8.26	8.11	7.90

Dorival, Dudley (HAI) (1975)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Semi-Final 2 - 1999 IAAF World Championships (Sevilla, ESP)										<i>Sanchez (1999) - Sevilla '99: análisis de la carreras con villas</i>							
date	24-Aug-99	time	2.60	3.62	4.65	5.70	6.74	7.82	8.87	9.96	11.05	12.20	13.86	2 / 7			
reaction time	0.151	interval		1.02	1.03	1.05	1.04	1.08	1.05	1.09	1.09	1.15	1.66		3.10	3.17	3.33
wind	0.0 m/s	velocity	5.28	8.96	8.87	8.70	8.79	8.46	8.70	8.39	8.39	7.95	8.45	7.94	8.85	8.65	8.23

Dostražil, Tomáš (CZE) (1996)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Heat 2 - 2014 Czech Republic National U20 Championships (Trinec, CZE) (99cm)										<i>Feher (2014) - Final report from the U18 & U20 Czech Republic national championships</i>							
date	28-Jun-14	time	2.85	4.09	5.30	6.52	7.75	9.00	10.22	11.52	12.78	14.11	15.87	6 / 6			
reaction time	0.184	interval		1.24	1.21	1.22	1.23	1.25	1.22	1.30	1.26	1.33	1.76		3.67	3.70	3.89
wind	-2.9 m/s	velocity	4.81	7.37	7.55	7.49	7.43	7.31	7.49	7.03	7.25	6.87	7.97	6.93	7.47	7.41	7.05

Doucouré, Ladj (FRA) (1983)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2009 ISTAF (Berlin, GER)										<i>Graubner (2009) - http://www.fgs.uni-halle.de</i>							
date	14-Jun-09	time	2.65	3.73	4.76	5.80	6.83	7.90	8.97	10.05	11.13	12.24	13.73	7 / 7			
reaction time	0.206	interval		1.08	1.03	1.04	1.03	1.07	1.07	1.08	1.08	1.11	1.49		3.15	3.17	3.27
wind	0.7 m/s	velocity	5.18	8.46	8.87	8.79	8.87	8.54	8.54	8.46	8.46	8.23	9.41	8.01	8.70	8.65	8.39

FINAL - 2008 Olympic Games (Beijing, CHN)										<i>Tsiokanos (2018) - race pattern of men's 110m hurdles - time analysis of olympic hurdle performance</i>							
date	21-Aug-08	time	2.58	3.64	4.66	5.68	6.69	7.68	8.69	9.73	10.78	11.84	13.24	8 / 4			
reaction time	0.170	interval		1.06	1.02	1.02	1.01	0.99	1.01	1.04	1.05	1.06	1.40		3.10	3.01	3.15
wind	0.1 m/s	velocity	5.32	8.62	8.96	8.96	9.05	9.23	9.05	8.79	8.70	8.62	10.01	8.31	8.85	9.11	8.70

FINAL - 2007 IAAF World Athletics Final (Stuttgart, GER)										<i>Graubner (2007) - http://www.fgs.uni-halle.de</i>							
date	23-Sep-07	time	2.61	3.65	4.67	5.69	6.70	7.72	8.74	9.77	10.81	11.87	13.27	1 / 5			
reaction time	0.160	interval		1.04	1.02	1.02	1.01	1.02	1.02	1.03	1.04	1.06	1.40		3.08	3.05	3.13
wind	0.0 m/s	velocity	5.26	8.79	8.96	8.96	9.05	8.96	8.96	8.87	8.79	8.62	10.01	8.29	8.90	8.99	8.76

FINAL - 2007 European Cup (Munich, GER)										<i>Graubner (2007) - http://www.fgs.uni-halle.de</i>							
date	24-Jun-07	time	2.57	3.61	4.63	5.63	6.64	7.65	8.67	9.70	10.77	11.87	13.35	1 / 1			
reaction time	0.152	interval		1.04	1.02	1.00	1.01	1.01	1.02	1.03	1.07	1.10	1.48		3.06	3.04	3.20
wind	0.4 m/s	velocity	5.34	8.79	8.96	9.14	9.05	9.05	8.96	8.87	8.54	8.31	9.47	8.24	8.96	9.02	8.57

FINAL - 2005 IAAF World Championships (Helsinki, FIN)										<i>Longuevre (2005) - Helsinki 2005 - Les haies: Cinq qualifiées et un titre mondial</i>							
date	12-Aug-05	time	2.30	3.30	4.30	5.28	6.26	7.26	8.26	9.26	10.32	11.36	13.07	5 / 1			
reaction time	0.164	interval		1.00	1.00	0.98	0.98	1.00	1.00	1.00	1.06	1.04	1.71		2.98	2.98	3.10
wind	-0.2 m/s	velocity	5.97	9.14	9.14	9.33	9.33	9.14	9.14	9.14	8.62	8.79	8.20	8.42	9.20	9.20	8.85

FINAL - 2004 Olympic Games (Athens, GRE)										<i>Ruiz (2004) - las carreras con vallas de juegos olimpicos de atenas '04</i>							
date	27-Aug-04	time	2.52	3.54	4.55	5.56	6.55	7.54	8.54	9.55	10.58	11.63	13.76	3 / 8			
reaction time	0.204	interval		1.02	1.01	1.01	0.99	0.99	1.00	1.01	1.03	1.05	2.13		3.04	2.98	3.09
wind	0.3 m/s	velocity	5.44	8.96	9.05	9.05	9.23	9.23	9.14	9.05	8.87	8.70	6.58	7.99	9.02	9.20	8.87

Semi-Final 2 - 2004 Olympic Games (Athens, GRE)										<i>Liagonne (2007) - Historique: Le 110m haies en chiffres</i>							
date	26-Aug-04	time	2.48	3.50	4.49	5.48	6.48	7.46	8.48	9.48	10.50	11.56	13.06	5 / 1			
reaction time	0.200	interval		1.02	0.99	0.99	1.00	0.98	1.02	1.00	1.02	1.06	1.50	NR / PB	3.00	3.00	3.08
wind	0.0 m/s	velocity	5.53	8.96	9.23	9.23	9.14	9.33	8.96	9.14	8.96	8.62	9.35	8.42	9.14	9.14	8.90

Heat 1 - 2004 Olympic Games (Athens, GRE)										<i>Liagonne (2007) - Historique: Le 110m haies en chiffres</i>							
date	24-Aug-04	time	2.52	3.56	4.55	5.54	6.54	7.54	8.55	9.56	10.60	11.64	13.18	8 / 1			
reaction time	0.205	interval		1.04	0.99	0.99	1.00	1.00	1.01	1.01	1.04	1.04	1.54	NR / PB	3.02	3.01	3.09
wind	1.5 m/s	velocity	5.44	8.79	9.23	9.23	9.14	9.14	9.05	9.05	8.79	8.79	9.10	8.35	9.08	9.11	8.87

FINAL - 2001 European Cup (Bremen, GER)										<i>Graubner (2007) - http://www.fgs.uni-halle.de</i>							
date	24-Jun-01	time	2.70	3.78	4.82	5.84	6.86	7.91	8.98	10.03	11.17	12.44	14.02	7 / 7			
reaction time	0.164	interval		1.08	1.04	1.02	1.02	1.05	1.07	1.05	1.14	1.27	1.58		3.14	3.14	3.46
wind	1.3 m/s	velocity	5.08	8.46	8.79	8.96	8.96	8.70	8.54	8.70	8.02	7.20	8.87	7.85	8.73	8.73	7.92

		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Douglas, Chris (AUS) (1997)																		
FINAL - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)		<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>																
date	20-Mar-22	time	2.46	3.50	4.54	5.56	6.56						7.60	8 / 5				
reaction time	0.159	interval	7 steps	1.04	1.04	1.02	1.00					1.04			3.10			
		velocity	5.58	8.79	8.79	8.96	9.14					9.35	7.89		8.85			
Semi-Final 3 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)		<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>																
date	20-Mar-22	time	2.46	3.53	4.56	5.56	6.58						7.56	8 / 2				
reaction time	0.145	interval	7 steps	1.07	1.03	1.00	1.02					0.98	NR PB		3.10			
		velocity	5.58	8.54	8.87	9.14	8.96					9.92	7.94		8.85			
Douvalidis, Konstadinos (GRE) (1982)																		
Semi-Final 3 - 2019 IAAF World Championships (Doha, QAT)		<i>CAA Hurdle Development (2019)</i>																
date	02-Oct-19	time	2.65	3.71	4.75	5.77	6.81	7.86	8.92	9.99	11.05	12.13		13.54	9 / 4			
reaction time	0.198	interval	7 steps	1.06	1.04	1.02	1.04	1.05	1.06	1.07	1.06	1.08	1.41		3.12	3.15	3.21	
wind	0.6 m/s	velocity	5.18	8.62	8.79	8.96	8.79	8.70	8.62	8.54	8.62	8.46	9.94	8.12	8.79	8.70	8.54	
FINAL - 2017 Golden Spike (Ostrava, CZE) (TV Analysis)		<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>																
date	28-Jun-17	time	2.56	3.62	4.66	5.70	6.72	7.76	8.80	9.88	10.96	12.04		13.51	2 / 5			
reaction time	0.154	interval		1.06	1.04	1.04	1.02	1.04	1.04	1.08	1.08	1.08	1.47		3.14	3.10	3.24	
wind	0.6 m/s	velocity	5.36	8.62	8.79	8.79	8.96	8.79	8.79	8.46	8.46	8.46	9.54	8.14	8.73	8.85	8.46	
FINAL - 2016 Athletissima (Lausanne, SUI) (TV Analysis)		<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>																
date	25-Aug-16	time	2.58	3.66	4.70	5.74	6.76	7.80	8.86	9.92	11.00	12.10		13.69	8 / 8			
reaction time	0.136	interval		1.08	1.04	1.04	1.02	1.04	1.06	1.06	1.08	1.10	1.59		3.16	3.12	3.24	
wind	0.5 m/s	velocity	5.32	8.46	8.79	8.79	8.96	8.79	8.62	8.62	8.46	8.31	8.82	8.04	8.68	8.79	8.46	
FINAL - 2016 London Anniversary Games (London, GBR) (TV Analysis)		<i>Henson (2021) - Athlete First: 2016 year end hurdle report</i>																
date	23-Jul-16	time	2.60	3.63	4.66	5.73	6.76	7.80	8.85	9.90	10.98	12.06		13.54	7 / 3			
reaction time	0.146	interval		1.03	1.03	1.07	1.03	1.04	1.05	1.05	1.08	1.08	1.48		3.13	3.12	3.21	
wind	-1.0 m/s	velocity	5.28	8.87	8.87	8.54	8.87	8.79	8.70	8.70	8.46	8.46	9.47	8.12	8.76	8.79	8.54	
FINAL - 2016 Meeting International Mohammed VI D'Athlisme (Rabat, MAR) (TV Analysis)		<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>																
date	22-May-16	time	2.52	3.56	4.58	5.60	6.60	7.62	8.66	9.70	10.78	11.86		13.38	3 / 4			
reaction time	0.113	interval		1.04	1.02	1.02	1.00	1.02	1.04	1.04	1.08	1.08	1.52		3.08	3.06	3.20	
wind	1.4 m/s	velocity	5.44	8.79	8.96	8.96	9.14	8.96	8.79	8.79	8.46	8.46	9.22	8.22	8.90	8.96	8.57	
FINAL - 2013 European Indoor Championships (Göteborg, SWE)		<i>Blomkvist (2013) - www.elitlandslag.se/SprintHäck/KortHäck.aspx</i>																
date	01-Mar-13	time	2.62	3.68	4.72	5.76	6.78						7.64	1 / 7				
reaction time	0.153	interval		1.06	1.04	1.04	1.02					0.86			3.14			
		velocity	5.24	8.62	8.79	8.79	8.96					11.30	7.85		8.73			
FINAL - 2007 European Cup (Munich, GER)		<i>Graubner (2007) - http://www.fgs.uni-halle.de</i>																
date	24-Jun-07	time	2.63	3.70	4.74	5.79	6.83	7.91	8.97	10.03	11.10	12.20		13.63	/ 5			
reaction time	0.141	interval		1.07	1.04	1.05	1.04	1.08	1.06	1.06	1.07	1.10	1.43		3.16	3.18	3.23	
wind	0.4 m/s	velocity	5.22	8.54	8.79	8.70	8.79	8.46	8.62	8.62	8.54	8.31	9.80	8.07	8.68	8.62	8.49	
Drut, Guy (FRA) (1950)																		
FINAL - 1976 Olympic Games (Montreal, CAN)		<i>Ewen (1977) - montreal 1976</i>																
date	28-Jul-76	time	2.5	3.5	4.6	5.6	6.6	7.6	8.7	9.7	10.7	11.8		13.30	5 / 1			
reaction time		interval		1.00	1.10	1.00	1.00	1.00	1.10	1.00	1.00	1.10	1.50		3.10	3.10	3.10	
wind	0.0 m/s	velocity	5.49	9.14	8.31	9.14	9.14	9.14	8.31	9.14	9.14	8.31	9.35	8.27	8.85	8.85	8.85	
FINAL - 1972 Olympic Games (Munich, FRG)		<i>Kay (1972) - BAAB Munich Technical Report</i>																
date	07-Sep-72	time	2.5	3.6	4.6	5.6	6.6	7.7	8.7	9.7	10.7	11.8		13.34	8 / 2			
reaction time		interval		1.10	1.00	1.00	1.00	1.10	1.00	1.00	1.00	1.10	1.54		3.10	3.10	3.10	
wind	0.3 m/s	velocity	5.49	8.31	9.14	9.14	9.14	8.31	9.14	9.14	9.14	8.31	9.10	8.25	8.85	8.85	8.85	
DuBose, Jacoby (USA) (1982)																		
Heat 3 - 2007 USATF National Championships (Indianapolis, IN)		<i>USATF Men's Hurdle Development (2007)</i>																
date	23-Jun-07	time	2.79	3.90	5.01	6.10	7.22	8.34	9.44	10.58	11.71	12.85		14.37	4 / 8			
reaction time		interval		1.11	1.11	1.09	1.12	1.12	1.10	1.14	1.13	1.14	1.52		3.31	3.34	3.41	
wind	-3.2 m/s	velocity	4.92	8.23	8.23	8.39	8.16	8.16	8.31	8.02	8.09	8.02	9.22	7.65	8.28	8.21	8.04	
Dunning, Robert (USA) (1997)																		
Heat 2 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)		<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>																
date	24-Jun-24	time	2.60	3.63	4.66	5.67	6.69	7.72	8.74	9.77	10.82	11.92		13.44	9 / 5			
reaction time		interval		1.03	1.03	1.01	1.02	1.03	1.02	1.03	1.05	1.10	1.52		3.07	3.07	3.18	
wind	-0.3 m/s	velocity	5.28	8.87	8.87	9.05	8.96	8.87	8.96	8.87	8.70	8.31	9.22	8.18	8.93	8.93	8.62	
FINAL - 2024 Atlanta City Games (Atlanta, GA) (Street Race) (TV Analysis)		<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>																
date	18-May-24	time	2.55	3.61	4.65	5.68	6.68	7.71	8.71	9.75	10.81	11.90		13.40	1 / 2			
reaction time		interval	7 steps	1.06	1.04	1.03	1.00	1.03	1.00	1.04	1.06	1.09	1.50		3.13	3.03	3.19	

wind	-0.7 m/s	velocity	5.38	8.62	8.79	8.87	9.14	8.87	9.14	8.79	8.62	8.39	9.35	8.21	8.76	9.05	8.60	
Heat 1 - 2023 Kamila Skolimowska Memorial (Silesia, POL)														<i>Omega Timing (2023) - diamond league race analysis</i>				
date	16-Jul-23	time	2.51	3.59	4.63	5.65	6.66	7.67	8.69	9.72	10.76	11.81		13.38	4 / 5			
reaction time	0.140	interval	7 steps	1.08	1.04	1.02	1.01	1.01	1.02	1.03	1.04	1.05	1.57		3.14	3.04	3.12	
wind	0.3 m/s	velocity	5.47	8.46	8.79	8.96	9.05	9.05	8.96	8.87	8.79	8.70	8.93	8.22	8.73	9.02	8.79	
FINAL - 2023 USATF National Championships (Eugene, OR) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>				
date	09-Jul-23	time	2.53	3.59	4.60	5.62	6.64	7.67	8.71	9.75	10.81	11.89		13.40	2 / 7			
reaction time		interval	7 steps	1.06	1.01	1.02	1.02	1.03	1.04	1.04	1.06	1.08	1.51		3.09	3.09	3.18	
wind	-0.2 m/s	velocity	5.42	8.62	9.05	8.96	8.96	8.87	8.79	8.79	8.62	8.46	9.28	8.21	8.87	8.87	8.62	
FINAL - 2023 USATF New York City Grand Prix (Randalls Island, NY) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>				
date	24-Jun-23	time	2.53	3.57	4.61	5.61	6.62	7.64	8.66	9.68	10.74	11.83		13.29	6 / 6			
reaction time	0.181	interval	7 steps	1.04	1.04	1.00	1.01	1.02	1.02	1.02	1.06	1.09	1.46		3.08	3.05	3.17	
wind	1.6 m/s	velocity	5.42	8.79	8.79	9.14	9.05	8.96	8.96	8.96	8.62	8.39	9.60	8.28	8.90	8.99	8.65	
FINAL - 2023 USATF Bermuda Grand Prix (Devonshire, BER) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>				
date	21-May-23	time	2.56	3.62	4.63	5.63	6.66	7.66	8.68	9.76	10.83	12.00		22.28	5 / 8			
reaction time	0.152	interval	7 steps	1.06	1.01	1.00	1.03	1.00	1.02	1.08	1.07	1.17	10.28		3.07	3.05	3.32	
wind	4.0 m/s	velocity	5.36	8.62	9.05	9.14	8.87	9.14	8.96	8.46	8.54	7.81	1.36	4.94	8.93	8.99	8.26	
FINAL - 2023 Adidas Atlanta City Games (Atlanta, GA) (street) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>				
date	05-May-23	time	2.57	3.63	4.65	5.65	6.65	7.65	8.65	9.65	10.68	11.73		13.09	1 / 2			
reaction time	0.187	interval	7 steps	1.06	1.02	1.00	1.00	1.00	1.00	1.00	1.03	1.05	1.36	PB	3.08	3.00	3.08	
wind	0.0 m/s	velocity	5.34	8.62	8.96	9.14	9.14	9.14	9.14	9.14	8.87	8.70	10.31	8.40	8.90	9.14	8.90	
FINAL - 2022 USATF National Championships (Eugene, OR) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
date	26-Jun-22	time	2.53	3.55	4.57	5.59	6.61	7.61	8.61	9.64	10.67	11.74		13.27	9 / 6			
reaction time		interval	7 steps	1.02	1.02	1.02	1.02	1.00	1.00	1.03	1.03	1.07	1.53		3.06	3.02	3.13	
wind	1.2 m/s	velocity	5.42	8.96	8.96	8.96	8.96	9.14	9.14	8.87	8.87	8.54	9.16	8.29	8.96	9.08	8.76	
Semi-Final 1 - 2022 USATF National Championships (Eugene, OR)														<i>USATF (2022) - Results powered by Karmarush.com</i>				
date	26-Jun-22	time	2.55	3.59	4.62	5.62	6.66	7.71	8.73	9.77	10.82	11.88		13.38	2 / 4			
reaction time		interval		1.04	1.03	1.00	1.04	1.05	1.02	1.04	1.05	1.06	1.50		3.07	3.11	3.15	
wind	0.4 m/s	velocity	5.38	8.79	8.87	9.14	8.79	8.70	8.96	8.79	8.70	8.62	9.35	8.22	8.93	8.82	8.70	
FINAL - 2022 New Balance Indoor Grand Prix (Staten Island, NY) (TV Analysis)														<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>				
date	06-Feb-22	time	2.55	3.64	4.70	5.74	6.85							7.82	7 / 8			
reaction time	0.179	interval	7 steps	1.09	1.06	1.04	1.11						0.97		3.19			
		velocity	5.38	8.39	8.62	8.79	8.23						10.02	7.67	8.60			
FINAL - 2021 Müller British Grand Prix (Gateshead, GBR) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>				
date	13-Jul-21	time	2.60	3.62	4.72	5.76	6.82	7.88	8.92	10.00	11.08	12.18		13.71	6 / 4			
reaction time	0.130	interval	7 steps	1.02	1.10	1.04	1.06	1.06	1.04	1.08	1.08	1.10	1.53		3.16	3.16	3.26	
wind	0.8 m/s	velocity	5.28	8.96	8.31	8.79	8.62	8.62	8.79	8.46	8.46	8.31	9.16	8.02	8.68	8.68	8.41	
FINAL - 2021 NCAA Championships (Eugene, OR) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>				
date	11-Jun-21	time	2.53	3.57	4.60	5.62	6.60	7.63	8.63	9.65	10.69	11.75		13.25	2 / 1			
reaction time	0.161	interval	7 steps	1.04	1.03	1.02	0.98	1.03	1.00	1.02	1.04	1.06	1.50		3.09	3.01	3.12	
wind	-0.6 m/s	velocity	5.42	8.79	8.87	8.96	9.33	8.87	9.14	8.96	8.79	8.62	9.35	8.30	8.87	9.11	8.79	
FINAL - 2019 The Match - Europe v USA (Minsk, BLR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>				
date	10-Sep-19	time	2.60	3.68	4.73	5.80	6.85	7.91	8.95	10.03	11.13	12.28		13.86	2 / 7			
reaction time	0.183	interval	7 steps	1.08	1.05	1.07	1.05	1.06	1.04	1.08	1.10	1.15	1.58		3.20	3.15	3.33	
wind	0.1 m/s	velocity	5.28	8.46	8.70	8.54	8.70	8.62	8.79	8.46	8.31	7.95	8.87	7.94	8.57	8.70	8.23	
Dutch, Johnny (USA) (1989)																		
FINAL - 2007 USATF National Junior Championships (Indianapolis, IN) (99cm)														<i>USATF Men's Hurdle Development (2007)</i>				
date	21-Jun-07	time	2.64	3.67	4.70	5.69	6.67	7.67	8.68	9.74	10.81	11.88		13.36	1 / 2			
reaction time		interval		1.03	1.03	0.99	0.98	1.00	1.01	1.06	1.07	1.07	1.48		3.05	2.99	3.20	
wind	2.7 m/s	velocity	5.20	8.87	8.87	9.23	9.33	9.14	9.05	8.62	8.54	8.54	9.47	8.23	8.99	9.17	8.57	
Eaton, Ashton (USA) (1988)																		
Decathlon - Heat 2 - 2010 NCAA National Championships (Eugene, OR)														<i>Deca Newsletter (2010) - eaton on ncaa three-peat</i>				
date	01-Jun-10	time	2.4	3.5	4.7	5.7	6.7	7.7	8.8	9.9	11.1	12.1		13.68	6 / 1			
reaction time		interval		1.10	1.20	1.00	1.00	1.00	1.10	1.10	1.20	1.00	1.58		3.30	3.10	3.30	
wind	1.6 m/s	velocity	5.72	8.31	7.62	9.14	9.14	9.14	8.31	8.31	7.62	9.14	8.87	8.04	8.31	8.85	8.31	
Decathlon - Heat 2 - 2009 IAAF World Championships (Berlin, GER)														<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>				
date	20-Aug-09	time	2.70	3.79	4.87	5.97	7.07	8.17	9.27	10.45	11.61	12.75		14.28	5 / 5			
reaction time	0.178	interval		1.09	1.08	1.10	1.10	1.10	1.10	1.18	1.16	1.14	1.53		3.27	3.30	3.48	
wind	0.3 m/s	velocity	5.08	8.39	8.46	8.31	8.31	8.31	8.31	7.75	7.88	8.02	9.16	7.70	8.39	8.31	7.88	

Eaton, Jarret (USA) (1989)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)		<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>															
date	20-Mar-22	time	2.46	3.48	4.52	5.52	6.54						7.53	6 / 3			
reaction time	0.166	interval	7 steps	1.02	1.04	1.00	1.02					0.99			3.06		
		velocity	5.58	8.96	8.79	9.14	8.96					9.82	7.97		8.96		
Semi-Final 1 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)		<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>															
date	20-Mar-22	time	2.43	3.46	4.46	5.48	6.50						7.52	4 / 1			
reaction time	0.134	interval	7 steps	1.03	1.00	1.02	1.02					1.02			3.05		
		velocity	5.65	8.87	9.14	8.96	8.96					9.53	7.98		8.99		
Heat 1 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)		<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>															
date	20-Mar-22	time	2.56	3.63	4.63	5.65	6.66						7.66	8 / 2			
reaction time	0.128	interval	7 steps	1.07	1.00	1.02	1.01					1.00			3.09		
		velocity	5.36	8.54	9.14	8.96	9.05					9.72	7.83		8.87		
FINAL - 2022 Müller Indoor Grand Prix (Birmingham, GBR) (TV Analysis)		<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>															
date	19-Feb-22	time	2.46	3.49	4.51	5.52	6.53						7.60	6 / 3			
reaction time	0.154	interval	7 steps	1.03	1.02	1.01	1.01					1.07			3.06		
		velocity	5.58	8.87	8.96	9.05	9.05					9.08	7.89		8.96		
FINAL - 2022 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)		<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>															
date	17-Feb-22	time	2.43	3.44	4.44	5.44	6.46						7.51	5 / 3			
reaction time	0.146	interval	7 steps	1.01	1.00	1.00	1.02					1.05			3.01		
		velocity	5.65	9.05	9.14	9.14	8.96					9.26	7.99		9.11		
FINAL - 2020 USA Olympic Trials (Eugene, OR) (TV Analysis)		<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>															
date	26-Jun-21	time	2.47	3.50	4.50	5.54	6.54	7.57	8.64	9.71	10.84	11.98	13.64	1 / 8			
reaction time	0.137	interval	7 steps	1.03	1.00	1.04	1.00	1.03	1.07	1.07	1.13	1.14	1.66		3.07	3.10	3.34
wind	0.4 m/s	velocity	5.55	8.87	9.14	8.79	9.14	8.87	8.54	8.54	8.09	8.02	8.45	8.06	8.93	8.85	8.21
Semi-Final 2 - 2020 USA Olympic Trials (Eugene, OR) (TV Analysis)		<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>															
date	26-Jun-21	time	2.50	3.56	4.53	5.54	6.55	7.60	8.60	9.63	10.70	11.80	13.32	3 / 4			
reaction time	0.157	interval	7 steps	1.06	0.97	1.01	1.01	1.05	1.00	1.03	1.07	1.10	1.52		3.04	3.06	3.20
wind	1.2 m/s	velocity	5.49	8.62	9.42	9.05	9.05	8.70	9.14	8.87	8.54	8.31	9.22	8.26	9.02	8.96	8.57
FINAL - 2021 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)		<i>Henson (2021) - men's 60m hurdles world record season - Grant Holloway</i>															
date	09-Feb-21	time	2.50	3.52	4.55	5.59	6.62						7.60	6 / 6			
reaction time	0.140	interval	7 steps	1.02	1.03	1.04	1.03					0.98			3.09		
		velocity	5.49	8.96	8.87	8.79	8.87					9.92	7.89		8.87		
Heat 1 - 2021 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)		<i>Henson (2021) - men's 60m hurdles world record season - Grant Holloway</i>															
date	09-Feb-21	time	2.37	3.40	4.43	5.46	6.49						7.55	4 / 2			
reaction time	0.161	interval	7 steps	1.03	1.03	1.03	1.03					1.06			3.09		
		velocity	5.79	8.87	8.87	8.87	8.87					9.17	7.95		8.87		
FINAL - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)		<i>CAA Hurdle Development (2020)</i>															
date	15-Feb-20	time	2.55	3.57	4.60	5.62	6.65						7.57	4 / 2			
reaction time	0.155	interval	7 Steps	1.02	1.03	1.02	1.03					0.92			3.07		
		velocity	5.38	8.96	8.87	8.96	8.87					10.57	7.93		8.93		
Semi-Final 1 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)		<i>CAA Hurdle Development (2020)</i>															
date	15-Feb-20	time	2.58	3.62	4.63	5.65	6.70						7.63	4 / 1			
reaction time	0.148	interval	7 Steps	1.04	1.01	1.02	1.05					0.93			3.07		
		velocity	5.32	8.79	9.05	8.96	8.70					10.45	7.86		8.93		
Heat 2 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)		<i>CAA Hurdle Development (2020)</i>															
date	14-Feb-20	time	2.62	3.67	4.69	5.74	6.81						7.74	3 / 1			
reaction time	0.154	interval	7 Steps	1.05	1.02	1.05	1.07					0.93			3.12		
		velocity	5.24	8.70	8.96	8.70	8.54					10.45	7.75		8.79		
FINAL - 2019 The Match - Europe v USA (Minsk, BLR) (TV Analysis)		<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>															
date	10-Sep-19	time	2.73	3.93	5.13	6.33	7.60	8.76	10.00	11.22	12.43	13.73	15.54	8 / 8			
reaction time	0.180	interval	7 steps	1.20	1.20	1.20	1.27	1.16	1.24	1.22	1.21	1.30	1.81		3.60	3.67	3.73
wind	0.1 m/s	velocity	5.03	7.62	7.62	7.62	7.20	7.88	7.37	7.49	7.55	7.03	7.75	7.08	7.62	7.47	7.35
FINAL - 2019 USATF National Championships (Des Moines, IA) (TV Analysis)		<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>															
date	28-Jul-19	time	2.50	3.54	4.54	5.57	6.57	7.60	8.64	9.71	10.81	11.93	13.51	1 / 6			
reaction time		interval	7 steps	1.04	1.00	1.03	1.00	1.03	1.04	1.07	1.10	1.12	1.58		3.07	3.07	3.29
wind	-0.8 m/s	velocity	5.49	8.79	9.14	8.87	9.14	8.87	8.79	8.54	8.31	8.16	8.87	8.14	8.93	8.93	8.33
FINAL - 2019 Müller Indoor Grand Prix (Birmingham, GBR) (TV Analysis)		<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>															

date 16-Feb-19 time 2.50 3.54 4.54 5.54 6.56
 reaction time 0.136 interval 7 steps 1.04 1.00 1.00 1.02
 velocity 5.49 8.79 9.14 9.14 8.96

7.51 4 / 1
 0.95 3.04
 10.23 7.99 9.02

FINAL - 2018 Meeting de Paris (Paris, FRA) (TV Analysis)*Henson (2020) - Athlete First: 2018 year end hurdle report*

date 30-Jun-18 time 2.44 3.48 4.52 5.54 6.54 7.58 8.60 9.64 10.74 11.84
 reaction time 0.129 interval 7 steps 1.04 1.04 1.02 1.00 1.04 1.02 1.04 1.10 1.10 1.56
 wind 1.5 m/s velocity 5.62 8.79 8.79 8.96 9.14 8.79 8.96 8.79 8.31 8.31 8.99 8.21

13.40 2 / 5
 3.10 3.06 3.24
 8.85 8.96 8.46

FINAL - 2018 USATF Championships (Des Moines, IA) (TV Analysis)*Henson (2020) - Athlete First: 2018 year end hurdle report*

date 24-Jun-18 time 2.47 3.50 4.52 5.54 6.56 7.56 8.60 9.68 10.76 11.88
 reaction time interval 7 steps 1.03 1.02 1.02 1.02 1.00 1.04 1.08 1.08 1.12 1.63
 wind -1.8 m/s velocity 5.55 8.87 8.96 8.96 8.96 9.14 8.79 8.46 8.46 8.16 8.60 8.14

13.51 7 / 3
 3.07 3.06 3.28
 8.93 8.96 8.36

FINAL - 2018 IAAF World Indoor Championships (Birmingham, GBR) Walker (2019). Biomechanical Report for the IAAF World Indoor Championships 2018: 60 Metres Hurdles Men

date 04-Mar-18 time 2.47 3.49 4.51 5.50 6.52
 reaction time 0.129 interval 7 steps 1.02 1.02 0.99 1.02
 velocity 5.55 8.96 8.96 9.23 8.96

7.47 7 / 2
 0.95 3.03
 10.23 8.03 9.05

FINAL - 2017 Galà dei Castelli (Bellinzona, SU)*(2017.07.18) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en*

date 18-Jul-17 time 2.53 3.58 4.59 5.59 6.62 7.67 8.71 9.78 10.87 12.01
 reaction time interval 7 steps 1.05 1.01 1.00 1.03 1.05 1.04 1.07 1.09 1.14 1.51
 wind -0.6 m/s velocity 5.42 8.70 9.05 9.14 8.87 8.70 8.79 8.54 8.39 8.02 9.28 8.14

13.52 3 / 2
 3.06 3.12 3.30
 8.96 8.79 8.31

FINAL - 2017 Müller's Anniversary Games (London, GBR) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date 09-Jul-17 time 2.44 3.48 4.48 5.48 6.48 7.52 8.56 9.62 10.72 11.80
 reaction time 0.125 interval 7 steps 1.04 1.00 1.00 1.00 1.04 1.04 1.06 1.10 1.08 1.54
 wind 0.0 m/s velocity 5.62 8.79 9.14 9.14 9.14 8.79 8.79 8.62 8.31 8.46 9.10 8.25

13.34 9 / 5
 3.04 3.08 3.24
 9.02 8.90 8.46

FINAL - 2017 Drake Relays (Des Moines, IA) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date 29-Apr-17 time 2.50 3.56 4.60 5.60 6.64 7.68 8.76 9.86 10.96 12.10
 reaction time interval 7 steps 1.06 1.04 1.00 1.04 1.04 1.08 1.10 1.10 1.14 1.58
 wind 1.8 m/s velocity 5.49 8.62 8.79 9.14 8.79 8.79 8.46 8.31 8.31 8.02 8.87 8.04

13.68 2 / 8
 3.10 3.16 3.34
 8.85 8.68 8.21

FINAL - 2016 Memorial van Damme (Brussels, BEL) (TV Analysis)*Henson (2020) - Athlete First: 2016 year end hurdle report*

date 09-Sep-16 time 2.50 3.57 4.60 5.60 6.62 7.66 8.72 9.77 10.83 11.94
 reaction time 0.181 interval 7 steps 1.07 1.03 1.00 1.02 1.04 1.06 1.05 1.06 1.11 1.60
 wind 0.2 m/s velocity 5.49 8.54 8.87 9.14 8.96 8.79 8.62 8.70 8.62 8.23 8.76 8.12

13.54 9 / 8
 3.10 3.12 3.22
 8.85 8.79 8.52

FINAL - 2016 USA Olympic Trials (Eugene, OR) (TV Analysis)*Henson (2020) - Athlete First: 2016 year end hurdle report*

date 09-Jul-16 time 2.47 3.47 4.47 5.47 6.45 7.47 8.49 9.51 10.61 11.71
 reaction time 0.196 interval 7 steps 1.00 1.00 1.00 0.98 1.02 1.02 1.02 1.10 1.10 1.59
 wind 1.0 m/s velocity 5.55 9.14 9.14 9.14 9.33 8.96 8.96 8.96 8.31 8.31 8.82 8.27

13.30 2 / 6
 3.00 3.02 3.22
 9.14 9.08 8.52

FINAL - 2016 Racers Grand Prix (Kingston, JAM) (TV Analysis)*Henson (2020) - Athlete First: 2016 year end hurdle report*

date 11-Jun-16 time 2.43 3.46 4.46 5.48 6.50 7.50 8.53 9.56 10.63 11.70
 reaction time interval 7 steps 1.03 1.00 1.02 1.02 1.00 1.03 1.03 1.07 1.07 1.58
 wind 0.2 m/s velocity 5.65 8.87 9.14 8.96 8.96 9.14 8.87 8.87 8.54 8.54 8.87 8.28

13.28 5 / 3
 3.05 3.05 3.17
 8.99 8.99 8.65

FINAL - 2016 Prefontaine Classic (Eugene, OR) (TV Analysis)*Henson (2021) - Athlete First: 2016 year end hurdle report*

date 28-May-16 time 2.44 3.48 4.52 5.54 6.56 7.60 8.66 9.72 10.82 11.94
 reaction time interval 7 steps 1.04 1.04 1.02 1.02 1.04 1.06 1.06 1.10 1.12 1.58
 wind 0.7 m/s velocity 5.62 8.79 8.79 8.96 8.96 8.79 8.62 8.62 8.31 8.16 8.87 8.14

13.52 7 / 5
 3.10 3.12 3.28
 8.85 8.79 8.36

FINAL - 2012 Prefontaine Classic (Eugene, OR) (TV Analysis)*Henson (2020) - Athlete First: 2012 Aries Merritt world record season*

date 02-Jun-12 time 2.56 3.60 4.64 5.66 6.68 7.72 8.76 9.78 10.82 11.90
 reaction time 0.168 interval 7 steps 1.04 1.04 1.02 1.02 1.04 1.04 1.04 1.02 1.04 1.44
 wind 2.4 m/s velocity 5.36 8.79 8.79 8.96 8.96 8.79 8.79 8.96 8.79 8.46 9.74 8.25

13.34 1 / 7
 3.10 3.10 3.14
 8.85 8.85 8.73

Edwards, Eric (USA) (2000)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

FINAL - 2024 Memorial van damme (Brussels, BEL)*Omega Timing (2024) - diamond league race analysis*

date 13-Sep-24 time 2.39 3.48 4.51 5.54 6.56 7.57 8.61 9.65 10.71 11.77
 reaction time 0.128 interval 1.09 1.03 1.03 1.02 1.01 1.04 1.04 1.06 1.06 1.58
 wind 0.4 m/s velocity 5.74 8.39 8.87 8.87 8.96 9.05 8.79 8.79 8.62 8.62 8.87 8.24

13.35 1 / 7
 3.15 3.07 3.16
 8.70 8.93 8.68

FINAL - 2024 Golden Gala • Pietro Mennea (Roma, ITA)*Omega Timing (2024) - diamond league race analysis*

date 30-Aug-24 time 2.39 3.46 4.51 5.53 6.55 7.57 8.59 9.63 10.68 11.73
 reaction time 0.130 interval 1.07 1.05 1.02 1.02 1.02 1.02 1.04 1.05 1.05 1.56
 wind 0.4 m/s velocity 5.74 8.54 8.70 8.96 8.96 8.96 8.96 8.79 8.70 8.70 8.99 8.28

13.29 8 / 4
 3.14 3.06 3.14
 8.73 8.96 8.73

Semi-Final 2 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)*Henson (2024) - Athlete First: 2024 year end hurdle report*

date 27-Jun-24 time 2.59 3.63 4.67 5.70 6.70 7.70 8.73 9.80 10.86 11.93
 reaction time interval 1.04 1.04 1.03 1.00 1.00 1.03 1.07 1.06 1.07 1.43

13.36 8 / 4
 3.11 3.03 3.20

wind	-0.2 m/s	velocity	5.30	8.79	8.79	8.87	9.14	9.14	8.87	8.54	8.62	8.54	9.80	8.23	8.82	9.05	8.57
Heat 2 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)														<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>			
date	24-Jun-24	time	2.63	3.66	4.72	5.74	6.74	7.77	8.79	9.82	10.85	11.92	13.37	8 / 4			
reaction time		interval		1.03	1.06	1.02	1.00	1.03	1.02	1.03	1.03	1.07	1.45		3.11	3.05	3.13
wind	-0.3 m/s	velocity	5.22	8.87	8.62	8.96	9.14	8.87	8.96	8.87	8.87	8.54	9.67	8.23	8.82	8.99	8.76
FINAL - 2024 Yangtze River Delta Athletics Diamond Gala (Suzhou, CHN) (TV Analysis)														<i>Omega Timing (2024) - diamond league race analysis</i>			
date	27-Apr-24	time	2.54	3.59	4.64	5.65	6.67	7.68	8.70	9.77	10.86	11.97	13.37	7 / 5			
reaction time	0.139	interval		1.05	1.05	1.01	1.02	1.01	1.02	1.07	1.09	1.11	1.40		3.11	3.05	3.27
wind	0.8 m/s	velocity	5.40	8.70	8.70	9.05	8.96	9.05	8.96	8.54	8.39	8.23	10.01	8.23	8.82	8.99	8.39
FINAL - 2024 Xiamen Diamond League (Xiamen, CHN)														<i>Omega Timing (2024) - diamond league race analysis</i>			
date	20-Apr-24	time	2.42	3.47	4.50	5.51	6.54	7.57	8.59	9.63	10.68	11.75	13.31	9 / 5			
reaction time	0.143	interval		1.05	1.03	1.01	1.03	1.03	1.02	1.04	1.05	1.07	1.56		3.09	3.08	3.16
wind	-0.3 m/s	velocity	5.67	8.70	8.87	9.05	8.87	8.87	8.96	8.79	8.70	8.54	8.99	8.26	8.87	8.90	8.68
FINAL - 2023 Weltklasse (Zürich, SUI)														<i>Omega Timing (2023) - diamond league race analysis</i>			
date	31-Aug-23	time	2.36	3.43	4.47	5.49	6.50	7.54	8.57	9.61	10.70	11.83	13.45	6 / 3			
reaction time	0.125	interval		1.07	1.04	1.02	1.01	1.04	1.03	1.04	1.09	1.13	1.62		3.13	3.08	3.26
wind	-0.1 m/s	velocity	5.81	8.54	8.79	8.96	9.05	8.79	8.87	8.79	8.39	8.09	8.65	8.18	8.76	8.90	8.41
FINAL - 2023 Kamila Skolimowska Memorial (Silesia, POL)														<i>Omega Timing (2023) - diamond league race analysis</i>			
date	16-Jul-23	time	2.38	3.46	4.51	5.57	6.61	7.65	8.69	9.75	10.82	11.92	13.54	9 / 6			
reaction time	0.130	interval		1.08	1.05	1.06	1.04	1.04	1.04	1.06	1.07	1.10	1.62		3.19	3.12	3.23
wind	0.3 m/s	velocity	5.76	8.46	8.70	8.62	8.79	8.79	8.79	8.62	8.54	8.31	8.65	8.12	8.60	8.79	8.49
Heat 1 - 2023 Kamila Skolimowska Memorial (Silesia, POL)														<i>Omega Timing (2023) - diamond league race analysis</i>			
date	16-Jul-23	time	3.46	4.50	5.53	6.57	7.62	8.64	9.68	10.73	11.80	13.36	3 / 4				
reaction time	0.137	interval		1.04	1.03	1.04	1.05	1.02	1.04	1.05	1.07	1.56			3.11	3.16	
wind	0.3 m/s	velocity	6.61	8.79	8.87	8.79	8.70	8.96	8.79	8.70	8.54	8.99	8.23		8.82	8.68	
FINAL - 2023 USATF National Championships (Eugene, OR) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>			
date	09-Jul-23	time	2.53	3.58	4.60	5.60	6.62	7.65	8.68	9.71	10.75	11.81	13.26	1 / 4			
reaction time		interval		1.05	1.02	1.00	1.02	1.03	1.03	1.03	1.04	1.06	1.45		3.07	3.08	3.13
wind	-0.2 m/s	velocity	5.42	8.70	8.96	9.14	8.96	8.87	8.87	8.87	8.79	8.62	9.67	8.30	8.93	8.90	8.76
FINAL - 2023 USATF New York City Grand Prix (Randalls Island, NY) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>			
date	24-Jun-23	time	2.50	3.54	4.59	5.61	6.62	7.64	8.67	9.71	10.76	11.83	13.23	8 / 4			
reaction time	0.127	interval		1.04	1.05	1.02	1.01	1.02	1.03	1.04	1.05	1.07	1.40		3.11	3.06	3.16
wind	1.6 m/s	velocity	5.49	8.79	8.70	8.96	9.05	8.96	8.87	8.79	8.70	8.54	10.01	8.31	8.82	8.96	8.68
FINAL - 2023 Meeting de Paris (Paris, FRA)														<i>Omega Timing (2023) - diamond league race analysis</i>			
date	09-Jun-23	time	2.32	3.39	4.42	5.45	6.48	7.51	8.55	9.58	10.65	11.72	13.32	1 / 8			
reaction time	0.130	interval		1.07	1.03	1.03	1.03	1.03	1.04	1.03	1.07	1.07	1.60		3.13	3.10	3.17
wind	-0.5 m/s	velocity	5.91	8.54	8.87	8.87	8.87	8.87	8.79	8.87	8.54	8.54	8.76	8.26	8.76	8.85	8.65
Heat 1 - 2023 Meeting de Paris (Paris, FRA)														<i>Omega Timing (2023) - diamond league race analysis</i>			
date	09-Jun-23	time	2.39	3.46	4.50	5.53	6.56	7.60	8.64	9.69	10.75	11.81	13.39	2 / 4			
reaction time	0.149	interval		1.07	1.04	1.03	1.03	1.04	1.04	1.05	1.06	1.06	1.58		3.14	3.11	3.17
wind	-2.0 m/s	velocity	5.74	8.54	8.79	8.87	8.87	8.79	8.79	8.70	8.62	8.62	8.87	8.22	8.73	8.82	8.65
FINAL - 2023 FBK Games (Hengelo, NED) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>			
date	04-Jun-23	time	2.56	3.60	4.64	5.67	6.70	7.73	8.76	9.80	10.83	11.93	13.29	3 / 3			
reaction time	0.129	interval		1.04	1.04	1.03	1.03	1.03	1.03	1.04	1.03	1.10	1.36		3.11	3.09	3.17
wind	0.4 m/s	velocity	5.36	8.79	8.79	8.87	8.87	8.87	8.87	8.79	8.87	8.31	10.31	8.28	8.82	8.87	8.65
FINAL - 2023 USATF Bermuda Grand Prix (Devonshire, BER) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>			
date	21-May-23	time	2.53	3.56	4.56	5.56	6.56	7.56	8.56	9.60	10.64	11.70	13.07	2 / 2			
reaction time	0.122	interval		1.03	1.00	1.00	1.00	1.00	1.00	1.04	1.04	1.06	1.37		3.03	3.00	3.14
wind	4.0 m/s	velocity	5.42	8.87	9.14	9.14	9.14	9.14	9.14	8.79	8.79	8.62	10.23	8.42	9.05	9.14	8.73
FINAL - 2022 USATF National Championships (Eugene, OR) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>			
date	26-Jun-22	time	2.57	3.63	4.70	5.74	6.78	7.82	8.87	9.94	11.02	12.11	13.76	8 / 7			
reaction time		interval		1.06	1.07	1.04	1.04	1.04	1.05	1.07	1.08	1.09	1.65		3.17	3.13	3.24
wind	1.2 m/s	velocity	5.34	8.62	8.54	8.79	8.79	8.79	8.70	8.54	8.46	8.39	8.50	7.99	8.65	8.76	8.46
Semi-Final 1 - 2022 USATF National Championships (Eugene, OR)														<i>USATF (2022) - Results powered by Karmarush.com</i>			
date	26-Jun-22	time	2.42	3.45	4.53	5.51	6.54	7.60	8.61	9.64	10.56	11.66	13.29	5 / 3			
reaction time		interval		1.03	1.08	0.98	1.03	1.06	1.01	1.03	0.92	1.10	1.63		3.09	3.10	3.05
wind	0.4 m/s	velocity	5.67	8.87	8.46	9.33	8.87	8.62	9.05	8.87	9.93	8.31	8.60	8.28	8.87	8.85	8.99
FINAL - 2022 NCAA Championships (Eugene, OR) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>			

date	10-Jun-22	time	2.44	3.47	4.47	5.46	6.46	7.46	8.47	9.49	10.53	11.61		13.15	6 / 2					
reaction time		interval		1.03	1.00	0.99	1.00	1.00	1.01	1.02	1.04	1.08	1.54	PB		3.02	3.01	3.14		
wind	0.0 m/s	velocity	5.62	8.87	9.14	9.23	9.14	9.14	9.05	8.96	8.79	8.46	9.10	8.37		9.08	9.11	8.73		
Efremov, David (KAZ) (1999)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10				
FINAL - 2019 Asian Grand Prix 2 (Chongqing, CHN)																				
<i>CAA Hurdle Development (2019)</i>																				
date	07-Jun-19	time	2.66	3.75	4.78	5.84	6.90	7.95	9.02	10.12	11.20	12.32		13.81	8 / 4					
reaction time	0.186	interval	7 steps	1.09	1.03	1.06	1.06	1.05	1.07	1.10	1.08	1.12	1.49	PB		3.18	3.18	3.30		
wind	1.2 m/s	velocity	5.16	8.39	8.87	8.62	8.62	8.70	8.54	8.31	8.46	8.16	9.41	7.97		8.62	8.62	8.31		
FINAL - 2019 Asian Grand Prix 1 (Chongqing, CHN)																				
<i>CAA Hurdle Development (2019)</i>																				
date	04-Jun-19	time	2.65	3.70	4.77	5.79	6.87	7.95	9.05	10.16	11.26	12.39		13.91	9 / 4					
reaction time	0.174	interval	7 steps	1.05	1.07	1.02	1.08	1.08	1.10	1.11	1.10	1.13	1.52			3.14	3.26	3.34		
wind	-0.3 m/s	velocity	5.18	8.70	8.54	8.96	8.46	8.46	8.31	8.23	8.31	8.09	9.22	7.91		8.73	8.41	8.21		
FINAL - 2019 Asian Athletics Championships (Doha, QAT)																				
<i>CAA Hurdle Development (2019)</i>																				
date	24-Apr-19	time	2.65	3.72	4.76	5.81	6.82	7.89	8.96	10.03	11.13	12.25		13.83	3 / 6					
reaction time	0.168	interval	7 steps	1.07	1.04	1.05	1.01	1.07	1.07	1.07	1.10	1.12	1.58	PB		3.16	3.15	3.29		
wind	1.7 m/s	velocity	5.18	8.54	8.79	8.70	9.05	8.54	8.54	8.54	8.31	8.16	8.87	7.95		8.68	8.70	8.33		
Eida, Ryusei (JPN) (2000)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10				
FINAL - 2018 Japanese National High School Championships (Nagoya, JPN) (99cm)																				
<i>99cm (2018) - 71st high school championships: JAF scientific committee - biomechanics data collection</i>																				
date	06-Aug-18	time	2.70	3.83	4.94	6.06	7.18	8.32	9.47	10.60	11.76	12.89		14.35	7 / 7					
reaction time		interval		1.13	1.11	1.12	1.12	1.14	1.15	1.13	1.16	1.13	1.46			3.36	3.41	3.42		
wind	1.6 m/s	velocity	5.08	8.09	8.23	8.16	8.16	8.02	7.95	8.09	7.88	8.09	9.60	7.67		8.16	8.04	8.02		
English, Andre (USA) (1984)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10				
FINAL - 2003 USATF National Junior Championships (Palo Alto, CA) (99cm)																				
<i>USATF Women's Sprint Development (2003)</i>																				
date	22-Jun-03	time	2.63	3.75	4.89	6.01	7.12	8.24	9.39	10.54	11.69	12.85		14.52	9 / 8					
reaction time		interval		1.12	1.14	1.12	1.11	1.12	1.15	1.15	1.15	1.16	1.67			3.38	3.38	3.46		
wind	-0.4 m/s	velocity	5.22	8.16	8.02	8.16	8.23	8.16	7.95	7.95	7.95	7.88	8.40	7.58		8.11	8.11	7.92		
Erm, Johannes (EST) (1998)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10				
Decathlon - Heat 2 - 2024 Olympic Games (Paris, FRA)																				
<i>Paris 2024 Olympic Games - Results Book (2024)</i>																				
date	03-Aug-24	time	2.63	3.77	4.89	5.99	7.07	8.15	9.27	10.38	11.53	12.68		14.35	7 / 3					
reaction time	0.208	interval	7 steps	1.14	1.12	1.10	1.08	1.08	1.12	1.11	1.15	1.15	1.67			3.36	3.28	3.41		
wind	0.2 m/s	velocity	5.22	8.02	8.16	8.31	8.46	8.46	8.16	8.23	7.95	7.95	8.40	7.67		8.16	8.36	8.04		
Ewen, Tim (AUS) (1977)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10				
FINAL - 2002 IAAF World Cup (Madrid, ESP)																				
<i>Sanchez (2002) - copa del mundo de Madrid '02: análisis de la carreras con villas</i>																				
date	21-Sep-02	time	2.69	3.78	4.85	5.93	6.97	8.03	9.13	10.22	11.31	12.42		14.10	8 / 7					
reaction time	0.140	interval		1.09	1.07	1.08	1.04	1.06	1.10	1.09	1.09	1.11	1.68			3.24	3.20	3.29		
wind	-2.2 m/s	velocity	5.10	8.39	8.54	8.46	8.79	8.62	8.31	8.39	8.39	8.23	8.35	7.80		8.46	8.57	8.33		
Faragona, Alessandro (ITA) (1995)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10				
FINAL - 2012 Italian National Indoor Youth Championships (Ancona, ITA) (91cm)																				
<i>FIDAL - Centro Studi & Ricerche (2012) - www.youtube.com/watch?v=SIDALf6RdBY</i>																				
date	18-Feb-12	time	2.68	3.78	4.83	5.87	6.93							7.93	4 / 1					
reaction time		interval	7 steps	1.10	1.05	1.04	1.06							1.00	PB			3.19		
		velocity	5.12	8.31	8.70	8.79	8.62							9.72	7.57			8.60		
Fareed, Naim (USA) (1996)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10				
Semi-Final 2 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)																				
<i>CAA Hurdle Development (2020)</i>																				
date	15-Feb-20	time	2.63	3.72	4.80	5.86	6.96							7.95	1 / 7					
reaction time	0.136	interval		1.09	1.08	1.06	1.10							0.99				3.23		
		velocity	5.22	8.39	8.46	8.62	8.31							9.82	7.55			8.49		
Heat 1 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)																				
<i>CAA Hurdle Development (2020)</i>																				
date	14-Feb-20	time	2.64	3.70	4.79	5.86	6.99							7.94	7 / 5					
reaction time	0.153	interval		1.06	1.09	1.07	1.13							0.95				3.22		
		velocity	5.20	8.62	8.39	8.54	8.09							10.23	7.56			8.52		
Faulk, Dexter (USA) (1984)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10				
FINAL - 2012 USA Olympic Trials (Eugene, OR)																				
<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>																				
date	30-Jun-12	time	2.42	3.46	4.48	5.50	6.56	7.60	8.62	9.64	10.69	11.74		13.23	8 / 6					
reaction time	0.142	interval		1.04	1.02	1.02	1.06	1.04	1.02	1.02	1.05	1.05	1.49					3.08	3.12	3.12
wind	1.2 m/s	velocity	5.67	8.79	8.96	8.96	8.62	8.79	8.96	8.96	8.70	8.70	9.41	8.31				8.90	8.79	8.79
FINAL - 2012 Prefontaine Classic (Eugene, OR) (TV Analysis)																				
<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>																				
date	02-Jun-12	time	2.52	3.56	4.58	5.60	6.60	7.60	8.62	9.64	10.66	11.74		13.12	7 / 4					
reaction time	0.143	interval		1.04	1.02	1.02	1.00	1.00	1.02	1.02	1.02	1.08	1.38					3.08	3.02	3.12
wind	2.4 m/s	velocity	5.44	8.79	8.96	8.96	9.14	9.14	8.96	8.96	8.96	8.46	10.16	8.38				8.90	9.08	8.79
FINAL - 2012 Golden Grand Prix (Shanghai, CHN) (TV Analysis)																				
<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>																				

date	19-May-12	time	2.52	3.58	4.62	5.64	6.66	7.70	8.74	9.80	10.86	11.94	13.43	2 / 5															
reaction time	0.177	interval		1.06	1.04	1.02	1.02	1.04	1.04	1.06	1.06	1.08	1.49		3.12	3.10	3.20												
wind	0.4 m/s	velocity	5.44	8.62	8.79	8.96	8.96	8.79	8.79	8.62	8.62	8.46	9.41	8.19	8.79	8.85	8.57												
FINAL - 2009 ISTAF (Berlin, GER)														<i>Graubner (2009) - http://www.fgs.uni-halle.de</i>															
date	14-Jun-09	time	2.55	3.61	4.63	5.66	6.69	7.70	8.75	9.77	10.81	11.86	13.18	4 / 1															
reaction time	0.147	interval		1.06	1.02	1.03	1.03	1.01	1.05	1.02	1.04	1.05	1.32	PB	3.11	3.09	3.11												
wind	0.7 m/s	velocity	5.38	8.62	8.96	8.87	8.87	9.05	8.70	8.96	8.79	8.70	10.62	8.35	8.82	8.87	8.82												
Semi-Final 2 - 2007 USATF National Championships (Indianapolis, IN)														<i>USATF Men's Hurdle Development (2007)</i>															
date	24-Jun-07	time	2.65	3.69	4.72	5.76	6.81	7.86	8.90	9.99	11.04	12.12	13.52	1 / 5															
reaction time		interval		1.04	1.03	1.04	1.05	1.05	1.04	1.09	1.05	1.08	1.40		3.11	3.14	3.22												
wind	-0.9 m/s	velocity	5.18	8.79	8.87	8.79	8.70	8.70	8.79	8.39	8.70	8.46	10.01	8.14	8.82	8.73	8.52												
Heat 1 - 2007 USATF National Championships (Indianapolis, IN)														<i>USATF Men's Hurdle Development (2007)</i>															
date	23-Jun-07	time	2.56	3.65	4.67	5.72	6.87	7.93	9.01	10.08	11.18	12.23	13.67	1 / 4															
reaction time	0.186	interval		1.09	1.02	1.05	1.15	1.06	1.08	1.07	1.10	1.05	1.44		3.16	3.29	3.22												
wind	0.1 m/s	velocity	5.36	8.39	8.96	8.70	7.95	8.62	8.46	8.54	8.31	8.70	9.74	8.05	8.68	8.33	8.52												
FINAL - 2003 USATF National Junior Championships (Palo Alto, CA) (99cm)														<i>USATF Women's Sprint Development (2003)</i>															
date	21-Jun-03	time	2.55	3.64	4.72	5.76	6.82	7.89	8.94	10.03	11.11	12.19	13.75	5 / 2															
reaction time		interval		1.09	1.08	1.04	1.06	1.07	1.05	1.09	1.08	1.08	1.56		3.21	3.18	3.25												
wind	-2.4 m/s	velocity	5.38	8.39	8.46	8.79	8.62	8.54	8.70	8.39	8.46	8.46	8.99	8.00	8.54	8.62	8.44												
Favaro, Denis (ITA) (1972)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2002 European Championships (Munich, GER)														<i>Graubner (2009) - http://www.fgs.uni-halle.de</i>															
date	10-Aug-02	time	2.73	3.79	4.85	5.89	6.93	7.95	8.99	10.03	11.09	12.18	13.59	1 / 6															
reaction time	0.202	interval		1.06	1.06	1.04	1.04	1.02	1.04	1.04	1.06	1.09	1.41	PB	3.16	3.10	3.19												
wind	0.4 m/s	velocity	5.03	8.62	8.62	8.79	8.79	8.96	8.79	8.79	8.62	8.39	9.94	8.09	8.68	8.85	8.60												
Fei Xiang (CHN) (1998)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Decathlon - Heat 3 - 2021 Chinese National Championships (Chongqing, CHN)														<i>CAA Hurdle Development (2021)</i>															
date	27-Jun-21	time	2.82	4.02	5.20	6.39	7.57	8.79	9.99	11.19	12.43	13.66	15.28	4 / 5															
reaction time	0.186	interval		1.20	1.18	1.19	1.18	1.22	1.20	1.20	1.24	1.23	1.62		3.57	3.60	3.67												
wind	-0.2 m/s	velocity	4.87	7.62	7.75	7.68	7.75	7.49	7.62	7.62	7.37	7.43	8.65	7.20	7.68	7.62	7.47												
Decathlon - Heat 2 - 2019 Chinese National Grand Prix Final (Daqing, CHN)														<i>CAA Hurdle Development (2019)</i>															
date	23-Aug-19	time	2.87	4.10	5.30	6.54	7.74	8.96	10.19	11.41	12.64	13.88	15.46	5 / 2															
reaction time	0.197	interval		1.23	1.20	1.24	1.20	1.22	1.23	1.22	1.23	1.24	1.58		3.67	3.65	3.69												
wind	?? m/s	velocity	4.78	7.43	7.62	7.37	7.62	7.49	7.43	7.49	7.43	7.37	8.87	7.12	7.47	7.51	7.43												
Decathlon - Heat 1 - 2019 Chinese National Championships (Shenyang, CHN)														<i>CAA Hurdle Development (2019)</i>															
date	11-Jul-19	time	2.82	4.00	5.17	6.34	7.52	8.71	9.89	11.11	12.31	13.54	15.10	3 / 3															
reaction time	0.165	interval		1.18	1.17	1.17	1.18	1.19	1.18	1.22	1.20	1.23	1.56	PB	3.52	3.55	3.65												
wind	-0.6 m/s	velocity	4.87	7.75	7.81	7.81	7.75	7.68	7.75	7.49	7.62	7.43	8.99	7.28	7.79	7.72	7.51												
Fenner, Mike (GER) (1971)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2002 European Championships (Munich, GER)														<i>Graubner (2009) - http://www.fgs.uni-halle.de</i>															
date	10-Aug-02	time	2.63	3.67	4.71	5.73	6.75	7.77	8.83	9.85	10.91	11.97	13.39	1 / 5															
reaction time	0.161	interval		1.04	1.04	1.02	1.02	1.02	1.06	1.02	1.06	1.06	1.42		3.10	3.10	3.14												
wind	0.4 m/s	velocity	5.22	8.79	8.79	8.96	8.96	8.96	8.62	8.96	8.62	8.62	9.87	8.22	8.85	8.85	8.73												
Semi-Final 2 - 2002 European Championships (Munich, GER)														<i>Graubner (2009) - http://www.fgs.uni-halle.de</i>															
date	10-Aug-02	time	2.62	3.66	4.70	5.72	6.76	7.78	8.80	9.84	10.92	11.99	13.44	1 / 2															
reaction time	0.138	interval		1.04	1.04	1.02	1.04	1.02	1.02	1.04	1.08	1.07	1.45		3.10	3.08	3.19												
wind	0.8 m/s	velocity	5.24	8.79	8.79	8.96	8.79	8.96	8.96	8.79	8.46	8.54	9.67	8.18	8.85	8.90	8.60												
Heat 2 - 2002 European Championships (Munich, GER)														<i>Graubner (2009) - http://www.fgs.uni-halle.de</i>															
date	09-Aug-02	time	2.64	3.70	4.76	5.81	6.84	7.88	8.94	9.99	11.05	12.14	13.57	1 / 2															
reaction time	0.134	interval		1.06	1.06	1.05	1.03	1.04	1.06	1.05	1.06	1.09	1.43		3.17	3.13	3.20												
wind	0.5 m/s	velocity	5.20	8.62	8.62	8.70	8.87	8.79	8.62	8.70	8.62	8.39	9.80	8.11	8.65	8.76	8.57												
FINAL - 2001 ISTAF (Berlin, GER)														<i>Graubner (2009) - http://www.fgs.uni-halle.de</i>															
date	31-Aug-01	time	2.62	3.70	4.79	5.86	6.92	8.01	9.09	10.18	11.27	12.38	13.83	1 / 7															
reaction time	0.140	interval		1.08	1.09	1.07	1.06	1.09	1.08	1.09	1.09	1.11	1.45		3.24	3.23	3.29												
wind	1.0 m/s	velocity	5.24	8.46	8.39	8.54	8.62	8.39	8.46	8.39	8.39	8.23	9.67	7.95	8.46	8.49	8.33												
FINAL - 1998 European Championships (Budapest, HUN)														<i>Sanchez (1998) - Budapest '98: análisis de la carreras con villas</i>															
date	22-Aug-98	time	2.61	3.63	4.68	5.72	6.74	7.77	8.82	9.85	10.88	11.97	13.38	2 / 7															
reaction time		interval		1.02	1.05	1.04	1.02	1.03	1.05	1.03	1.03	1.09	1.41		3.11	3.10	3.15												
wind	1.5 m/s	velocity	5.26	8.96	8.70	8.79	8.96	8.87	8.70	8.87	8.87	8.39	9.94	8.22	8.82	8.85	8.70												
Ferguson, Kenneth (USA) (1984)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10

FINAL - 2003 USATF National Junior Championships (Palo Alto, CA) (99cm)

USATF Women's Sprint Development (2003)

date	21-Jun-03	time	2.55	3.62	4.67	5.69	6.72	7.75	8.79	9.86	10.94	12.04	13.60	4 / 1				
reaction time		interval		1.07	1.05	1.02	1.03	1.03	1.04	1.07	1.08	1.10	1.56		3.14	3.10	3.25	
wind	-2.4 m/s	velocity	5.38	8.54	8.70	8.96	8.87	8.87	8.79	8.54	8.46	8.31	8.99	8.09	8.73	8.85	8.44	

Fernando Santana, José (BRA) (1991)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Decathlon - Heat 3** - 2024 Olympic Games (Paris, FRA)

Paris 2024 Olympic Games - Results Book (2024)

date	03-Aug-24	time	2.50	3.62	4.70	5.77	6.83	7.90	8.99	10.11	11.24	12.36	14.00	9 / 5				
reaction time	0.150	interval	7 steps	1.12	1.08	1.07	1.06	1.07	1.09	1.12	1.13	1.12	1.64		3.27	3.22	3.37	
wind	0.7 m/s	velocity	5.49	8.16	8.46	8.54	8.62	8.54	8.39	8.16	8.09	8.16	8.55	7.86	8.39	8.52	8.14	

Ferreira, João (POR) (1986)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL** - 2010 European Team Championships, 1st League (Budapest, HUN)

Blomkvist (2010) - www.sub13.se

date	20-Jun-10	time	2.62	3.67	4.75	5.80	6.87	7.96	9.04	10.13	11.24	12.36	13.97	7 / 6				
reaction time	0.168	interval		1.05	1.08	1.05	1.07	1.09	1.08	1.09	1.11	1.12	1.61		3.18	3.24	3.32	
wind	1.1 m/s	velocity	5.24	8.70	8.46	8.70	8.54	8.39	8.46	8.39	8.23	8.16	8.71	7.87	8.62	8.46	8.26	

Fillery, Cameron (GBR) (1998)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL** - 2022 Müller Birmingham Diamond League (Birmingham, GBR) (TV Analysis)

Henson (2022) - Athlete First: 2022 year end hurdle report

date	21-May-22	time	2.57	3.67	4.73	5.79	6.88	7.93	8.98	10.08	11.17	12.28	13.90	9 / 9				
reaction time	0.126	interval	7 steps	1.10	1.06	1.06	1.09	1.05	1.05	1.10	1.09	1.11	1.62		3.22	3.19	3.30	
wind	0.7 m/s	velocity	5.34	8.31	8.62	8.62	8.39	8.70	8.70	8.31	8.39	8.23	8.65	7.91	8.52	8.60	8.31	

FINAL - 2020 Doha Diamond League (Doha, QAT) (TV Analysis)

Henson (2020) - Athlete First: 2020 year end hurdle report

date	25-Sep-20	time	2.52	3.64	4.72	5.76	6.80	7.84	8.92	10.00	11.08	12.16	13.76	6 / 5				
reaction time	0.128	interval	7 steps	1.12	1.08	1.04	1.04	1.04	1.08	1.08	1.08	1.08	1.60		3.24	3.16	3.24	
wind	0.3 m/s	velocity	5.44	8.16	8.46	8.79	8.79	8.79	8.46	8.46	8.46	8.46	8.76	7.99	8.46	8.68	8.46	

FINAL - 2019 Müller Grand Prix (Birmingham, GBR) (TV Analysis)

Henson (2020) - Athlete First: 2019 year end hurdle report

date	18-Aug-19	time	2.58	3.65	4.74	5.76	6.77	7.78	8.83	9.88	10.92	12.02	13.54	9 / 5				
reaction time	0.109	interval	7 steps	1.07	1.09	1.02	1.01	1.01	1.05	1.05	1.04	1.10	1.52	PB	3.18	3.07	3.19	
wind	-0.2 m/s	velocity	5.32	8.54	8.39	8.96	9.05	9.05	8.70	8.70	8.79	8.31	9.22	8.12	8.62	8.93	8.60	

Fofana, Hassane (ITA) (1992)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL** - 2024 Golden Gala • Pietro Mennea (Roma, ITA)

Omega Timing (2024) - diamond league race analysis

date	30-Aug-24	time	2.48	3.60	4.68	5.74	6.79	7.85	8.93	10.02	11.10	12.21	13.84	1 / 9				
reaction time	0.154	interval		1.12	1.08	1.06	1.05	1.06	1.08	1.09	1.08	1.11	1.63		3.26	3.19	3.28	
wind	0.4 m/s	velocity	5.53	8.16	8.46	8.62	8.70	8.62	8.46	8.39	8.46	8.23	8.60	7.95	8.41	8.60	8.36	

Semi-Final 3 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)

Henson (2023) - Athlete First: 2023 year end hurdle report

date	21-Aug-23	time	2.56	3.66	4.73	5.75	6.78	7.82	8.88	9.92	10.96	12.03	13.50	9 / 7				
reaction time	0.147	interval	7 steps	1.10	1.07	1.02	1.03	1.04	1.06	1.04	1.04	1.07	1.47		3.19	3.13	3.15	
wind	-0.1 m/s	velocity	5.36	8.31	8.54	8.96	8.87	8.79	8.62	8.79	8.79	8.54	9.54	8.15	8.60	8.76	8.70	

Heat 2 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)

Henson (2023) - Athlete First: 2023 year end hurdle report

date	20-Aug-23	time	2.63	3.68	4.78	5.83	6.86	7.90	8.95	10.00	11.04	12.10	13.53	5 / 4				
reaction time	0.141	interval	7 steps	1.05	1.10	1.05	1.03	1.04	1.05	1.05	1.04	1.06	1.43		3.20	3.12	3.15	
wind	0.5 m/s	velocity	5.22	8.70	8.31	8.70	8.87	8.79	8.70	8.70	8.79	8.62	9.80	8.13	8.57	8.79	8.70	

Semi-Final 2 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis) Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record

date	20-Mar-22	time	2.48	3.54	4.58	5.60	6.64						7.65	1 / 6				
reaction time	0.122	interval		1.06	1.04	1.02	1.04						1.01	PB	3.12			
		velocity	5.53	8.62	8.79	8.96	8.79						9.62	7.84	8.79			

FINAL - 2020 Paavo Nurmi Games (Turku, FIN) (TV Analysis)

Henson (2020) - Athlete First: 2020 year end hurdle report

date	11-Aug-20	time	2.60	3.70	4.80	5.85	6.91	8.00	9.08	10.14	11.22	12.30	13.88	7 / 6				
reaction time	0.170	interval	7 steps	1.10	1.10	1.05	1.06	1.09	1.08	1.06	1.08	1.08	1.58		3.25	3.23	3.22	
wind	1.1 m/s	velocity	5.28	8.31	8.31	8.70	8.62	8.39	8.46	8.62	8.46	8.46	8.87	7.93	8.44	8.49	8.52	

Semi-Final 2 - 2019 IAAF World Championships (Doha, QAT)

CAA Hurdle Development (2019)

date	02-Oct-19	time	2.60	3.67	4.72	5.75	6.79	7.83	8.87	9.92	10.99	12.08	13.52	2 / 6				
reaction time	0.155	interval	7 steps	1.07	1.05	1.03	1.04	1.04	1.04	1.05	1.07	1.09	1.44		3.15	3.12	3.21	
wind	0.9 m/s	velocity	5.28	8.54	8.70	8.87	8.79	8.79	8.79	8.70	8.54	8.39	9.74	8.14	8.70	8.79	8.54	

FINAL - 2015 Italian National Championships (Torino, ITA)Incalza (FIDAL - Centro Studi & Ricerche) (2015) - <https://www.youtube.com/watch?v=Ytpg1XHNpfg>

date	25-Jul-15	time	2.66	3.74	4.79	5.82	6.85	7.91	8.96	9.99	11.09	12.17	13.59	6 / 1				
reaction time		interval		1.08	1.05	1.03	1.03	1.06	1.05	1.03	1.10	1.08	1.42		3.16	3.14	3.21	
wind	1.8 m/s	velocity	5.16	8.46	8.70	8.87	8.87	8.62	8.70	8.87	8.31	8.46	9.87	8.09	8.68	8.73	8.54	

Heat 4 - 2014 European Championships (Zurich, SUI)Incalza (2014) - <https://www.youtube.com/watch?v=wFOM-j9iZHE&list=UU7691fXeyNFIMROfkJ-WWUg>

date	13-Aug-14	time	2.64	3.71	4.74	5.79	6.83	7.86	8.89	9.93	10.99	12.08	13.55	2 / 5				
reaction time	0.130	interval		1.07	1.03	1.05	1.04	1.03	1.03	1.04	1.06	1.09	1.47	PB	3.15	3.10	3.19	
wind	0.7 m/s	velocity	5.20	8.54	8.87	8.70	8.79	8.87	8.87	8.79	8.62	8.39	9.54	8.12	8.70	8.85	8.60	

		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Fontenot, Ryan (USA) (1986)																	
FINAL - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)														CAA Hurdle Development (2020)			
date	15-Feb-20	time	2.67	3.73	4.80	5.84	6.87						7.84	8 / 7			
reaction time	0.170	interval		1.06	1.07	1.04	1.03					0.97			3.17		
		velocity	5.14	8.62	8.54	8.79	8.87					10.02	7.65		8.65		
Semi-Final 1 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)														CAA Hurdle Development (2020)			
date	15-Feb-20	time	2.67	3.73	4.79	5.82	6.85						7.79	3 / 4			
reaction time	0.151	interval		1.06	1.06	1.03	1.03					0.94			3.15		
		velocity	5.14	8.62	8.62	8.87	8.87					10.34	7.70		8.70		
Heat 2 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)														CAA Hurdle Development (2020)			
date	14-Feb-20	time	2.66	3.74	4.79	5.84	6.89						7.81	4 / 2			
reaction time	0.160	interval		1.08	1.05	1.05	1.05					0.92			3.18		
		velocity	5.16	8.46	8.70	8.70	8.70					10.57	7.68		8.62		
FINAL - 2019 Seiko Golden Grand Prix (Osaka, JPN)														Shibayama (2019) - race analysis of men's 110m hurdles in the 2019 season			
date	19-May-19	time	2.67	3.75	4.82	5.91	6.95	8.01	9.06	10.10	11.18	12.27	13.70	6 / 6			
reaction time	0.157	interval		1.08	1.07	1.09	1.04	1.06	1.05	1.04	1.08	1.09	1.43		3.24	3.15	3.21
wind	2.9 m/s	velocity	5.14	8.46	8.54	8.39	8.79	8.62	8.70	8.79	8.46	8.39	9.80	8.03	8.46	8.70	8.54
Forsberg, Anton (SWE) (1991)																	
FINAL - 2010 Swedish National Championships (Falun, SWE)														Blomkvist (2010) - www.sub13.se			
date	22-Aug-10	time	2.82	4.00	5.15	6.30	7.43	8.59	9.78	10.97	12.16	13.39	15.02	/ 6			
reaction time		interval		1.18	1.15	1.15	1.13	1.16	1.19	1.19	1.19	1.23	1.63		3.48	3.48	3.61
wind	-0.7 m/s	velocity	4.87	7.75	7.95	7.95	8.09	7.88	7.68	7.68	7.68	7.43	8.60	7.32	7.88	7.88	7.60
B FINAL - 2010 Folksam GP (Sollentuna, SWE)														Blomkvist (2010) - www.sub13.se			
date	01-Jul-10	time	2.60	3.77	4.90	6.05	7.24	8.33	9.55	10.72	11.97	13.28	15.16	/ 3			
reaction time		interval		1.17	1.13	1.15	1.19	1.09	1.22	1.17	1.25	1.31	1.88	PB	3.45	3.50	3.73
wind	0.8 m/s	velocity	5.28	7.81	8.09	7.95	7.68	8.39	7.49	7.81	7.31	6.98	7.46	7.26	7.95	7.83	7.35
Foster, Charles (USA) (1953)																	
Heat 1 - 1976 Olympic Games (Montreal, CAN)														Lamare (1976) - les jeux de la XXI olympia, Montreal 1976			
date	26-Jul-76	time	2.4		5.5	6.6							13.68	6 / 1			
reaction time		interval			3.15	1.07									3.15		
wind	0.0 m/s	velocity	5.84		8.70	8.54							8.04		8.70		
Foster, Greg (USA) (1958)																	
FINAL - 1987 IAAF World Championships (Rome, ITA)														Susanka (1988) - time analysis of the sprint hurdle events at the II World Championships in Athletics			
date	03-Sep-87	time	2.60	3.64	4.64	5.64	6.64	7.65	8.67	9.72	10.76	11.81	13.21	3 / 1			
reaction time		interval		1.04	1.00	1.00	1.00	1.01	1.02	1.05	1.04	1.05	1.40		3.04	3.03	3.14
wind	0.5 m/s	velocity	5.28	8.79	9.14	9.14	9.14	9.05	8.96	8.70	8.79	8.70	10.01	8.33	9.02	9.05	8.73
Semi-Final 1 - 1987 IAAF World Championships (Rome, ITA)														Susanka (1988) - time analysis of the sprint hurdle events at the II World Championships in Athletics			
date	01-Sep-87	time	2.60	3.65	4.68	5.70	6.72	7.76	8.79	9.85	10.93	11.99	13.41	6 / 2			
reaction time		interval		1.05	1.03	1.02	1.02	1.04	1.03	1.06	1.08	1.06	1.42		3.10	3.09	3.20
wind	-0.5 m/s	velocity	5.28	8.70	8.87	8.96	8.96	8.79	8.87	8.62	8.46	8.62	9.87	8.20	8.85	8.87	8.57
Heat 1 - 1987 IAAF World Championships (Rome, ITA)														Susanka (1988) - time analysis of the sprint hurdle events at the II World Championships in Athletics			
date	01-Sep-87	time	2.60	3.63	4.64	5.64	6.64	7.62	8.63	9.67	10.72	11.79	13.20	8 / 1			
reaction time		interval		1.03	1.01	1.00	1.00	0.98	1.01	1.04	1.05	1.07	1.41	CR	3.04	2.99	3.16
wind	1.4 m/s	velocity	5.28	8.87	9.05	9.14	9.14	9.33	9.05	8.79	8.70	8.54	9.94	8.33	9.02	9.17	8.68
FINAL - 1983 IAAF World Championships (Helsinki, FIN)														Knoke (1984) - the hurdles			
date	12-Aug-83	time	2.58	3.68	4.62	5.62	6.61	7.61	8.60	9.61	10.68	11.81	13.42	5 / 1			
reaction time	0.191	interval		1.10	0.94	1.00	0.99	1.00	0.99	1.01	1.07	1.13	1.61		3.04	2.98	3.21
wind	1.3 m/s	velocity	5.32	8.31	9.72	9.14	9.23	9.14	9.23	9.05	8.54	8.09	8.71	8.20	9.02	9.20	8.54
FINAL - 1981 USSR vs. USA (Leningrad, URS)														Chanon (1987) - analyse comparee des caracteristiques des courses de 100m haies et 110m haies			
date	10-Jul-81	time	2.48	3.58	4.60	5.61	6.62	7.67	8.72	9.82	10.92	12.02	13.30	/ 1			
reaction time		interval		1.10	1.02	1.01	1.01	1.05	1.05	1.10	1.10	1.10	1.28		3.13	3.11	3.30
wind	2.8 m/s	velocity	5.53	8.31	8.96	9.05	9.05	8.70	8.70	8.31	8.31	8.31	10.95	8.27	8.76	8.82	8.31
Foster, Jasher (USA) (1998)																	
FINAL - 2020 Don Kirby Elite Invitational (Albuquerque, NM) (Altitude)														CAA Hurdle Development (2020)			
date	14-Feb-20	time	2.64	3.74	4.82	5.89	6.97						7.95	7 / 4			
reaction time		interval		1.10	1.08	1.07	1.08						0.98		3.25		
		velocity	5.20	8.31	8.46	8.54	8.46						9.92	7.55	8.44		
Fourie, Lehann (RSA) (1987)																	
FINAL - 2012 Memorial Van Damme (Brussels, BEL) (TV Analysis)														Henson (2020) - Athlete First: 2012 Aries Merritt world record season			

date	07-Sep-12	time	2.48	3.52	4.52	5.52	6.52	7.54	8.58	9.60	10.62	11.70	13.24	3 / 6				
reaction time	0.133	interval	7 steps	1.04	1.00	1.00	1.00	1.02	1.04	1.02	1.02	1.08	1.54	AR	3.04	3.06	3.12	
wind	0.3 m/s	velocity	5.53	8.79	9.14	9.14	9.14	8.96	8.79	8.96	8.96	8.46	9.10	8.31	9.02	8.96	8.79	
FINAL - 2012 AVIVA Grand Prix (Birmingham, GBR) (TV Analysis)													<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>					
date	26-Aug-12	time	2.48	3.52	4.54	5.56	6.58	7.60	8.70	9.81	10.87	11.99	13.59	8 / 7				
reaction time	0.139	interval	7 steps	1.04	1.02	1.02	1.02	1.02	1.10	1.11	1.06	1.12	1.60		3.08	3.14	3.29	
wind	-0.9 m/s	velocity	5.53	8.79	8.96	8.96	8.96	8.96	8.31	8.23	8.62	8.16	8.76	8.09	8.90	8.73	8.33	
FINAL - 2012 Olympic Games (London, GBR) (TV Analysis)													<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>					
date	08-Aug-12	time	2.48	3.56	4.58	5.58	6.62	7.66	8.74	9.78	10.90	12.02	13.53	3 / 7				
reaction time	0.136	interval	7 steps	1.08	1.02	1.00	1.04	1.04	1.08	1.04	1.12	1.12	1.51		3.10	3.16	3.28	
wind	-0.3 m/s	velocity	5.53	8.46	8.96	9.14	8.79	8.79	8.46	8.79	8.16	8.16	9.28	8.13	8.85	8.68	8.36	
Semi-Final 3 - 2012 Olympic Games (London, GBR) (TV Analysis)													<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>					
date	08-Aug-12	time	2.44	3.52	4.54	5.56	6.56	7.58	8.58	9.64	10.70	11.78	13.28	6 / 3				
reaction time	0.139	interval	7 steps	1.08	1.02	1.02	1.00	1.02	1.00	1.06	1.06	1.08	1.50		3.12	3.02	3.20	
wind	0.1 m/s	velocity	5.62	8.46	8.96	8.96	9.14	8.96	9.14	8.62	8.62	8.46	9.35	8.28	8.79	9.08	8.57	
FINAL - 2012 IAAF World Indoor Championships (Istanbul, TUR) (TV Analysis)													<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>					
date	11-Mar-12	time	2.52	3.58	4.62	5.66	6.70						7.69	8 / 7				
reaction time	0.147	interval	7 steps	1.06	1.04	1.04	1.04						0.99		3.14			
		velocity	5.44	8.62	8.79	8.79	8.79						9.82	7.80	8.73			
Heat 1 - 2009 IAAF World Championships (Berlin, GER)													<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>					
date	19-Aug-09	time	2.62	3.66	4.72	5.78	6.84	7.88	8.96	10.02	11.10	12.21	13.67	3 / 4				
reaction time	0.139	interval		1.04	1.06	1.06	1.06	1.04	1.08	1.06	1.08	1.11	1.46		3.16	3.18	3.25	
wind	-0.4 m/s	velocity	5.24	8.79	8.62	8.62	8.62	8.79	8.46	8.62	8.46	8.23	9.60	8.05	8.68	8.62	8.44	
Frolík, Petr (CZE) (1991)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Heat 1 - 2014 Czech Republic National Championships (Ostrava, CZE)													<i>Feher (2014) - Final report from the Czech Republic national championships</i>					
date	02-Aug-14	time	2.88	4.07	5.26	6.46	7.63	8.85	10.07	11.29	12.48	13.74	15.36	7 / 5				
reaction time	0.186	interval		1.19	1.19	1.20	1.17	1.22	1.22	1.22	1.19	1.26	1.62		3.58	3.61	3.67	
wind	-1.6 m/s	velocity	4.76	7.68	7.68	7.62	7.81	7.49	7.49	7.49	7.68	7.25	8.65	7.16	7.66	7.60	7.47	
Heat 3 - 2013 Czech Republic National Championships (Tábor, CZE)													<i>Feher (2013) - Final report from the men's & women's Czech Republic national championships</i>					
date	15-Jun-13	time	2.92	4.13	5.31	6.51	7.75	8.98	10.26	11.51	12.81	14.09	15.78	2 / 5				
reaction time	0.204	interval		1.21	1.18	1.20	1.24	1.23	1.28	1.25	1.30	1.28	1.69		3.59	3.75	3.83	
wind	-0.3 m/s	velocity	4.70	7.55	7.75	7.62	7.37	7.43	7.14	7.31	7.03	7.14	8.30	6.97	7.64	7.31	7.16	
Heat 3 - 2012 Czech Republic National Indoor Championships (Praha, CZE)													<i>Feher (2012) - Czech Republic indoor national championships - men's 60m hurdles</i>					
date	25-Feb-12	time	2.82	4.01	5.19	6.37	7.54						8.56	7 / 6				
reaction time	0.172	interval		1.19	1.18	1.18	1.17						1.02		3.55			
		velocity	4.87	7.68	7.75	7.75	7.81						9.53	7.01	7.72			
Fudaba, Hiroki (JPN) (1994)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2019 Japanese National Championships (Fukuoka, JPN)													<i>Yamanaka (2019) - research on athlete performance and technique- 2019 data book</i>					
date	30-Jun-19	time	2.66	3.75	4.81	5.91	6.98	8.07	9.15	10.26	11.37	12.49	14.00	8 / 7				
reaction time	0.148	interval	7 steps	1.09	1.06	1.10	1.07	1.09	1.08	1.11	1.11	1.12	1.51		3.25	3.24	3.34	
wind	-0.6 m/s	velocity	5.16	8.39	8.62	8.31	8.54	8.39	8.46	8.23	8.23	8.16	9.28	7.86	8.44	8.46	8.21	
FINAL - 2019 Fuse Sprint (Tottori, JPN)													<i>Kijima (2019) - research on athlete performance and technique- 2019 data book</i>					
date	02-Jun-19	time	2.66	3.75	4.84	5.89	6.96	8.04	9.11	10.20	11.29	12.39	13.89	3 / 7				
reaction time	0.150	interval	7 steps	1.09	1.09	1.05	1.07	1.08	1.07	1.09	1.09	1.10	1.50		3.23	3.22	3.28	
wind	1.9 m/s	velocity	5.16	8.39	8.39	8.70	8.54	8.46	8.54	8.39	8.39	8.31	9.35	7.92	8.49	8.52	8.36	
FINAL - 2018 Japanese National Championships (Yamaguchi, JPN)													<i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>					
date	24-Jun-18	time	2.68	3.75	4.82	5.85	6.92	7.97	9.04	10.11	11.20	12.32	13.76	3 / 4				
reaction time	0.164	interval	7 steps	1.07	1.07	1.03	1.07	1.05	1.07	1.07	1.09	1.12	1.44		3.17	3.19	3.28	
wind	0.7 m/s	velocity	5.12	8.54	8.54	8.87	8.54	8.70	8.54	8.54	8.39	8.16	9.74	7.99	8.65	8.60	8.36	
Semi-Final 2 - 2017 Japanese National Championships (Osaka, JPN)													<i>(2017) - tfdata-store.com/2017/07/13/post-1040/</i>					
date	24-Jun-17	time	2.68	3.77	4.85	5.91	6.98	8.05	9.15	10.27	11.40	12.54	14.06	9 / 8				
reaction time	0.171	interval	7 steps	1.09	1.08	1.06	1.07	1.07	1.10	1.12	1.13	1.14	1.52		3.23	3.24	3.39	
wind	0.3 m/s	velocity	5.12	8.39	8.46	8.62	8.54	8.54	8.31	8.16	8.09	8.02	9.22	7.82	8.49	8.46	8.09	
Heat 3 - 2017 Japanese National Championships (Osaka, JPN)													<i>(2017) - tfdata-store.com/2017/07/13/post-1040/</i>					
date	24-Jun-17	time	2.69	3.78	4.85	5.93	6.99	8.08	9.15	10.25	11.36	12.49	13.94	5 / 3				
reaction time	0.165	interval	7 steps	1.09	1.07	1.08	1.06	1.09	1.07	1.10	1.11	1.13	1.45		3.24	3.22	3.34	
wind	0.5 m/s	velocity	5.10	8.39	8.54	8.46	8.62	8.39	8.54	8.31	8.23	8.09	9.67	7.89	8.46	8.52	8.21	
FINAL - 2017 East Japan Business Athletics Championships (Yuma, JPN)													<i>(2017) - tfdata-store.com/2017/05/20/post-579/</i>					
date	20-May-17	time	2.71	3.81	4.86	5.94	7.01	8.10	9.18	10.28	11.37	12.50	14.00	2 / 5				

reaction time	interval	7 steps	1.10	1.05	1.08	1.07	1.09	1.08	1.10	1.09	1.13	1.50		3.23	3.24	3.32		
wind	1.1 m/s	velocity	5.06	8.31	8.70	8.46	8.54	8.39	8.46	8.31	8.39	8.09	9.35	7.86	8.49	8.46	8.26	
Open FINAL - 2017 Michitaka Memorial (Osaka, JPN)													(2017) - tfdata-store.com/2017/05/08/post-413/					
date	07-May-17	time	2.77	3.85	4.96	6.06	7.16	8.24	9.37	10.51	11.61	12.75		14.27	5 / 6			
reaction time	interval	7 steps	1.08	1.11	1.10	1.10	1.08	1.13	1.14	1.10	1.14	1.52			3.29	3.31	3.38	
wind	-1.5 m/s	velocity	4.95	8.46	8.23	8.31	8.31	8.46	8.09	8.02	8.31	8.02	9.22	7.71	8.33	8.28	8.11	
FINAL - 2017 Michitaka Memorial (Osaka, JPN)													(2017) - tfdata-store.com/2017/05/08/post-413/					
date	07-May-17	time	2.72	3.81	4.92	6.00	7.10	8.19	9.29	10.39	11.52	12.63		14.14	1 / 6			
reaction time	interval	7 steps	1.09	1.11	1.08	1.10	1.09	1.10	1.10	1.13	1.11	1.51			3.28	3.29	3.34	
wind	-0.8 m/s	velocity	5.04	8.39	8.23	8.46	8.31	8.39	8.31	8.31	8.09	8.23	9.28	7.78	8.36	8.33	8.21	
B FINAL - 2017 Mikio Oda Memorial (Hiroshima, JPN)													(2017) - tfdata-store.com/2017/05/01/458/					
date	29-Apr-17	time	2.72	3.83	4.92	6.00	7.09	8.18	9.29	10.40	11.54	12.68		14.20	1 / 5			
reaction time	interval	7 steps	1.11	1.09	1.08	1.09	1.09	1.11	1.11	1.14	1.14	1.52			3.28	3.29	3.39	
wind	-1.5 m/s	velocity	5.04	8.23	8.39	8.46	8.39	8.39	8.23	8.23	8.02	8.02	9.22	7.75	8.36	8.33	8.09	
FINAL - 2016 Japanese National Championships (Nagoya, JPN)													Kota (2016) - race analysis of japanese top-ranked men 110m and women 100m hurdlers					
date	26-Jun-16	time	2.64	3.74	4.80	5.87	6.93	7.98	9.05	10.11	11.19	12.27		13.71	4 / 5			
reaction time	0.140	interval	1.10	1.06	1.07	1.06	1.05	1.07	1.06	1.08	1.08	1.44			3.23	3.18	3.22	
wind	2.4 m/s	velocity	5.20	8.31	8.62	8.54	8.62	8.70	8.54	8.62	8.46	8.46	9.74	8.02	8.49	8.62	8.52	
FINAL - 2016 Fuse Sprint (Tottori, JPN)													Kota (2016) - race analysis of japanese top-ranked men 110m and women 100m hurdlers					
date	05-Jun-16	time	2.67	3.75	4.83	5.89	6.96	8.05	9.14	10.23	11.33	12.46		13.96	8 / 8			
reaction time	interval		1.08	1.08	1.06	1.07	1.09	1.09	1.09	1.10	1.13	1.50			3.22	3.25	3.32	
wind	1.4 m/s	velocity	5.14	8.46	8.46	8.62	8.54	8.39	8.39	8.39	8.31	8.09	9.35	7.88	8.52	8.44	8.26	
FINAL - 2015 Shizuoka International Athletics Meeting (Fukuroi, JPN)													Takashima (2015) - race analysis of 110m & 100m hurdles in Japan- results 2015 competitions					
date	03-May-15	time	2.74	3.86	4.93	6.01	7.08	8.14	9.22	10.30	11.40	12.51		13.99	1 / 4			
reaction time	interval		1.12	1.07	1.08	1.07	1.06	1.08	1.08	1.08	0.10	2.11	1.48		3.27	3.21	3.29	
wind	-0.8 m/s	velocity	5.01	8.16	8.54	8.46	8.54	8.62	8.46	8.46	91.40	4.33	9.47	7.86	8.39	8.54	8.33	
Fujihara, Koki (JPN) (2002)																		
			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
B FINAL - 2022 Mikio Oda Memorial (Hiroshima, JPN)													Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season					
date	29-Apr-22	time	2.63	3.74	4.80	5.85	6.90	7.99	9.10	10.23	11.38	12.50		14.03	8 / 4			
reaction time	0.177	interval	7 steps	1.11	1.06	1.05	1.05	1.09	1.11	1.13	1.15	1.12	1.53			3.22	3.25	3.40
wind	-0.7 m/s	velocity	5.22	8.23	8.62	8.70	8.70	8.39	8.23	8.09	7.95	8.16	9.16	7.84	8.52	8.44	8.06	
Fujii, Ryota (JPN) (1996)																		
			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2023 Fuse Sprint (Tottori, JPN)													Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season					
date	25-Jun-23	time	2.57	3.64	4.67	5.70	6.73	7.77	8.83	9.88	10.97	12.05		13.51	5 / 3			
reaction time	0.147	interval	1.07	1.03	1.03	1.03	1.04	1.06	1.05	1.09	1.08	1.46			3.13	3.13	3.22	
wind	1.1 m/s	velocity	5.34	8.54	8.87	8.87	8.87	8.79	8.62	8.70	8.39	8.46	9.60	8.14	8.76	8.76	8.52	
FINAL - 2023 Japanese National Championships (Osaka, JPN)													Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season					
date	04-Jun-23	time	2.62	3.67	4.70	5.72	6.75	7.80	8.84	9.91	10.99	12.10		13.61	9 / 5			
reaction time	0.169	interval	1.05	1.03	1.02	1.03	1.05	1.04	1.07	1.08	1.11	1.51			3.10	3.12	3.26	
wind	-0.9 m/s	velocity	5.24	8.70	8.87	8.96	8.87	8.70	8.79	8.54	8.46	8.23	9.28	8.08	8.85	8.79	8.41	
FINAL - 2023 Michitaka Kinami Memorial (Osaka, JPN)													Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season					
date	07-May-23	time	2.59	3.65	4.72	5.77	6.81	7.88	8.94	10.00	11.09	12.19		13.65	5 / 6			
reaction time	0.143	interval	1.06	1.07	1.05	1.04	1.07	1.06	1.06	1.09	1.10	1.46			3.18	3.17	3.25	
wind	-0.3 m/s	velocity	5.30	8.62	8.54	8.70	8.79	8.54	8.62	8.62	8.39	8.31	9.60	8.06	8.62	8.65	8.44	
FINAL - 2022 Japanese National Championships (Osaka, JPN)													Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season					
date	12-Jun-22	time	2.58	3.65	4.70	5.73	6.76	7.82	8.89	9.97	11.05	12.15		13.63	9 / 6			
reaction time	0.145	interval	1.07	1.05	1.03	1.03	1.06	1.07	1.08	1.08	1.10	1.48			3.15	3.16	3.26	
wind	-1.2 m/s	velocity	5.32	8.54	8.70	8.87	8.87	8.62	8.54	8.46	8.46	8.31	9.47	8.07	8.70	8.68	8.41	
FINAL - 2022 Seiko Golden Grand Prix (Tokyo, JPN)													Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season					
date	08-May-22	time	2.62	3.70	4.75	5.80	6.85	7.91	8.98	10.06	11.15	12.25		13.70	7 / 5			
reaction time	0.153	interval	1.08	1.05	1.05	1.05	1.06	1.07	1.08	1.09	1.10	1.45			3.18	3.18	3.27	
wind	0.1 m/s	velocity	5.24	8.46	8.70	8.70	8.70	8.62	8.54	8.46	8.39	8.31	9.67	8.03	8.62	8.62	8.39	
FINAL - 2022 Michitaka Kinami Memorial (Osaka, JPN)													Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season					
date	01-May-22	time	2.59	3.65	4.69	5.73	6.77	7.83	8.88	9.95	11.02	12.14		13.59	4 / 4			
reaction time	0.147	interval	1.06	1.04	1.04	1.04	1.06	1.05	1.07	1.07	1.12	1.45			3.14	3.15	3.26	
wind	0.8 m/s	velocity	5.30	8.62	8.79	8.79	8.79	8.62	8.70	8.54	8.54	8.16	9.67	8.09	8.73	8.70	8.41	
FINAL - 2022 Mikio Oda Memorial (Hiroshima, JPN)													Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season					
date	29-Apr-22	time	2.64	3.73	4.81	5.89	6.96	8.05	9.14	10.23	11.33	12.46		13.94	8 / 6			
reaction time	0.155	interval	1.09	1.08	1.08	1.07	1.09	1.09	1.09	1.09	1.10	1.13	1.48		3.25	3.25	3.32	

wind	-1.5 m/s	velocity	5.20	8.39	8.46	8.46	8.54	8.39	8.39	8.39	8.31	8.09	9.47	7.89	8.44	8.44	8.26	
FINAL - 2021 Japanese National Championships (Osaka, JPN)															<i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>			
date	27-Jun-21	time	2.59	3.65	4.69	5.73	6.77	7.80	8.86	9.92	11.00	12.08		13.54	2 / 6			
reaction time	0.149	interval		1.06	1.04	1.04	1.04	1.03	1.06	1.06	1.08	1.08	1.46	PB		3.14	3.13	3.22
wind	1.2 m/s	velocity	5.30	8.62	8.79	8.79	8.79	8.87	8.62	8.62	8.46	8.46	9.60	8.12		8.73	8.76	8.52
FINAL - 2021 Fuse Sprint (Tottori, JPN)															<i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>			
date	06-Jun-21	time	2.62	3.71	4.76	5.81	6.90	7.96	9.02	10.13	11.21	12.31		13.79	9 / 6			
reaction time	0.152	interval		1.09	1.05	1.05	1.09	1.06	1.06	1.11	1.08	1.10	1.48			3.19	3.21	3.29
wind	1.8 m/s	velocity	5.24	8.39	8.70	8.70	8.39	8.62	8.62	8.23	8.46	8.31	9.47	7.98		8.60	8.54	8.33
FINAL - 2021 Mikio Oda Memorial (Hiroshima, JPN)															<i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>			
date	29-Apr-21	time	2.64	3.73	4.78	5.85	6.91	7.98	9.05	10.13	11.22	12.34		13.84	2 / 8			
reaction time		interval		1.09	1.05	1.07	1.06	1.07	1.07	1.08	1.09	1.12	1.50			3.21	3.20	3.29
wind	1.7 m/s	velocity	5.20	8.39	8.70	8.54	8.62	8.54	8.54	8.46	8.39	8.16	9.35	7.95		8.54	8.57	8.33
FINAL - 2020 All Japan Corporate Championships (Kumagaya, JPN)															<i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>			
date	20-Sep-20	time	2.60	3.68	4.73	5.79	6.83	7.90	8.98	10.06	11.16	12.28		13.78	7 / 3			
reaction time	0.151	interval		1.08	1.05	1.06	1.04	1.07	1.08	1.08	1.10	1.12	1.50			3.19	3.19	3.30
wind	0.1 m/s	velocity	5.28	8.46	8.70	8.62	8.79	8.54	8.46	8.46	8.31	8.16	9.35	7.98		8.60	8.60	8.31
Race 2 - 2020 World Athletics Trials (Fuji, JPN)															<i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>			
date	06-Sep-20	time	2.60	3.67	4.73	5.78	6.83	7.89	8.95	10.03	11.15	12.26		13.78	4 / 2			
reaction time		interval		1.07	1.06	1.05	1.05	1.06	1.06	1.08	1.12	1.11	1.52			3.18	3.17	3.31
wind	1.3 m/s	velocity	5.28	8.54	8.62	8.70	8.70	8.62	8.62	8.46	8.16	8.23	9.22	7.98		8.62	8.65	8.28
FINAL - 2020 Athlete Night Games (Fukui, JPN)															<i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>			
date	29-Aug-20	time	2.59	3.65	4.68	5.70	6.76	7.82	8.87	9.94	11.02	12.14		13.58	8 / 5			
reaction time		interval		1.06	1.03	1.02	1.06	1.06	1.05	1.07	1.08	1.12	1.44			3.11	3.17	3.27
wind	1.4 m/s	velocity	5.30	8.62	8.87	8.96	8.62	8.62	8.70	8.54	8.46	8.16	9.74	8.10		8.82	8.65	8.39
Heat 2 - 2020 Athlete Night Games (Fukui, JPN)															<i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>			
date	29-Aug-20	time	2.57	3.61	4.64	5.68	6.72	7.78	8.87	9.93	11.03	12.10		13.57	1 / 1			
reaction time		interval		1.04	1.03	1.04	1.04	1.06	1.09	1.06	1.10	1.07	1.47	PB		3.11	3.19	3.23
wind	1.5 m/s	velocity	5.34	8.79	8.87	8.79	8.79	8.62	8.39	8.62	8.31	8.54	9.54	8.11		8.82	8.60	8.49
FINAL - 2020 Seiko Golden Grand Prix (Tokyo, JPN)															<i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>			
date	23-Aug-20	time	2.60	3.67	4.73	5.77	6.82	7.88	8.97	10.08	11.19	12.31		13.79	9 / 5			
reaction time	0.144	interval		1.07	1.06	1.04	1.05	1.06	1.09	1.11	1.11	1.12	1.48			3.17	3.20	3.34
wind	-0.4 m/s	velocity	5.28	8.54	8.62	8.79	8.70	8.62	8.39	8.23	8.23	8.16	9.47	7.98		8.65	8.57	8.21
FINAL - 2019 Japanese World Championships Trials (Fujiyoshida, JPN)															<i>Shibayama (2019) - race analysis of men's 110m hurdles in the 2019 season</i>			
date	01-Sep-19	time	2.59	3.65	4.70	5.74	6.80	7.86	8.92	10.00	11.10	12.21		13.65	2 / 6			
reaction time		interval		1.06	1.05	1.04	1.06	1.06	1.06	1.08	1.10	1.11	1.44	PB		3.15	3.18	3.29
wind	1.4 m/s	velocity	5.30	8.62	8.70	8.79	8.62	8.62	8.62	8.46	8.31	8.23	9.74	8.06		8.70	8.62	8.33
FINAL - 2019 Japanese National Championships (Fukuoka, JPN)															<i>Yamanaka (2019) - research on athlete performance and technique- 2019 data book</i>			
date	30-Jun-19	time	2.64	3.72	4.79	5.87	6.95	8.05	9.15	10.26	11.39	12.52		13.99	2 / 6			
reaction time	0.148	interval		1.08	1.07	1.08	1.08	1.10	1.10	1.11	1.13	1.13	1.47			3.23	3.28	3.37
wind	-0.6 m/s	velocity	5.20	8.46	8.54	8.46	8.46	8.31	8.31	8.23	8.09	8.09	9.54	7.86		8.49	8.36	8.14
FINAL - 2019 Fuse Sprint (Tottori, JPN)															<i>Kijima (2019) - research on athlete performance and technique- 2019 data book</i>			
date	02-Jun-19	time	2.60	3.68	4.74	5.81	6.87	7.95	9.02	10.11	11.21	12.31		13.78	8 / 5			
reaction time	0.146	interval		1.08	1.06	1.07	1.06	1.08	1.07	1.09	1.10	1.10	1.47	PB		3.21	3.21	3.29
wind	1.9 m/s	velocity	5.28	8.46	8.62	8.54	8.62	8.46	8.54	8.39	8.31	8.31	9.54	7.98		8.54	8.54	8.33
FINAL - 2019 Kinami Memorial (Osaka, JPN)															<i>Matsubayashi (2019) - research on athlete performance and technique- 2019 data book</i>			
date	06-May-19	time	2.60	3.70	4.78	5.87	6.97	8.05	9.15	10.24	11.35	12.49		13.94	3 / 7			
reaction time		interval		1.10	1.08	1.09	1.10	1.08	1.10	1.09	1.11	1.14	1.45			3.27	3.28	3.34
wind	0.3 m/s	velocity	5.28	8.31	8.46	8.39	8.31	8.46	8.31	8.39	8.23	8.02	9.67	7.89		8.39	8.36	8.21
A FINAL - 2019 Mikio Oda Memorial (Hiroshima, JPN)															<i>Kobayashi (2019) - research on athlete performance and technique- 2019 data book</i>			
date	28-Apr-19	time	2.74	3.84	4.89	5.96	7.03	8.12	9.22	10.32	11.44	12.58		14.07	1 / 7			
reaction time		interval		1.10	1.05	1.07	1.07	1.09	1.10	1.10	1.12	1.14	1.49			3.22	3.26	3.36
wind	0.6 m/s	velocity	5.01	8.31	8.70	8.54	8.54	8.39	8.31	8.31	8.16	8.02	9.41	7.82		8.52	8.41	8.16
A FINAL - 2018 National Sports Festival (Fukui, JPN)															<i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>			
date	08-Oct-18	time	2.61	3.70	4.75	5.82	6.89	7.98	9.05	10.14	11.24	12.33		13.81	1 / 6			
reaction time	0.142	interval		1.09	1.05	1.07	1.07	1.09	1.07	1.09	1.10	1.09	1.48	PB		3.21	3.23	3.28
wind	1.2 m/s	velocity	5.26	8.39	8.70	8.54	8.54	8.39	8.54	8.39	8.31	8.39	9.47	7.97		8.54	8.49	8.36
Heat 4 - 2017 Japanese National Championships (Osaka, JPN)															<i>(2017) - tfdata-store.com/2017/07/13/post-1040/</i>			

date	24-Jun-17	time	2.64	3.73	4.80	5.88	6.95	8.01	9.13	10.24	11.34	12.47	13.92	1 / 4			
reaction time	0.138	interval		1.09	1.07	1.08	1.07	1.06	1.12	1.11	1.10	1.13	1.45	=PB	3.24	3.25	3.34
wind	0.0 m/s	velocity	5.20	8.39	8.54	8.46	8.54	8.62	8.16	8.23	8.31	8.09	9.67	7.90	8.46	8.44	8.21
B FINAL - 2017 Mikio Oda Memorial (Hiroshima, JPN)														(2017) - tfdata-store.com/2017/05/01/458/			
date	29-Apr-17	time	2.61	3.73	4.84	5.97	7.09	8.19	9.34	10.49	11.65	12.81	14.36	2 / 7			
reaction time		interval		1.12	1.11	1.13	1.12	1.10	1.15	1.15	1.16	1.16	1.55		3.36	3.37	3.47
wind	-1.5 m/s	velocity	5.26	8.16	8.23	8.09	8.16	8.31	7.95	7.95	7.88	7.88	9.05	7.66	8.16	8.14	7.90
FINAL - 2016 Six College Meeting (Sagamihara, JPN)														(2016.07.18) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en			
date	17-Jul-16	time	2.63	3.73	4.82	5.90	6.98	8.07	9.18	10.28	11.38	12.51	13.95	5 / 2			
reaction time		interval		1.10	1.09	1.08	1.08	1.09	1.11	1.10	1.10	1.13	1.44	PB	3.27	3.28	3.33
wind	0.3 m/s	velocity	5.22	8.31	8.39	8.46	8.46	8.39	8.23	8.31	8.31	8.09	9.74	7.89	8.39	8.36	8.23
Fujiwara, Koki (JPN) (2002)																	
FINAL - 2019 Japanese National High School Championships (Okinawa, JPN) (99cm)														Kota (2019) - JAF scientific committee - biomechanics data			
date	08-Aug-19	time	2.71	3.84	4.93	6.01	7.10	8.26	9.37	10.54	11.71	12.93	14.47	3 / 4			
reaction time		interval		1.13	1.09	1.08	1.09	1.16	1.11	1.17	1.17	1.22	1.54		3.30	3.36	3.56
wind	-3.0 m/s	velocity	5.06	8.09	8.39	8.46	8.39	7.88	8.23	7.81	7.81	7.49	9.10	7.60	8.31	8.16	7.70
Fukumoto, Ren (JPN) (2000)																	
U20 FINAL - 2018 National Sports Festival (Fukui, JPN) (99cm)														Joshi (2018) - research on athlete performance and technique- 2018 data book			
date	07-Oct-18	time	2.62	3.70	4.76	5.82	6.88	7.96	9.03	10.11	11.20	12.31	13.72	1 / 5			
reaction time	0.135	interval		1.08	1.06	1.06	1.06	1.08	1.07	1.08	1.09	1.11	1.41		3.20	3.21	3.28
wind	1.5 m/s	velocity	5.24	8.46	8.62	8.62	8.62	8.46	8.54	8.46	8.39	8.23	9.94	8.02	8.57	8.54	8.36
Fukumoto, Riku (JPN)																	
Semi-Final 2 - 2016 Japanese National Youth Championships (Mizuho, JPN) (91cm)														(2016.11.11) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en			
date	21-Oct-16	time	2.64	3.73	4.83	5.90	6.98	8.06	9.15	10.26	11.38	12.51	13.95	3 / 1			
reaction time		interval		1.09	1.10	1.07	1.08	1.08	1.09	1.11	1.12	1.13	1.44		3.26	3.25	3.36
wind	1.6 m/s	velocity	5.20	8.39	8.31	8.54	8.46	8.46	8.39	8.23	8.16	8.09	9.74	7.89	8.41	8.44	8.16
Heat 3 - 2016 Japanese National Youth Championships (Mizuho, JPN) (91cm)														(2016.11.07) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en			
date	21-Oct-16	time	2.62	3.71	4.78	5.83	6.89	7.97	9.05	10.17	11.27	12.41	13.86	2 / 1			
reaction time		interval		1.09	1.07	1.05	1.06	1.08	1.08	1.12	1.10	1.14	1.45		3.21	3.22	3.36
wind	1.4 m/s	velocity	5.24	8.39	8.54	8.70	8.62	8.46	8.46	8.16	8.31	8.02	9.67	7.94	8.54	8.52	8.16
FINAL - 2016 China Perfecture High School Championships (Izumo, JPN)														(2016.10.16) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en			
date	15-Oct-16	time	2.75	3.90	5.04	6.16	7.33	8.46	9.65	10.82	12.02	13.23	14.71	4 / 1			
reaction time		interval		1.15	1.14	1.12	1.17	1.13	1.19	1.17	1.20	1.21	1.48		3.41	3.49	3.58
wind	0.9 m/s	velocity	4.99	7.95	8.02	8.16	7.81	8.09	7.68	7.81	7.62	7.55	9.47	7.48	8.04	7.86	7.66
Fung Kin Hei (HKG) (2000)																	
U20 FINAL - 2019 Chinese National Youth Games (Taiyuan, CHN) (99cm)														CAA Hurdle Development (2019)			
date	14-Aug-19	time	2.68	3.78	4.90	5.99	7.07	8.17	9.24	10.37	11.48	12.61	14.10	3 / 7			
reaction time	0.155	interval		1.10	1.12	1.09	1.08	1.10	1.07	1.13	1.11	1.13	1.49		3.31	3.25	3.37
wind	-0.3 m/s	velocity	5.12	8.31	8.16	8.39	8.46	8.31	8.54	8.09	8.23	8.09	9.41	7.80	8.28	8.44	8.14
U20 Heat 2 - 2019 Chinese National Youth Games (Taiyuan, CHN) (99cm)														CAA Hurdle Development (2019)			
date	14-Aug-19	time	2.65	3.72	4.81	5.91	6.97	8.07	9.18	10.28	11.39	12.53	14.04	7 / 3			
reaction time	0.160	interval		1.07	1.09	1.10	1.06	1.10	1.11	1.10	1.11	1.14	1.51		3.26	3.27	3.35
wind	-0.3 m/s	velocity	5.18	8.54	8.39	8.31	8.62	8.31	8.23	8.31	8.23	8.02	9.28	7.83	8.41	8.39	8.19
Furukawa, Yutaro (JPN) (1985)																	
A FINAL - 2018 National Sports Festival (Fukui, JPN)														Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season			
date	08-Oct-18	time	2.63	3.70	4.76	5.84	6.90	7.97	9.05	10.15	11.24	12.36	13.86	2 / 7			
reaction time	0.145	interval		1.07	1.06	1.08	1.06	1.07	1.08	1.10	1.09	1.12	1.50		3.21	3.21	3.31
wind	1.2 m/s	velocity	5.22	8.54	8.62	8.46	8.62	8.54	8.46	8.31	8.39	8.16	9.35	7.94	8.54	8.54	8.28
FINAL - 2017 Mito Invitational (Mito, JPN)														(2017) - tfdata-store.com/2017/05/06/post-423/			
date	05-May-17	time	2.64	3.72	4.81	5.90	6.97	8.06	9.16	10.27	11.39	12.53	14.05	2 / 4			
reaction time		interval		1.08	1.09	1.09	1.07	1.09	1.10	1.11	1.12	1.14	1.52		3.26	3.26	3.37
wind	-2.3 m/s	velocity	5.20	8.46	8.39	8.39	8.54	8.39	8.31	8.23	8.16	8.02	9.22	7.83	8.41	8.41	8.14
Heat 3 - 2017 Mito Invitational (Mito, JPN)														(2017) - tfdata-store.com/2017/05/06/post-423/			
date	05-May-17	time	2.65	3.73	4.81	5.90	6.99	8.09	9.21	10.35	11.49	12.66	14.25	4 / 3			
reaction time		interval		1.08	1.08	1.09	1.09	1.10	1.12	1.14	1.14	1.17	1.59		3.25	3.31	3.45
wind	-2.5 m/s	velocity	5.18	8.46	8.46	8.39	8.39	8.31	8.16	8.02	8.02	7.81	8.82	7.72	8.44	8.28	7.95
B FINAL - 2017 Mikio Oda Memorial (Hiroshima, JPN)														(2017) - tfdata-store.com/2017/05/01/458/			
date	29-Apr-17	time	2.67	3.77	4.88	5.98	7.08	8.20	9.35	10.50	11.68	12.87	14.61	5 / 8			
reaction time		interval		1.10	1.11	1.10	1.10	1.12	1.15	1.15	1.18	1.19	1.74		3.31	3.37	3.52
wind	-1.5 m/s	velocity	5.14	8.31	8.23	8.31	8.31	8.16	7.95	7.95	7.75	7.68	8.06	7.53	8.28	8.14	7.79

FINAL - 2015 Japanese National Championships (Niigata, JPN)*Takashima (2015) - race analysis of 110m & 100m hurdles in Japan- results 2015 competitions*

date	28-Jun-15	time	2.63	3.70	4.77	5.83	6.89	7.97	9.09	10.20	11.34	12.48	14.00	9 / 8				
reaction time	0.150	interval		1.07	1.07	1.06	1.06	1.08	1.12	1.11	1.14	1.14	1.52		3.20	3.26	3.39	
wind	-1.4 m/s	velocity	5.22	8.54	8.54	8.62	8.62	8.46	8.16	8.23	8.02	8.02	9.22	7.86	8.57	8.41	8.09	

FINAL - 2009 Japanese National Championships (Hiroshima, JPN)*Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdles*

date	27-Jun-09	time	2.63	3.72	4.80	5.86	6.93	7.99	9.09	10.17	11.27	12.43	13.96	8 / 8				
reaction time		interval		1.09	1.08	1.06	1.07	1.06	1.10	1.08	1.10	1.16	1.53		3.23	3.23	3.34	
wind	1.6 m/s	velocity	5.22	8.39	8.46	8.62	8.54	8.62	8.31	8.46	8.31	7.88	9.16	7.88	8.49	8.49	8.21	

Heat 5 - 2009 Japanese National Championships (Hiroshima, JPN)*Akirabun (2010) - analysis of speed and stride on straight track events in the 2009 season*

date	26-Jun-09	time	2.41	3.51	4.57	5.63	6.70	7.77	8.85	9.93	11.04	12.16	13.82	2 / 1				
reaction time		interval		1.10	1.06	1.06	1.07	1.07	1.08	1.08	1.11	1.12	1.66		3.22	3.22	3.31	
wind	0.6 m/s	velocity	5.69	8.31	8.62	8.62	8.54	8.54	8.46	8.46	8.23	8.16	8.45	7.96	8.52	8.52	8.28	

Furumoto, Tsubasa (JPN) (1995)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Heat 3 - 2017 Japanese National Championships (Osaka, JPN)***(2017) - tfdata-store.com/2017/07/13/post-1040/*

date	24-Jun-17	time	2.65	3.77	4.88	5.98	7.07	8.18	9.28	10.40	11.52	12.65	14.11	3 / 7				
reaction time	0.120	interval		1.12	1.11	1.10	1.09	1.11	1.10	1.12	1.12	1.13	1.46		3.33	3.30	3.37	
wind	0.5 m/s	velocity	5.18	8.16	8.23	8.31	8.39	8.23	8.31	8.16	8.16	8.09	9.60	7.80	8.23	8.31	8.14	

Heat 2 - 2017 Mito Invitational (Mito, JPN)*(2017) - tfdata-store.com/2017/05/06/post-423/*

date	05-May-17	time	2.64	3.73	4.84	5.91	6.99	8.08	9.17	10.27	11.41	12.54	14.01	5 / 1				
reaction time		interval		1.09	1.11	1.07	1.08	1.09	1.09	1.10	1.14	1.13	1.47		3.27	3.26	3.37	
wind	0.6 m/s	velocity	5.20	8.39	8.23	8.54	8.46	8.39	8.39	8.31	8.02	8.09	9.54	7.85	8.39	8.41	8.14	

Semi-Final 2 - 2016 Japanese University Championships (Kumagaya, JPN)*(2016.09.05) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en*

date	04-Sep-16	time	2.70	3.80	4.93	6.04	7.14	8.24	9.34	10.47	11.66	12.85	14.36	8 / 8				
reaction time	0.133	interval		1.10	1.13	1.11	1.10	1.10	1.10	1.13	1.19	1.19	1.51		3.34	3.30	3.51	
wind	0.7 m/s	velocity	5.08	8.31	8.09	8.23	8.31	8.31	8.31	8.09	7.68	7.68	9.28	7.66	8.21	8.31	7.81	

Furuta, Kazuaki (JPN) (1992)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Heat 4 - 2017 Japanese National Championships (Osaka, JPN)***(2017) - tfdata-store.com/2017/07/13/post-1040/*

date	24-Jun-17	time	2.69	3.79	4.86	5.95	7.04	8.13	9.26	10.37	11.50	12.65	14.17	3 / 7				
reaction time	0.130	interval	7 steps	1.10	1.07	1.09	1.09	1.09	1.13	1.11	1.13	1.15	1.52		3.26	3.31	3.39	
wind	0.0 m/s	velocity	5.10	8.31	8.54	8.39	8.39	8.39	8.09	8.23	8.09	7.95	9.22	7.76	8.41	8.28	8.09	

Furuya, Kyohei (JPN) (1996)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Semi-Final 2 - 2017 Japanese National Championships (Osaka, JPN)***(2017) - tfdata-store.com/2017/07/13/post-1040/*

date	24-Jun-17	time	2.61	3.69	4.79	5.86	6.94	8.03	9.14	10.26	11.36	12.51	13.94	3 / 7				
reaction time	0.102	interval		1.08	1.10	1.07	1.08	1.09	1.11	1.12	1.10	1.15	1.43		3.25	3.28	3.37	
wind	0.3 m/s	velocity	5.26	8.46	8.31	8.54	8.46	8.39	8.23	8.16	8.31	7.95	9.80	7.89	8.44	8.36	8.14	

Heat 1 - 2017 Japanese National Championships (Osaka, JPN)*(2017) - tfdata-store.com/2017/07/13/post-1040/*

date	24-Jun-17	time	2.63	3.69	4.76	5.83	6.88	7.95	9.06	10.16	11.28	12.43	13.89	9 / 5				
reaction time	0.124	interval		1.06	1.07	1.07	1.05	1.07	1.11	1.10	1.12	1.15	1.46		3.20	3.23	3.37	
wind	1.3 m/s	velocity	5.22	8.62	8.54	8.54	8.70	8.54	8.23	8.31	8.16	7.95	9.60	7.92	8.57	8.49	8.14	

FINAL - 2017 Mito Invitational (Mito, JPN)*(2017) - tfdata-store.com/2017/05/06/post-423/*

date	05-May-17	time	2.63	3.72	4.82	5.93	7.05	8.15	9.23	10.37	11.48	12.59	14.02	4 / 3				
reaction time		interval		1.09	1.10	1.11	1.12	1.10	1.08	1.14	1.11	1.11	1.43		3.30	3.30	3.36	
wind	-2.3 m/s	velocity	5.22	8.39	8.31	8.23	8.16	8.31	8.46	8.02	8.23	8.23	9.80	7.85	8.31	8.31	8.16	

Heat 1 - 2017 Mito Invitational (Mito, JPN)*(2017) - tfdata-store.com/2017/05/06/post-423/*

date	05-May-17	time	2.64	3.74	4.82	5.90	7.00	8.09	9.18	10.30	11.42	12.55	14.00	5 / 1				
reaction time		interval		1.10	1.08	1.08	1.10	1.09	1.09	1.12	1.12	1.13	1.45		3.26	3.28	3.37	
wind	0.3 m/s	velocity	5.20	8.31	8.46	8.46	8.31	8.39	8.39	8.16	8.16	8.09	9.67	7.86	8.41	8.36	8.14	

B FINAL - 2017 Mikio Oda Memorial (Hiroshima, JPN)*(2017) - tfdata-store.com/2017/05/01/458/*

date	29-Apr-17	time	2.60	3.71	4.81	5.89	6.98	8.06	9.18	10.28	11.44	12.58	14.07	4 / 2				
reaction time		interval		1.11	1.10	1.08	1.09	1.08	1.12	1.10	1.16	1.14	1.49		3.29	3.29	3.40	
wind	-1.5 m/s	velocity	5.28	8.23	8.31	8.46	8.39	8.46	8.16	8.31	7.88	8.02	9.41	7.82	8.33	8.33	8.06	

Semi-Final 2 - 2016 Japanese University Championships (Kumagaya, JPN)*(2016.09.05) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en*

date	04-Sep-16	time	2.68	3.77	4.89	5.97	7.09	8.18	9.34	10.48	11.61	12.78	14.21	3 / 7				
reaction time	0.133	interval		1.09	1.12	1.08	1.12	1.09	1.16	1.14	1.13	1.17	1.43		3.29	3.37	3.44	
wind	0.7 m/s	velocity	5.12	8.39	8.16	8.46	8.16	8.39	7.88	8.02	8.09	7.81	9.80	7.74	8.33	8.14	7.97	

Furuya, Shinta (JPN) (2000)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Race 2 - 2020 World Athletics Trials (Fuji, JPN)***Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season*

date	06-Sep-20	time	2.65	3.76	4.83	5.92	7.00	8.10	9.22	10.36	11.49	12.64	14.16	7 / 4				
reaction time		interval		1.11	1.07	1.09	1.08	1.10	1.12	1.14	1.13	1.15	1.52	PB	3.27	3.30	3.42	

wind	1.3 m/s	velocity	5.18	8.23	8.54	8.39	8.46	8.31	8.16	8.02	8.09	7.95	9.22	7.77		8.39	8.31	8.02
U20 FINAL - 2019 Japanese National U18/U20 Championships (Hiroshima, JPN) (99cm)															<i>Kijima (2019) - research on athlete performance and technique- 2019 data book</i>			
date	18-Oct-19	time	2.60	3.69	4.75	5.79	6.85	7.91	8.99	10.06	11.17	12.28		13.79	7 / 3			
reaction time	0.122	interval		1.09	1.06	1.04	1.06	1.06	1.08	1.07	1.11	1.11	1.51			3.19	3.20	3.29
wind	-0.6 m/s	velocity	5.28	8.39	8.62	8.79	8.62	8.62	8.46	8.54	8.23	8.23	9.28	7.98		8.60	8.57	8.33
Furuya, Takumu (JPN) (1997)																		
B FINAL - 2019 Mikio Oda Memorial (Hiroshima, JPN)															<i>Kobayashi (2019) - research on athlete performance and technique- 2019 data book</i>			
date	28-Apr-19	time	2.73	3.82	4.93	6.00	7.10	8.20	9.31	10.43	11.57	12.73		14.28	4 / 5			
reaction time		interval		1.09	1.11	1.07	1.10	1.10	1.11	1.12	1.14	1.16	1.55			3.27	3.31	3.42
wind	1.4 m/s	velocity	5.03	8.39	8.23	8.54	8.31	8.31	8.23	8.16	8.02	7.88	9.05	7.70		8.39	8.28	8.02
FINAL - 2018 Seiko Golden Grand Prix (Osaka, JPN)															<i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>			
date	20-May-18	time	2.66	3.73	4.77	5.82	6.86	7.92	8.98	10.04	11.12	12.22		13.61	2 / 4			
reaction time	0.133	interval		1.07	1.04	1.05	1.04	1.06	1.06	1.06	1.08	1.10	1.39	PB		3.16	3.16	3.24
wind	-0.4 m/s	velocity	5.16	8.54	8.79	8.70	8.79	8.62	8.62	8.62	8.46	8.31	10.09	8.08		8.68	8.68	8.46
FINAL - 2018 Mikio Oda Memorial (Hiroshima, JPN)															<i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>			
date	29-Apr-18	time	2.67	3.74	4.77	5.81	6.87	7.91	8.96	10.02	11.10	12.18		13.57	2 / 2			
reaction time		interval		1.07	1.03	1.04	1.06	1.04	1.05	1.06	1.08	1.08	1.39			3.14	3.15	3.22
wind	2.6 m/s	velocity	5.14	8.54	8.87	8.79	8.62	8.79	8.70	8.62	8.46	8.46	10.09	8.11		8.73	8.70	8.52
Heat 3 - 2018 Mikio Oda Memorial (Hiroshima, JPN)															<i>(2018.05.01) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>			
date	29-Apr-18	time	2.65	3.71	4.77	5.83	6.88	7.95	9.00	10.07	11.15	12.24		13.70	2 / 3			
reaction time		interval		1.06	1.06	1.06	1.05	1.07	1.05	1.07	1.08	1.09	1.46			3.18	3.17	3.24
wind	2.2 m/s	velocity	5.18	8.62	8.62	8.62	8.70	8.54	8.70	8.54	8.46	8.39	9.60	8.03		8.62	8.65	8.46
FINAL - 2017 Nambu Memorial (Sapporo, JPN)															<i>(2017) - tfdata-store.com/2017/07/12/post-1025/</i>			
date	09-Jul-17	time	2.64	3.73	4.78	5.83	6.87	7.92	8.98	10.06	11.14	12.26		13.70	4 / 2			
reaction time		interval		1.09	1.05	1.05	1.04	1.05	1.06	1.08	1.08	1.12	1.44			3.19	3.15	3.28
wind	2.7 m/s	velocity	5.20	8.39	8.70	8.70	8.79	8.70	8.62	8.46	8.46	8.16	9.74	8.03		8.60	8.70	8.36
Heat 1 - 2017 Japanese National Championships (Osaka, JPN)															<i>(2017) - tfdata-store.com/2017/07/13/post-1040/</i>			
date	24-Jun-17	time	2.66	3.75	4.80	5.87	6.90	7.95	9.02	10.10	11.18	12.30		13.74	6 / 4			
reaction time	0.146	interval		1.09	1.05	1.07	1.03	1.05	1.07	1.08	1.08	1.12	1.44			3.21	3.15	3.28
wind	1.3 m/s	velocity	5.16	8.39	8.70	8.54	8.87	8.70	8.54	8.46	8.46	8.16	9.74	8.01		8.54	8.70	8.36
FINAL - 2017 Tokyo Six School Meeting (Tokyo, JPN)															<i>(2017) - tfdata-store.com/2017/04/10/post-342/</i>			
date	08-Apr-17	time	2.62	3.72	4.79	5.85	6.94	7.99	9.06	10.15	11.22	12.31		13.75	5 / 2			
reaction time		interval		7 steps	1.10	1.07	1.06	1.09	1.05	1.07	1.09	1.07	1.09	1.44		3.23	3.21	3.25
wind	0.5 m/s	velocity	5.24	8.31	8.54	8.62	8.39	8.70	8.54	8.39	8.54	8.39	9.74	8.00		8.49	8.54	8.44
Heat 1 - 2017 Tokyo Six School Meeting (Tokyo, JPN)															<i>(2017) - tfdata-store.com/2017/04/10/post-342/</i>			
date	08-Apr-17	time	2.64	3.72	4.82	5.86	6.92	7.98	9.06	10.14	11.23	12.34		13.84	5 / 1			
reaction time		interval		7 steps	1.08	1.10	1.04	1.06	1.06	1.08	1.08	1.09	1.11	1.50		3.22	3.20	3.28
wind	1.3 m/s	velocity	5.20	8.46	8.31	8.79	8.62	8.62	8.46	8.46	8.39	8.23	9.35	7.95		8.52	8.57	8.36
FINAL - 2016 Japanese University Championships (Kumagaya, JPN)															<i>(2016.09.06) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>			
date	04-Sep-16	time	2.66	3.76	4.85	5.94	7.02	8.12	9.23	10.34	11.48	12.64		14.09	3 / 2			
reaction time	0.149	interval		1.10	1.09	1.09	1.08	1.10	1.11	1.11	1.14	1.16	1.45			3.28	3.29	3.41
wind	-1.9 m/s	velocity	5.16	8.31	8.39	8.39	8.46	8.31	8.23	8.23	8.02	7.88	9.67	7.81		8.36	8.33	8.04
Semi-Final 2 - 2016 Japanese University Championships (Kumagaya, JPN)															<i>(2016.09.05) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>			
date	04-Sep-16	time	2.65	3.75	4.83	5.92	7.00	8.09	9.17	10.27	11.37	12.48		13.93	6 / 3			
reaction time	0.143	interval		1.10	1.08	1.09	1.08	1.09	1.08	1.10	1.10	1.11	1.45			3.27	3.25	3.31
wind	0.7 m/s	velocity	5.18	8.31	8.46	8.39	8.46	8.39	8.46	8.31	8.31	8.23	9.67	7.90		8.39	8.44	8.28
FINAL - 2016 IAAF World Junior Championships (Bydgoszcz, POL) (99cm)															<i>(2016.07.24) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>			
date	21-Jul-16	time	2.62	3.66	4.68	5.69	6.70	7.72	8.74	9.76	10.81	11.86		13.31	7 / 3			
reaction time	0.152	interval		1.04	1.02	1.01	1.01	1.02	1.02	1.02	1.05	1.05	1.45	NJR		3.07	3.05	3.12
wind	0.2 m/s	velocity	5.24	8.79	8.96	9.05	9.05	8.96	8.96	8.96	8.70	8.70	9.67	8.26		8.93	8.99	8.79
FINAL - 2016 Seiko Golden Grand Prix (Kawasaki, JPN)															<i>Kota (2016) - race analysis of japanese top-ranked men 110m and women 100m hurdlers</i>			
date	08-May-16	time	2.64	3.75	4.82	5.89	6.94	8.02	9.10	10.21	11.29	12.40		13.85	2 / 6			
reaction time	0.149	interval		1.11	1.07	1.07	1.05	1.08	1.08	1.11	1.08	1.11	1.45			3.25	3.21	3.30
wind	-0.6 m/s	velocity	5.20	8.23	8.54	8.54	8.70	8.46	8.46	8.23	8.46	8.23	9.67	7.94		8.44	8.54	8.31
FINAL - 2016 Mikio Oda Memorial (Hiroshima, JPN)															<i>Kota (2016) - race analysis of japanese top-ranked men 110m and women 100m hurdlers</i>			
date	29-Apr-16	time	2.67	3.75	4.84	5.90	6.96	8.03	9.12	10.21	11.32	12.44		13.92	1 / 4			
reaction time		interval		1.08	1.09	1.06	1.06	1.07	1.09	1.09	1.11	1.12	1.48			3.23	3.22	3.32
wind	-0.5 m/s	velocity	5.14	8.46	8.39	8.62	8.62	8.54	8.39	8.39	8.23	8.16	9.47	7.90		8.49	8.52	8.26

FINAL - 2015 Japanese National Junior Championships (Nagoya, JPN) (99cm)													<i>Takashima (2015) - race analysis of 110m & 100m hurdles in Japan- results 2015 competitions</i>					
date	16-Oct-15	time	2.67	3.76	4.83	5.90	6.97	8.05	9.13	10.21	11.31	12.40	13.86	3 / 1				
reaction time		interval		1.09	1.07	1.07	1.07	1.08	1.08	1.08	1.10	1.09	1.46		3.23	3.23	3.27	
wind	0.1 m/s	velocity	5.14	8.39	8.54	8.54	8.54	8.46	8.46	8.46	8.31	8.39	9.60	7.94	8.49	8.49	8.39	

FINAL - 2015 Japanese National Championships (Niigata, JPN)													<i>Takashima (2015) - race analysis of 110m & 100m hurdles in Japan- results 2015 competitions</i>					
date	28-Jun-15	time	2.62	3.72	4.79	5.86	6.92	7.98	9.07	10.17	11.27	12.36	13.81	5 / 2				
reaction time	0.132	interval		1.10	1.07	1.07	1.06	1.06	1.09	1.10	1.10	1.09	1.45		3.24	3.21	3.29	
wind	-1.4 m/s	velocity	5.24	8.31	8.54	8.54	8.62	8.62	8.39	8.31	8.31	8.39	9.67	7.97	8.46	8.54	8.33	

FINAL - 2015 Shizuoka International Athletics Meeting (Fukuroi, JPN)													<i>Takashima (2015) - race analysis of 110m & 100m hurdles in Japan- results 2015 competitions</i>					
date	03-May-15	time	2.63	3.74	4.82	5.91	6.99	8.07	9.16	10.26	11.36	12.48	13.93	/ 2				
reaction time		interval		1.11	1.08	1.09	1.08	1.08	1.09	1.10	1.10	1.12	1.45		3.28	3.25	3.32	
wind	-0.8 m/s	velocity	5.22	8.23	8.46	8.39	8.46	8.46	8.39	8.31	8.31	8.16	9.67	7.90	8.36	8.44	8.26	

Semi-Final 1 - 2014 Japanese National Junior Championships (Nagoya, JPN) (99cm)													<i>Kota (2017) - 70th high school championships: JAF scientific committee- biomechanics data</i>					
date	03-Oct-14	time	2.62	3.71	4.81	5.87	6.93	8.01	9.10	10.18	11.28	12.37	13.83	/ 1				
reaction time		interval		1.09	1.10	1.06	1.06	1.08	1.09	1.08	1.10	1.09	1.46	PB	3.25	3.23	3.27	
wind	0.7 m/s	velocity	5.24	8.39	8.31	8.62	8.62	8.46	8.39	8.46	8.31	8.39	9.60	7.95	8.44	8.49	8.39	

Semi-Final 1 - 2014 Kanto Championships (Sagamihara, JPN)													<i>(2017.03.01) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>					
date	31-Aug-14	time	2.62	3.72	4.80	5.85	6.93	8.00	9.08	10.17	11.28	12.40	13.89	6 / 1				
reaction time		interval		1.10	1.08	1.05	1.08	1.07	1.08	1.09	1.11	1.12	1.49	PB	3.23	3.23	3.32	
wind	-0.2 m/s	velocity	5.24	8.31	8.46	8.70	8.46	8.54	8.46	8.39	8.23	8.16	9.41	7.92	8.49	8.49	8.26	

FINAL - 2014 Japanese National High School Championships (Kofu, JPN) (99cm)													<i>Yanagiya (2014) - research on athlete performance and technique- 2014 data book</i>					
date	03-Aug-14	time	2.64	3.74	4.82	5.89	6.97	8.05	9.16	10.27	11.39	12.55	14.05	4 / 1				
reaction time		interval		1.10	1.08	1.07	1.08	1.08	1.11	1.11	1.12	1.16	1.50		3.25	3.27	3.39	
wind	-2.4 m/s	velocity	5.20	8.31	8.46	8.54	8.46	8.46	8.23	8.23	8.16	7.88	9.35	7.83	8.44	8.39	8.09	

Gabriel, G.	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
Semi-Final ? - 1986 French National Indoor Championships (Lievin, FRA)													<i>Aubert (1986) - indoor - video - haies, etude des performances</i>					
date	26-Jan-86	time	2.66	3.76	4.91	6.01	7.10					8.08	/ 5					
reaction time		interval		1.10	1.15	1.10	1.09				0.98			3.35				
		velocity	5.16	8.31	7.95	8.31	8.39				9.92	7.43		8.19				

Heat ? - 1986 French National Indoor Championships (Lievin, FRA)													<i>Aubert (1986) - indoor - video - haies, etude des performances</i>					
date	25-Jan-86	time	2.70	3.85	4.98	6.08	7.24					8.16	/ 5					
reaction time		interval		1.15	1.13	1.10	1.16				0.92			3.38				
		velocity	5.08	7.95	8.09	8.31	7.88				10.57	7.35		8.11				

Gaio, Finley (SUI) (1999)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
FINAL - 2023 Weltklasse (Zürich, SUI)													<i>Omega Timing (2023) - diamond league race analysis</i>					
date	31-Aug-23	time	2.45	3.55	4.63	5.69	6.74	7.81	8.92	10.01	11.10	12.18	13.77	9 / 8				
reaction time	0.154	interval	7 steps	1.10	1.08	1.06	1.05	1.07	1.11	1.09	1.09	1.08	1.59		3.24	3.23	3.26	
wind	-0.1 m/s	velocity	5.60	8.31	8.46	8.62	8.70	8.54	8.23	8.39	8.39	8.46	8.82	7.99	8.46	8.49	8.41	

FINAL - 2022 European Athletics Championships (Munich, GER) (TV Analysis)													<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>					
date	17-Aug-22	time	2.58	3.64	4.70	5.72	6.74	7.78	8.82	9.86	10.94	12.02	13.50	2 / 5				
reaction time	0.172	interval	7 steps	1.06	1.06	1.02	1.02	1.04	1.04	1.04	1.08	1.08	1.48		3.14	3.10	3.20	
wind	-0.2 m/s	velocity	5.32	8.62	8.62	8.96	8.96	8.79	8.79	8.79	8.46	8.46	9.47	8.15	8.73	8.85	8.57	

FINAL - 2021 Weltklasse (Zürich, SUI) (TV Analysis)													<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>					
date	09-Sep-21	time	2.56	3.64	4.70	5.74	6.82	7.88	8.96	10.02	11.12	12.22	13.72	8 / 6				
reaction time	0.135	interval	7 steps	1.08	1.06	1.04	1.08	1.06	1.08	1.06	1.10	1.10	1.50		3.18	3.22	3.26	
wind	0.6 m/s	velocity	5.36	8.46	8.62	8.79	8.46	8.62	8.46	8.62	8.31	8.31	9.35	8.02	8.62	8.52	8.41	

Gao Shunyang (CHN) (2001)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
U20 Heat 3 - 2019 Chinese National Youth Games (Taiyuan, CHN) (99cm)													<i>CAA Hurdle Development (2019)</i>					
date	14-Aug-19	time	2.75	3.85	4.95	6.02	7.11	8.19	9.28	10.38	11.49	12.64	14.21	2 / 5				
reaction time	0.184	interval		1.10	1.10	1.07	1.09	1.08	1.09	1.10	1.11	1.15	1.57		3.27	3.26	3.36	
wind	0.6 m/s	velocity	4.99	8.31	8.31	8.54	8.39	8.46	8.39	8.31	8.23	7.95	8.93	7.74	8.39	8.41	8.16	

García, Anier (CUB) (1976)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
FINAL - 2004 Olympic Games (Athens, GRE)													<i>Ruiz (2004) - las carreras con vallas de juegos olímpicos de atenas '04</i>					
date	27-Aug-04	time	2.47	3.51	4.53	5.55	6.55	7.55	8.57	9.61	10.65	11.69	13.20	7 / 3				
reaction time	0.169	interval		1.04	1.02	1.02	1.00	1.00	1.02	1.04	1.04	1.04	1.51		3.08	3.02	3.12	
wind	0.3 m/s	velocity	5.55	8.79	8.96	8.96	9.14	9.14	8.96	8.79	8.79	8.79	9.28	8.33	8.90	9.08	8.79	

FINAL - 2002 IAAF World Cup (Madrid, ESP)													<i>Sanchez (2002) - copa del mundo de Madrid '02: análisis de la carreras con villas</i>					
date	21-Sep-02	time	2.47	3.49	4.50	5.50	6.50	7.51	8.52	9.52	10.56	11.61	13.10	9 / 1				
reaction time	0.136	interval		1.02	1.01	1.00	1.00	1.01	1.01	1.00	1.04	1.05	1.49		3.03	3.02	3.09	
wind	-2.2 m/s	velocity	5.55	8.96	9.05	9.14	9.14	9.05	9.05	9.14	8.79	8.70	9.41	8.40	9.05	9.08	8.87	

FINAL - 2001 ISTAF (Berlin, GER)Graubner (2009) - <http://www.fgs.uni-halle.de>

date	31-Aug-09	time	2.57	3.60	4.61	5.60	6.61	7.64	8.66	9.68	10.69	11.76	13.15	5 / 2				
reaction time	0.168	interval		1.03	1.01	0.99	1.01	1.03	1.02	1.02	1.01	1.07	1.39		3.03	3.06	3.10	
wind	1.0 m/s	velocity	5.34	8.87	9.05	9.23	9.05	8.87	8.96	8.96	9.05	8.54	10.09	8.37	9.05	8.96	8.85	

FINAL - 1999 IAAF World Championships (Sevilla, ESP)

Sanchez (1999) - Sevilla '99: análisis de la carreras con villas

date	25-Aug-99	time	2.52	3.53	4.54	5.53	6.53	7.52	8.51	9.53	10.59	11.65	13.07	3 / 2				
reaction time	0.158	interval		1.01	1.01	0.99	1.00	0.99	0.99	1.02	1.06	1.06	1.42		AR	3.01	2.98	3.14
wind	1.0 m/s	velocity	5.44	9.05	9.05	9.23	9.14	9.23	9.23	8.96	8.62	8.62	9.87	8.42		9.11	9.20	8.73

Semi-Final 2 - 1999 IAAF World Championships (Sevilla, ESP)

Sanchez (1999) - Sevilla '99: análisis de la carreras con villas

date	24-Aug-99	time	2.51	3.55	4.55	5.55	6.55	7.54	8.56	9.60	10.64	11.72	13.18	5 / 1				
reaction time	0.139	interval		1.04	1.00	1.00	1.00	0.99	1.02	1.04	1.04	1.08	1.46			3.04	3.01	3.16
wind	0.0 m/s	velocity	5.47	8.79	9.14	9.14	9.14	9.23	8.96	8.79	8.79	8.46	9.60	8.35		9.02	9.11	8.68

Quarter-Final 1 - 1999 IAAF World Championships (Sevilla, ESP)

Sanchez (1999) - Sevilla '99: análisis de la carreras con villas

date	23-Aug-99	time	2.54	3.57	4.58	5.58	6.58	7.58	8.59	9.62	10.68	11.74	13.20	3 / 2				
reaction time	0.169	interval		1.03	1.01	1.00	1.00	1.00	1.01	1.03	1.06	1.06	1.46			3.04	3.01	3.15
wind	-0.4 m/s	velocity	5.40	8.87	9.05	9.14	9.14	9.14	9.05	8.87	8.62	8.62	9.60	8.33		9.02	9.11	8.70

Heat 6 - 1999 IAAF World Championships (Sevilla, ESP)

Sanchez (1999) - Sevilla '99: análisis de la carreras con villas

date	23-Aug-99	time	2.53	3.54	4.54	5.55	6.55	7.56	8.59	9.63	10.71	11.80	13.40	1 / 1				
reaction time	0.155	interval		1.01	1.00	1.01	1.00	1.01	1.03	1.04	1.08	1.09	1.60			3.02	3.04	3.21
wind	0.0 m/s	velocity	5.42	9.05	9.14	9.05	9.14	9.05	8.87	8.79	8.46	8.39	8.76	8.21		9.08	9.02	8.54

Garcia, Yordanis (CUB) (1988)**Decathlon - Heat 2 - 2009 IAAF World Championships (Berlin, GER)**

Graubner (2009) - biomechanical analyses at the 12th IAAF world championships

date	20-Aug-09	time	2.61	3.69	4.78	5.89	6.99	8.11	9.21	10.30	11.45	12.59	14.08	4 / 2				
reaction time	0.156	interval		1.08	1.09	1.11	1.10	1.12	1.10	1.09	1.15	1.14	1.49			3.28	3.32	3.38
wind	0.3 m/s	velocity	5.26	8.46	8.39	8.23	8.31	8.16	8.31	8.39	7.95	8.02	9.41	7.81		8.36	8.26	8.11

Gault, Willie (USA) (1960)**FINAL - 1983 IAAF World Championships (Helsinki, FIN)**

Knoke (1984) - the hurdles

date	12-Aug-83	time	2.54	3.57	4.64	5.69	6.72	7.74	8.78	9.83	10.97	12.05	13.48	8 / 3				
reaction time	0.161	interval		1.03	1.07	1.05	1.03	1.02	1.04	1.05	1.14	1.08	1.43			3.15	3.09	3.27
wind	1.3 m/s	velocity	5.40	8.87	8.54	8.70	8.87	8.96	8.79	8.70	8.02	8.46	9.80	8.16		8.70	8.87	8.39

Geerds, Job (NED) (2002)**FINAL - 2024 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)**

Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record

date	10-Feb-24	time	2.48	3.52	4.58	5.60	6.58						7.65	8 / 7				
reaction time	0.185	interval	7 steps	1.04	1.06	1.02	0.98						7.65			3.12		
		velocity	5.53	8.79	8.62	8.96	9.33						1.83	7.84		8.79		

Giaconi, Andrea (ITA) (1974)**Heat 3 - 2002 European Championships (Munich, GER)**Graubner (2009) - <http://www.fgs.uni-halle.de>

date	09-Aug-02	time	2.61	3.69	4.75	5.79	6.81	7.87	8.91	9.97	11.02	12.11	13.55	/ 1				
reaction time	0.116	interval		1.08	1.06	1.04	1.02	1.06	1.04	1.06	1.05	1.09	1.44			3.18	3.12	3.20
wind	2.0 m/s	velocity	5.26	8.46	8.62	8.79	8.96	8.62	8.79	8.62	8.70	8.39	9.74	8.12		8.62	8.79	8.57

Gilbert, Tre'Bien (USA) (1999)**Semi-Final 2 - 2022 USATF National Championships (Eugene, OR)**

USATF (2022) - Results powered by Karmarush.com

date	26-Jun-22	time	2.54	3.58	4.62	5.65	6.66	7.68	8.71	9.77	10.85	11.95	13.51	8 / 5				
reaction time		interval		1.04	1.04	1.03	1.01	1.02	1.03	1.06	1.08	1.10	1.56			3.11	3.06	3.24
wind	0.1 m/s	velocity	5.40	8.79	8.79	8.87	9.05	8.96	8.87	8.62	8.46	8.31	8.99	8.14		8.82	8.96	8.46

Semi-Final 1 - 2020 USA Olympic Trials (Eugene, OR) (TV Analysis)

Henson (2021) - Athlete First: 2021 year end hurdle report

date	26-Jun-21	time	2.50	3.58	4.60	5.61	6.63	7.64	8.71	9.76	10.80	11.92	13.41	8 / 5				
reaction time	0.191	interval	7 steps	1.08	1.02	1.01	1.02	1.01	1.07	1.05	1.04	1.12	1.49			PB	3.11	3.10
wind	1.8 m/s	velocity	5.49	8.46	8.96	9.05	8.96	9.05	8.54	8.70	8.79	8.16	9.41	8.20		8.82	8.85	8.54

Gletty, Makenson (FRA) (1999)**Decathlon - Heat 3 - 2024 Olympic Games (Paris, FRA)**

Paris 2024 Olympic Games - Results Book (2024)

date	03-Aug-24	time	2.47	3.57	4.65	5.71	6.76	7.84	8.93	10.02	11.14	12.27	13.96	2 / 3				
reaction time	0.144	interval	7 steps	1.10	1.08	1.06	1.05	1.08	1.09	1.09	1.12	1.13	1.69			3.24	3.22	3.34
wind	0.7 m/s	velocity	5.55	8.31	8.46	8.62	8.70	8.46	8.39	8.39	8.16	8.09	8.30	7.88		8.46	8.52	8.21

Golaube, Kamal (USA)**Heat 1 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)**

CAA Hurdle Development (2020)

date	14-Feb-20	time	2.63	3.75	4.89	6.00	7.12						8.16	5 / 7				
reaction time	0.130	interval		1.12	1.14	1.11	1.12						1.04			3.37		
		velocity	5.22	8.16	8.02	8.23	8.16						9.35	7.35		8.14		

		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Golubovic, Daniel (AUS) (1993)																		
Decathlon - Heat 2 - 2024 Olympic Games (Paris, FRA)																		
date	03-Aug-24	time	2.60	3.80	4.98	6.15	7.30	8.46	9.64	10.84	12.04	13.25		15.15	4 / 7			
reaction time	0.166	interval		1.20	1.18	1.17	1.15	1.16	1.18	1.20	1.20	1.21	1.90			3.55	3.49	3.61
wind	0.2 m/s	velocity	5.28	7.62	7.75	7.81	7.95	7.88	7.75	7.62	7.62	7.55	7.38	7.26		7.72	7.86	7.60
Gong Kewei (CHN) (1994)																		
Decathlon - Heat 3 - 2021 Chinese National Championships (Chongqing, CHN)																		
date	27-Jun-21	time	2.71	3.89	5.05	6.19	7.32	8.46	9.62	10.81	12.01	13.21		14.76	2 / 1			
reaction time	0.177	interval		1.18	1.16	1.14	1.13	1.14	1.16	1.19	1.20	1.20	1.55			3.48	3.43	3.59
wind	-0.2 m/s	velocity	5.06	7.75	7.88	8.02	8.09	8.02	7.88	7.68	7.62	7.62	9.05	7.45		7.88	7.99	7.64
Gonigam, Philippe (FRA) (1963)																		
Heat ? - 1986 French National Indoor Championships (Lievin, FRA)																		
date	25-Jan-86	time	2.72	3.84	4.96	6.07	7.20							8.18	/ 5			
reaction time		interval		1.12	1.12	1.11	1.13						0.98			3.35		
		velocity	5.04	8.16	8.16	8.23	8.09						9.92	7.33		8.19		
Graham, Javon (USA)																		
Semi-Final 2 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)																		
date	15-Feb-20	time	2.60	3.70	4.77	5.83	6.91							7.84	2 / 5			
reaction time	0.158	interval		1.10	1.07	1.06	1.08						0.93			3.23		
		velocity	5.28	8.31	8.54	8.62	8.46						10.45	7.65		8.49		
Heat 3 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)																		
date	14-Feb-20	time	2.65	3.77	4.82	5.92	6.97							7.92	8 / 4			
reaction time	0.166	interval		1.12	1.05	1.10	1.05						0.95			3.27		
		velocity	5.18	8.16	8.70	8.31	8.70						10.23	7.58		8.39		
Greff, Ronan (FRA) (1998)																		
FINAL - 2020 Meeting Pro Athlé Tour de Marseille (Marseille, FRA) (TV Analysis)																		
date	03-Sep-20	time	2.69	3.80	4.88	5.89	7.03	8.08	9.15	10.30	11.41	12.49		14.16	1 / 8			
reaction time	0.247	interval		1.11	1.08	1.01	1.14	1.05	1.07	1.15	1.11	1.08	1.67			3.20	3.26	3.34
wind	-0.3 m/s	velocity	5.10	8.23	8.46	9.05	8.02	8.70	8.54	7.95	8.23	8.46	8.40	7.77		8.57	8.41	8.21
Gu Yihe (CHN) (2000)																		
Decathlon - Heat 2 - 2021 Chinese National Championships (Chongqing, CHN)																		
date	27-Jun-21	time	2.87	4.07	5.34	6.57	7.82	9.07	10.33	11.58	12.86	14.16		15.89	2 / 5			
reaction time	0.208	interval		1.20	1.27	1.23	1.25	1.25	1.26	1.25	1.28	1.30	1.73			3.70	3.76	3.83
wind	-0.2 m/s	velocity	4.78	7.62	7.20	7.43	7.31	7.31	7.25	7.31	7.14	7.03	8.10	6.92		7.41	7.29	7.16
Gundersen, Gaute (NOR) (1972)																		
FINAL - 1997 European Cup (Munich, GER)																		
date	22-Jun-97	time	2.66	3.74	4.78	5.82	6.86	7.91	8.98	10.04	11.14	12.26		13.70	/ 5			
reaction time		interval		1.08	1.04	1.04	1.05	1.07	1.06	1.10	1.12	1.44				3.16	3.16	3.28
wind	0.2 m/s	velocity	5.16	8.46	8.79	8.79	8.79	8.70	8.54	8.62	8.31	8.16	9.74	8.03		8.68	8.68	8.36
Guo Qi (CHN) (1990)																		
Decathlon - Heat 1 - 2021 Chinese National Championships (Chongqing, CHN)																		
date	27-Jun-21	time	2.78	3.99	5.17	6.35	7.52	8.71	9.89	11.08	12.28	13.53		15.18	5 / 4			
reaction time	0.188	interval	7 steps	1.21	1.18	1.18	1.17	1.19	1.18	1.19	1.20	1.25	1.65			3.57	3.54	3.64
wind	-0.2 m/s	velocity	4.94	7.55	7.75	7.75	7.81	7.68	7.75	7.68	7.62	7.31	8.50	7.25		7.68	7.75	7.53
Decathlon - Heat 1 - 2019 Chinese National Championships (Shenyang, CHN)																		
date	11-Jul-19	time	2.75	3.91	5.05	6.19	7.32	8.47	9.62	10.77	11.98	13.16		14.75	6 / 2			
reaction time	0.169	interval	7 steps	1.16	1.14	1.14	1.13	1.15	1.15	1.15	1.21	1.18	1.59			3.44	3.43	3.54
wind	-0.6 m/s	velocity	4.99	7.88	8.02	8.02	8.09	7.95	7.95	7.95	7.55	7.75	8.82	7.46		7.97	7.99	7.75
Guo Zhongjie (CHN) (2001)																		
FINAL - 2021 Chinese National Championships (Chongqing, CHN)																		
date	25-Jun-21	time	2.70	3.78	4.85	5.89	6.97	8.04	9.12	10.21	11.31	12.44		13.91	6 / 5			
reaction time	0.182	interval		1.08	1.07	1.04	1.08	1.07	1.08	1.09	1.10	1.13	1.47			3.19	3.23	3.32
wind	1.6 m/s	velocity	5.08	8.46	8.54	8.79	8.46	8.54	8.46	8.39	8.31	8.09	9.54	7.91		8.60	8.49	8.26
Heat 3 - 2021 Chinese National Championships (Chongqing, CHN)																		
date	25-Jun-21	time	2.66	3.72	4.79	5.84	6.90	7.96	9.06	10.15	11.29	12.45		13.94	4 / 2			
reaction time	0.178	interval		1.06	1.07	1.05	1.06	1.06	1.10	1.09	1.14	1.16	1.49			3.18	3.22	3.39
wind	0.5 m/s	velocity	5.16	8.62	8.54	8.70	8.62	8.62	8.31	8.39	8.02	7.88	9.41	7.89		8.62	8.52	8.09
FINAL - 2020 Chinese Olympic Trials (Shaoxing, CHN)																		
date	12-Jun-21	time	2.71	3.77	4.85	5.95	7.10							dnf	8 / --			
reaction time		interval		1.06	1.08	1.10	1.15									3.24		
wind	0.9 m/s	velocity	5.06	8.62	8.46	8.31	7.95									8.46		

Heat 2 - 2020 Chinese Olympic Trials (Shaoxing, CHN)

date	12-Jun-21	time	2.61	3.70	4.77	5.85	6.93	8.02	9.14	10.26	11.36	12.54	14.15	<i>CAA Hurdle Development (2021)</i>			
reaction time	0.177	interval		1.09	1.07	1.08	1.08	1.09	1.12	1.12	1.10	1.18	1.61	3.24	3.29	3.40	
wind	-0.8 m/s	velocity	5.26	8.39	8.54	8.46	8.46	8.39	8.16	8.16	8.31	7.75	8.71	7.77	8.46	8.33	8.06

FINAL - 2020 Chinese National Championships (Shaoxing, CHN)

date	16-Sep-20	time	2.74	3.81	4.89	5.96	7.05	8.14	9.24	10.36	11.51	12.67	14.22	<i>CAA Hurdle Development (2020)</i>			
reaction time	0.185	interval		1.07	1.08	1.07	1.09	1.09	1.10	1.12	1.15	1.16	1.55	3.22	3.28	3.43	
wind	0.4 m/s	velocity	5.01	8.54	8.46	8.54	8.39	8.39	8.31	8.16	7.95	7.88	9.05	7.74	8.52	8.36	7.99

Heat 1 - 2020 Chinese National Championships (Shaoxing, CHN)

date	16-Sep-20	time	2.71	3.79	4.87	5.95	7.05	8.16	9.26	10.37	11.52	12.68	14.22	<i>CAA Hurdle Development (2020)</i>			
reaction time	0.179	interval		1.08	1.08	1.08	1.10	1.11	1.10	1.11	1.15	1.16	1.54	3.24	3.31	3.42	
wind	0.3 m/s	velocity	5.06	8.46	8.46	8.46	8.31	8.23	8.31	8.23	7.95	7.88	9.10	7.74	8.46	8.28	8.02

FINAL - 2019 Chinese National Grand Prix Final (Daqing, CHN)

date	24-Aug-19	time	2.73	3.80	4.90	6.00	7.11	8.24	9.37	10.52	11.68	12.88	14.46	<i>CAA Hurdle Development (2019)</i>			
reaction time	0.226	interval		1.07	1.10	1.10	1.11	1.13	1.13	1.15	1.16	1.20	1.58	3.27	3.37	3.51	
wind	-0.1 m/s	velocity	5.03	8.54	8.31	8.31	8.23	8.09	8.09	7.95	7.88	7.62	8.87	7.61	8.39	8.14	7.81

Heat 1 - 2019 Chinese National Grand Prix Final (Daqing, CHN)

date	23-Aug-19	time	2.73	3.84	4.92	6.01	7.12	8.22	9.36	10.51	11.66	12.85	14.42	<i>CAA Hurdle Development (2019)</i>			
reaction time	0.193	interval		1.11	1.08	1.09	1.11	1.10	1.14	1.15	1.15	1.19	1.57	3.28	3.35	3.49	
wind	-0.2 m/s	velocity	5.03	8.23	8.46	8.39	8.23	8.31	8.02	7.95	7.95	7.68	8.93	7.63	8.36	8.19	7.86

U20 FINAL - 2019 Chinese National Youth Games (Taiyuan, CHN) (99cm)

date	14-Aug-19	time	2.64	3.70	4.75	5.77	6.79	7.82	8.87	9.93	11.03	12.14	13.68	<i>CAA Hurdle Development (2019)</i>			
reaction time	0.162	interval		1.06	1.05	1.02	1.02	1.03	1.05	1.06	1.10	1.11	1.54	PB	3.13	3.10	3.27
wind	-0.3 m/s	velocity	5.20	8.62	8.70	8.96	8.96	8.87	8.70	8.62	8.31	8.23	9.10	8.04	8.76	8.85	8.39

U20 Heat 1 - 2019 Chinese National Youth Games (Taiyuan, CHN) (99cm)

date	14-Aug-19	time	2.60	3.68	4.75	5.77	6.81	7.86	8.92	10.03	11.11	12.26	13.90	<i>CAA Hurdle Development (2019)</i>			
reaction time	0.211	interval		1.08	1.07	1.02	1.04	1.05	1.06	1.11	1.08	1.15	1.64	3.17	3.15	3.34	
wind	0.5 m/s	velocity	5.28	8.46	8.54	8.96	8.79	8.70	8.62	8.23	8.46	7.95	8.55	7.91	8.65	8.70	8.21

Heat 1 - 2019 Chinese National Championships (Shenyang, CHN)

date	08-Jul-19	time	2.70	3.80	4.92	6.00	7.11	8.19	9.32	10.43	11.58	12.73	14.30	<i>CAA Hurdle Development (2019)</i>			
reaction time	0.190	interval		1.10	1.12	1.08	1.11	1.08	1.13	1.11	1.15	1.15	1.57	3.30	3.32	3.41	
wind	0.1 m/s	velocity	5.08	8.31	8.16	8.46	8.23	8.46	8.09	8.23	7.95	7.95	8.93	7.69	8.31	8.26	8.04

FINAL - 2019 Chinese National Grand Prix 4 (Luoyang, CHN)

date	30-May-19	time	2.68	3.77	4.87	5.96	7.05	8.12	9.24	10.36	11.53	12.68	14.22	<i>CAA Hurdle Development (2019)</i>			
reaction time	0.192	interval		1.09	1.10	1.09	1.09	1.07	1.12	1.12	1.17	1.15	1.54	3.28	3.28	3.44	
wind	0.0 m/s	velocity	5.12	8.39	8.31	8.39	8.39	8.54	8.16	8.16	7.81	7.95	9.10	7.74	8.36	8.36	7.97

FINAL - 2019 Chinese National Grand Prix 3 (Jinhai, CHN)

date	23-May-19	time	2.74	3.82	4.88	5.94	7.02	8.12	9.22	10.32	11.46	12.66	14.25	<i>CAA Hurdle Development (2019)</i>			
reaction time	0.219	interval		1.08	1.06	1.06	1.08	1.10	1.10	1.10	1.14	1.20	1.59	3.20	3.28	3.44	
wind	2.5 m/s	velocity	5.01	8.46	8.62	8.62	8.46	8.31	8.31	8.31	8.02	7.62	8.82	7.72	8.57	8.36	7.97

B-FINAL - 2019 Chinese Indoor National Grand Prix 2 (Nanjing, CHN)

date	24-Feb-19	time	2.70	3.82	4.90	5.97	7.10						8.04	<i>CAA Hurdle Development (2019)</i>			
reaction time		interval		1.12	1.08	1.07	1.13						0.94	3.27			
		velocity	5.08	8.16	8.46	8.54	8.09						10.34	7.46	8.39		

A-FINAL - 2019 Chinese Indoor National Grand Prix 1 (Nanjing, CHN)

date	20-Feb-19	time	2.73	3.82	4.90	6.00	7.09						8.03	<i>CAA Hurdle Development (2019)</i>			
reaction time		interval		1.09	1.08	1.10	1.09						0.94	PB	3.27		
		velocity	5.03	8.39	8.46	8.31	8.39						10.34	7.47	8.39		

Heat 2 - 2018 Chinese National Championships (Taiyuan, CHN)

date	15-Sep-18	time	2.70	3.80	4.92	6.00	7.15	8.31	9.46	10.61	11.78	13.00	14.59	<i>Henson (2018) - coaching observations</i>			
reaction time		interval		1.10	1.12	1.08	1.15	1.16	1.15	1.15	1.17	1.22	1.59	3.30	3.46	3.54	
wind	0.7 m/s	velocity	5.08	8.31	8.16	8.46	7.95	7.88	7.95	7.95	7.81	7.49	8.82	7.54	8.31	7.92	7.75

Gustafsson, Josua (SWE) (1988)

FINAL - 2010 Swedish National Championships (Falun, SWE)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
date	22-Aug-10	time	2.80	3.97	5.17	6.33	7.49	8.69	9.89	11.10	12.31	13.54	15.17	1 / 7			
reaction time		interval		1.17	1.20	1.16	1.16	1.20	1.20	1.21	1.21	1.23	1.63		3.53	3.56	3.65
wind	-0.7 m/s	velocity	4.90	7.81	7.62	7.88	7.88	7.62	7.62	7.55	7.55	7.43	8.60	7.25	7.77	7.70	7.51

Gustafsson, Petter (SWE) (1994)

H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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FINAL 2 - 2017 Windsprint (Sundsvall, SWE)

date	30-Jul-17	time	2.65	3.77	4.90	6.05	7.18	8.37	9.52	10.66	11.85	13.05		14.56
reaction time		interval		1.12	1.13	1.15	1.13	1.19	1.15	1.14	1.19	1.20	1.51	
wind	1.0 m/s	velocity	5.18	8.16	8.09	7.95	8.09	7.68	7.95	8.02	7.68	7.62	9.28	7.55

(2017) - www.windsprint/Splittider/
/ 33.40 3.47 3.53
8.06 7.90 7.77**FINAL - 2017 Windsprint (Sundsvall, SWE)**

date	30-Jul-17	time	2.68	3.81	4.94	6.07	7.22	8.36	9.51	10.69	11.86	13.00		14.54
reaction time		interval		1.13	1.13	1.13	1.15	1.14	1.15	1.18	1.17	1.14	1.54	
wind	1.0 m/s	velocity	5.12	8.09	8.09	8.09	7.95	8.02	7.95	7.75	7.81	8.02	9.10	7.57

(2017) - www.windsprint/Splittider/
/ 33.39 3.44 3.49
8.09 7.97 7.86**Guzik, Vojtech (CZE) (1997)**

Heat 3 - 2014 Czech Republic National U18 Championships (Trinec, CZE) (91cm)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
date	28-Jun-14	time	2.83	4.04	5.23	6.41	7.60	8.80	10.01	11.21	12.50	13.79	15.54	6 / 6			
reaction time	0.170	interval		1.21	1.19	1.18	1.19	1.20	1.21	1.20	1.29	1.29	1.75		3.58	3.60	3.78
wind	-1.6 m/s	velocity	4.85	7.55	7.68	7.75	7.68	7.62	7.55	7.62	7.09	7.09	8.01	7.08	7.66	7.62	7.25

*Feher (2014) - Final report from the U18 & U20 Czech Republic national championships***Hairston, Max (USA) (1994)**

Heat 4 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
date	24-Jun-24	time	2.62	3.69	4.75	5.83	6.86	7.95	9.00				6 / --			
reaction time		interval	7 steps	1.07	1.06	1.08	1.03	1.09	1.05			DQ		3.21	3.17	
wind	1.2 m/s	velocity	5.24	8.54	8.62	8.46	8.87	8.39	8.70					8.54	8.65	

*Henson (2024) - Athlete First: 2024 year end hurdle report***FINAL - 2020 Millrose Games (New York, NY) (TV Analysis)**

date	08-Feb-20	time	2.57	3.67	4.77	5.81	6.87					7.87	2 / 7			
reaction time	0.206	interval	7 steps	1.10	1.10	1.04	1.06				1.00			3.24		
		velocity	5.34	8.31	8.31	8.79	8.62				9.72	7.62		8.46		

*Henson (2020) - Athlete First: 2020 year end hurdle report***FINAL - 2020 Mountain T's Invitational (Flagstaff AZ) (Altitude)**

date	01-Feb-20	time	2.65	3.75	4.82	5.92	6.99					7.91	3 / 4			
reaction time		interval	7 steps	1.10	1.07	1.10	1.07				0.92			3.27		
		velocity	5.18	8.31	8.54	8.31	8.54				10.57	7.59		8.39		

*CAA Hurdle Development (2020)***Heat 2 - 2020 Mountain T's Invitational (Flagstaff AZ) (Altitude)**

date	01-Feb-20	time	2.66	3.75	4.86	5.94	7.03					7.96	4 / 1			
reaction time		interval	7 steps	1.09	1.11	1.08	1.09				0.93			3.28		
		velocity	5.16	8.39	8.23	8.46	8.39				10.45	7.54		8.36		

*CAA Hurdle Development (2020)***Haloun, Lukáš (CZE) (1991)**

Heat 1 - 2012 Czech Republic National Indoor Championships (Praha, CZE)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
date	25-Feb-12	time	2.70	3.86	5.00	6.13	7.30					8.27	2 / 3			
reaction time	0.122	interval		1.16	1.14	1.13	1.17				0.97			3.43		
		velocity	5.08	7.88	8.02	8.09	7.81				10.02	7.26		7.99		

*Feher (2012) - Czech Republic indoor national championships - men's 60m hurdles***Hardee, Trey (USA) (1984)**

Decathlon - Heat 2 - 2009 IAAF World Championships (Berlin, GER)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
date	20-Aug-09	time	2.65	3.75	4.82	5.87	6.93	8.03	9.09	10.21	11.29	12.41	13.86	1 / 1		
reaction time	0.134	interval		1.10	1.07	1.05	1.06	1.10	1.06	1.12	1.08	1.12	1.45		3.22	3.22
wind	0.3 m/s	velocity	5.18	8.31	8.54	8.70	8.62	8.31	8.62	8.16	8.46	8.16	9.67	7.94	8.52	8.52

*Graubner (2009) - biomechanical analyses at the 12th IAAF world championships***Harrington, Larry (USA) (1970)**

FINAL - 1996 USA Olympic Trials (Atlanta, GA)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
date	23-Jun-96	time	2.42										dnf	3 / --		
reaction time		interval														
wind	0.9 m/s	velocity	5.67													

*McNichols (2000) - Hurdle technique study through video analysis***Harris, Aleec (USA) (1990)**

FINAL - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
date	15-Feb-20	time	2.60	3.63	4.70	5.71	6.75					7.67	7 / 5			
reaction time	0.128	interval		1.03	1.07	1.01	1.04				0.92			3.11		
		velocity	5.28	8.87	8.54	9.05	8.79				10.57	7.82		8.82		

*CAA Hurdle Development (2020)***Semi-Final 1 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)**

date	15-Feb-20	time	2.63	3.70	4.74	5.77	6.84					7.75	6 / 3			
reaction time	0.145	interval		1.07	1.04	1.03	1.07				0.91			3.14		
		velocity	5.22	8.54	8.79	8.87	8.54				10.68	7.74		8.73		

*CAA Hurdle Development (2020)***Heat 3 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)**

date	14-Feb-20	time	2.62	3.67	4.72	5.77	6.84					7.77	5 / 3			
reaction time	0.157	interval		1.05	1.05	1.05	1.07				0.93			3.15		
		velocity	5.24	8.70	8.70	8.70	8.54				10.45	7.72		8.70		

*CAA Hurdle Development (2020)***FINAL - 2020 Millrose Games (New York, NY) (TV Analysis)**

date	08-Feb-20	time	2.56	3.64	4.70	5.73	6.80					7.77	4 / 4			
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Henson (2020) - Athlete First: 2020 year end hurdle report

reaction time	0.167	interval	1.08	1.06	1.03	1.07							0.97			3.17			
		velocity	5.36	8.46	8.62	8.87	8.54						10.02	7.72		8.65			
FINAL - 2019 Prefontaine Classic (Stanford, CA) (TV Analysis)													<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>						
date	30-Jun-19	time	2.60	3.63	4.66	5.72	6.74	7.76	8.78	9.82	10.88	11.94		13.39		1 / 8			
reaction time	0.161	interval	1.03	1.03	1.06	1.02	1.02	1.02	1.04	1.06	1.06		1.45			3.12	3.06	3.16	
wind	0.3 m/s	velocity	5.28	8.87	8.87	8.62	8.96	8.96	8.96	8.79	8.62	8.62	9.67	8.22		8.79	8.96	8.68	
FINAL - 2018 István Gyulai Memorial (Székesfehérvár, HUN) (TV Analysis)													<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>						
date	02-Jul-18	time	2.56	3.60	4.64	5.68	6.72	7.74	8.78	9.84	10.88	11.96		13.43		7 / 5			
reaction time	0.163	interval	1.04	1.04	1.04	1.04	1.02	1.04	1.06	1.04	1.08	1.47				3.12	3.10	3.18	
wind	0.6 m/s	velocity	5.36	8.79	8.79	8.79	8.79	8.96	8.79	8.62	8.79	8.46	9.54	8.19		8.79	8.85	8.62	
FINAL - 2018 USATF Championships (Des Moines, IA) (TV Analysis)													<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>						
date	24-Jun-18	time	2.57	3.63	4.70	5.77	6.80	7.85	8.90	10.01	11.11	12.21		13.76		6 / 7			
reaction time		interval	1.06	1.07	1.07	1.03	1.05	1.05	1.11	1.10	1.10	1.55				3.20	3.13	3.31	
wind	-1.8 m/s	velocity	5.34	8.62	8.54	8.54	8.87	8.70	8.70	8.23	8.31	8.31	9.05	7.99		8.57	8.76	8.28	
FINAL - 2018 Prefontaine Classic (Eugene, OR) (TV Analysis)													<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>						
date	26-May-18	time	2.58	3.64	4.68	5.72	6.76	7.84	8.88	9.92	10.98	12.06		13.52		1 / 8			
reaction time	0.170	interval	1.06	1.04	1.04	1.04	1.08	1.04	1.04	1.06	1.08	1.46				3.14	3.16	3.18	
wind	3.0 m/s	velocity	5.32	8.62	8.79	8.79	8.79	8.46	8.79	8.79	8.62	8.46	9.60	8.14		8.73	8.68	8.62	
Semi-Final 1 - 2017 IAAF World Championships (London, GBR)													<i>Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles</i>						
date	06-Aug-17	time	2.41	3.49	4.53	5.56	6.60	7.62	8.66	9.70	10.75	11.82		13.40		8 / 6			
reaction time	0.140	interval	1.08	1.04	1.03	1.04	1.02	1.04	1.04	1.05	1.07	1.58				3.15	3.10	3.16	
wind	0.2 m/s	velocity	5.69	8.46	8.79	8.87	8.79	8.96	8.79	8.79	8.70	8.54	8.87	8.21		8.70	8.85	8.68	
FINAL - 2017 Prefontaine Classic (Eugene, OR) (TV Analysis)													<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>						
date	27-May-17	time	2.52	3.58	4.62	5.62	6.62	7.64	8.68	9.74	10.78	11.82		13.30		8 / 6			
reaction time	0.165	interval	1.06	1.04	1.00	1.00	1.02	1.04	1.06	1.04	1.04	1.48				3.10	3.06	3.14	
wind	0.9 m/s	velocity	5.44	8.62	8.79	9.14	9.14	8.96	8.79	8.62	8.79	8.79	9.47	8.27		8.85	8.96	8.73	
FINAL - 2017 Drake Relays (Des Moines, IA) (TV Analysis)													<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>						
date	29-Apr-17	time	2.56	3.60	4.64	5.68	6.70	7.73	8.76	9.80	10.86	11.90		13.37		1 / 3			
reaction time		interval	1.04	1.04	1.04	1.02	1.03	1.03	1.04	1.06	1.04	1.47				3.12	3.08	3.14	
wind	1.8 m/s	velocity	5.36	8.79	8.79	8.79	8.96	8.87	8.87	8.79	8.62	8.79	9.54	8.23		8.79	8.90	8.73	
FINAL - 2016 USA Olympic Trials (Eugene, OR) (TV Analysis)													<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>						
date	09-Jul-16	time	2.53	3.60	4.64	5.67	6.70	7.74	8.81	9.84	10.91	12.00		13.56		8 / 7			
reaction time	0.186	interval	1.07	1.04	1.03	1.03	1.04	1.07	1.03	1.07	1.09	1.56				3.14	3.14	3.19	
wind	1.0 m/s	velocity	5.42	8.54	8.79	8.87	8.87	8.79	8.54	8.87	8.54	8.39	8.99	8.11		8.73	8.73	8.60	
Harrold, Daniel (USA) (2000)																			
			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Semi-Final 1 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)													<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>						
date	27-Jun-24	time	2.54	3.60	4.64	5.67	6.71	7.77	8.81	9.88	10.96	12.05		13.76		9 / 8			
reaction time		interval	7 steps	1.06	1.04	1.03	1.04	1.06	1.04	1.07	1.08	1.09	1.71			3.13	3.14	3.24	
wind	0.3 m/s	velocity	5.40	8.62	8.79	8.87	8.79	8.62	8.79	8.54	8.46	8.39	8.20	7.99		8.76	8.73	8.46	
Heat 3 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)													<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>						
date	24-Jun-24	time	2.53	3.57	4.61	5.65	6.63	7.66	8.70	9.76	10.83	12.00		13.41		8 / 5			
reaction time		interval	7 steps	1.04	1.04	1.04	0.98	1.03	1.04	1.06	1.07	1.17	1.41	PB		3.12	3.05	3.30	
wind	1.8 m/s	velocity	5.42	8.79	8.79	8.79	9.33	8.87	8.79	8.62	8.54	7.81	9.94	8.20		8.79	8.99	8.31	
Hashimoto, Yu (JPN)																			
			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2021 Japanese U16 National Championships (Matsuyama, JPN) (99cm)													<i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>						
date	24-Oct-21	time	2.67	3.77	4.88	6.00	7.12	8.23	9.36	10.47	11.55	12.68		14.19		1 / 1			
reaction time		interval	1.10	1.11	1.12	1.12	1.11	1.13	1.11	1.08	1.13	1.51				3.33	3.36	3.32	
wind	1.0 m/s	velocity	5.14	8.31	8.23	8.16	8.16	8.23	8.09	8.23	8.46	8.09	9.28	7.75		8.23	8.16	8.26	
Hashizume, Rento (JPN) (2006)																			
			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2024 Japanese National High School Championships (Fukuoka, JPN)													<i>Takashima (2024) - national high school sports festival - biomechanics data</i>						
date	01-Aug-24	time	2.69	3.78	4.88	5.99	7.08	8.18	9.29	10.43	11.56	12.72		14.18		3 / 5			
reaction time	0.143	interval	1.09	1.10	1.11	1.09	1.10	1.11	1.14	1.13	1.16	1.46	PB			3.30	3.30	3.43	
wind	-0.7 m/s	velocity	5.10	8.39	8.31	8.23	8.39	8.31	8.23	8.02	8.09	7.88	9.60	7.76		8.31	8.31	7.99	
Hatanaka, Yushi (JPN) (1994)																			
			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2018 Kinami Michitaka Memorial (Osaka, JPN)													<i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>						
date	06-May-18	time	2.65	3.76	4.88	5.98	7.07	8.16	9.28	10.40	11.53	12.65		14.11		3 / 6			
reaction time		interval	1.11	1.12	1.10	1.09	1.09	1.12	1.12	1.13	1.12	1.46				3.33	3.30	3.37	
wind	1.6 m/s	velocity	5.18	8.23	8.16	8.31	8.39	8.39	8.16	8.16	8.09	8.16	9.60	7.80		8.23	8.31	8.14	
FINAL - 2017 Kansai Regional University Championships (Osaka, JPN)													<i>(2017) - tfdata-store.com/2017/05/13/post-441/</i>						

date	11-May-17	time	2.64	3.77	4.85	5.93	7.03	8.12	9.22	10.31	11.43	12.58	14.03	4 / 2				
reaction time		interval		1.13	1.08	1.08	1.10	1.09	1.10	1.09	1.12	1.15	1.45	=PB	3.29	3.29	3.36	
wind	1.6 m/s	velocity	5.20	8.09	8.46	8.46	8.31	8.39	8.31	8.39	8.16	7.95	9.67	7.84	8.33	8.33	8.16	
FINAL - 2017 Osaka University Athletics Championships (Osaka, JPN)														(2017) - tfdata-store.com/2017/04/07/post-249/				
date	06-Apr-17	time	2.71	3.84	4.95	6.04	7.15	8.28	9.42	10.58	11.75	12.91	14.46	6 / 1				
reaction time		interval	7 steps	1.13	1.11	1.09	1.11	1.13	1.14	1.16	1.17	1.16	1.55		3.33	3.38	3.49	
wind	-1.8 m/s	velocity	5.06	8.09	8.23	8.39	8.23	8.09	8.02	7.88	7.81	7.88	9.05	7.61	8.23	8.11	7.86	
FINAL - 2016 Kansai Student Athletics Championships (Osaka, JPN)														(2016.10.20) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en				
date	19-Oct-16	time	2.71	3.83	4.92	6.04	7.13	8.23	9.34	10.46	11.60	12.73	14.19	5 / 1				
reaction time		interval	7 steps	1.12	1.09	1.12	1.09	1.10	1.11	1.12	1.14	1.13	1.46		3.33	3.30	3.39	
wind	-1.0 m/s	velocity	5.06	8.16	8.39	8.16	8.39	8.31	8.23	8.16	8.02	8.09	9.60	7.75	8.23	8.31	8.09	
Semi-Final 1 - 2016 Japanese University Championships (Kumagaya, JPN)														(2016.09.05) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en				
date	04-Sep-16	time	2.69	3.81	4.91	6.03	7.12	8.27	9.40	10.56	11.69	12.86	14.34	6 / 8				
reaction time	0.151	interval		1.12	1.10	1.12	1.09	1.15	1.13	1.16	1.13	1.17	1.48		3.34	3.37	3.46	
wind	0.6 m/s	velocity	5.10	8.16	8.31	8.16	8.39	7.95	8.09	7.88	8.09	7.81	9.47	7.67	8.21	8.14	7.92	
Hayles, Jaheem (JAM) (2001)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2023 NCAA Championships (Austin, TX) (TV Analysis)														Henson (2023) - Athlete First: 2023 year end hurdle report				
date	09-Jun-23	time	2.57	3.62	4.66	5.70	6.71	7.72	8.74	9.77	10.79	11.84	13.28	9 / 3				
reaction time		interval		1.05	1.04	1.04	1.01	1.01	1.02	1.03	1.02	1.05	1.44	PB		3.13	3.04	3.10
wind	1.8 m/s	velocity	5.34	8.70	8.79	8.79	9.05	9.05	8.96	8.87	8.96	8.70	9.74	8.28	8.76	9.02	8.85	
FINAL - 2022 NCAA Championships (Eugene, OR) (TV Analysis)														Henson (2022) - Athlete First: 2022 year end hurdle report				
date	10-Jun-22	time	2.55	3.65	4.72	5.77	6.82	7.86	8.89	9.96	11.06	12.19	13.73	4 / 9				
reaction time		interval		1.10	1.07	1.05	1.05	1.04	1.03	1.07	1.10	1.13	1.54		3.22	3.12	3.30	
wind	0.0 m/s	velocity	5.38	8.31	8.54	8.70	8.70	8.79	8.87	8.54	8.31	8.09	9.10	8.01	8.52	8.79	8.31	
Hedvičák, Jaroslav (CZE) (1990)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Heat 1 - 2012 Czech Republic National Indoor Championships (Praha, CZE)														Feher (2012) - Czech Republic indoor national championships - men's 60m hurdles				
date	25-Feb-12	time	2.74	3.90	5.05	6.18	7.33							8.32	6 / 4			
reaction time	0.149	interval		1.16	1.15	1.13	1.15						0.99			3.44		
		velocity	5.01	7.88	7.95	8.09	7.95						9.82	7.21		7.97		
Heinä, Joonas-Ville (FIN) (1989)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2011 Landskamp FIN-SWE-NOR (Tampere, FIN)														Blomkvist (2011) - www.sub13.se				
date	05-Feb-11	time	2.56	3.64	4.68	5.76	6.84							7.87	7 / 1			
reaction time		interval		1.08	1.04	1.08	1.08						1.03			3.20		
		velocity	5.36	8.46	8.79	8.46	8.46						9.44	7.62		8.57		
Helcelet, Adam Sebastian (CZE) (1992)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2012 Czech Republic National Indoor Championships (Praha, CZE)														Feher (2012) - Czech Republic indoor national championships - men's 60m hurdles				
date	25-Feb-12	time	2.70	3.83	4.88	5.97	7.09							8.06	7 / 5			
reaction time	0.140	interval		1.13	1.05	1.09	1.12						0.97			3.27		
		velocity	5.08	8.09	8.70	8.39	8.16						10.02	7.44		8.39		
Heat 3 - 2012 Czech Republic National Indoor Championships (Praha, CZE)														Feher (2012) - Czech Republic indoor national championships - men's 60m hurdles				
date	25-Feb-12	time	2.69	3.82	4.90	5.96	7.13							8.13	5 / 2			
reaction time	0.135	interval		1.13	1.08	1.06	1.17						1.00			3.27		
		velocity	5.10	8.09	8.46	8.62	7.81						9.72	7.38		8.39		
Hemery, David (GBR) (1944)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 1970 Commonwealth Games (Edinburgh, GBR)														LeMasurier (1972) - track speed- hurdles, sprints, and relays				
date	18-Jul-70	time	2.55	3.65	4.65	5.70	6.75	7.80	8.85	9.90	11.00	12.10	(13.66)	13.6	1 / 1			
reaction time		interval		1.10	1.00	1.05	1.05	1.05	1.05	1.05	1.10	1.10	1.50			3.15	3.15	3.25
wind	2.9 m/s	velocity	5.38	8.31	9.14	8.70	8.70	8.70	8.70	8.70	8.31	8.31	9.35	8.09	8.70	8.70	8.44	
Hernández, Yoel (CUB) (1977)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 1999 IAAF World Championships (Sevilla, ESP)														Sanchez (1999) - Sevilla '99: análisis de la carreras con villas				
date	25-Aug-99	time	2.57	3.61	4.63	5.66	6.65	7.65	8.68	9.71	10.73	11.83	13.30	7 / 6				
reaction time	0.129	interval		1.04	1.02	1.03	0.99	1.00	1.03	1.03	1.02	1.10	1.47			3.09	3.02	3.15
wind	1.0 m/s	velocity	5.34	8.79	8.96	8.87	9.23	9.14	8.87	8.87	8.96	8.31	9.54	8.27	8.87	9.08	8.70	
Semi-Final 1 - 1999 IAAF World Championships (Sevilla, ESP)														Sanchez (1999) - Sevilla '99: análisis de la carreras con villas				
date	24-Aug-99	time	2.60	3.61	4.64	5.64	6.66	7.65	8.68	9.71	10.77	11.83	13.32	4 / 3				
reaction time	0.143	interval		1.01	1.03	1.00	1.02	0.99	1.03	1.03	1.06	1.06	1.49			3.04	3.04	3.15
wind	0.0 m/s	velocity	5.28	9.05	8.87	9.14	8.96	9.23	8.87	8.87	8.62	8.62	9.41	8.26	9.02	9.02	8.70	
Herring, Aubrey (USA) (1978)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2010 Windsprint (Sundsvall, SWE)														Blomkvist (2010) - www.sub13.se				
date	08-Aug-10	time	2.68	3.75	4.84	5.90	6.96	8.04	9.13	10.23	11.36	12.49	14.07	1 / 5				

reaction time	interval	1.07	1.09	1.06	1.06	1.08	1.09	1.10	1.13	1.13	1.58		3.22	3.23	3.36		
wind	1.1 m/s	velocity	5.12	8.54	8.39	8.62	8.62	8.46	8.39	8.31	8.09	8.09	8.87	7.82	8.52	8.49	8.16

FINAL - 2008 Seiko Super Grand Prix (Kawasaki, JPN) *Akirabun (2009) - race analysis of 2008 men's and women's 100m and 110m & 100m hurdles*

date	23-Sep-08	time	2.45	3.54	4.60	5.64	6.66	7.74	8.81	9.89	10.98	12.12	13.77	/ 2			
reaction time		interval	1.09	1.06	1.04	1.02	1.08	1.07	1.08	1.09	1.14	1.65			3.19	3.17	3.31
wind	-0.7 m/s	velocity	5.60	8.39	8.62	8.79	8.96	8.46	8.54	8.46	8.39	8.02	8.50	7.99	8.60	8.65	8.28

Heat 4 - 2007 USATF National Championships (Indianapolis, IN) *USATF Men's Hurdle Development (2007)*

date	23-Jun-07	time	2.64	3.79	4.89	5.99	7.07	8.17	9.29	10.41	11.51	12.66	14.27	8 / 8			
reaction time		interval	1.15	1.10	1.10	1.08	1.10	1.12	1.12	1.10	1.15	1.61			3.35	3.30	3.37
wind	-2.8 m/s	velocity	5.20	7.95	8.31	8.31	8.46	8.31	8.16	8.16	8.31	7.95	8.71	7.71	8.19	8.31	8.14

FINAL - 2006 USATF National Championships (Indianapolis, IN) *USATF Men's Hurdle Development (2006)*

date	25-Jun-06	time	2.60	3.65	4.69	5.74	6.77	7.81	8.83	9.86	10.93	12.00	13.45	/ 7			
reaction time		interval	1.05	1.04	1.05	1.03	1.04	1.02	1.03	1.07	1.07	1.45			3.14	3.09	3.17
wind	-0.4 m/s	velocity	5.28	8.70	8.79	8.70	8.87	8.79	8.96	8.87	8.54	8.54	9.67	8.18	8.73	8.87	8.65

Hicks, Antwon (USA) (1983)

H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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FINAL - 2012 AVIVA London Grand Prix (London, GBR) (TV Analysis) *Henson (2020) - Athlete First: 2012 Aries Merritt world record season*

date	13-Jul-12	time	2.48	3.54	4.60	5.60	6.62	7.66	8.72	9.78	10.84	11.92	13.46	1 / 6				
reaction time	0.165	interval	7 steps	1.06	1.06	1.00	1.02	1.04	1.06	1.06	1.06	1.08	1.54			3.12	3.12	3.20
wind	0.6 m/s	velocity	5.53	8.62	8.62	9.14	8.96	8.79	8.62	8.62	8.62	8.46	9.10	8.17		8.79	8.79	8.57

FINAL - 2012 USA Olympic Trials (Eugene, OR) *Henson (2020) - Athlete First: 2012 Aries Merritt world record season*

date	30-Jun-12	time	2.37	3.44	4.44	5.44	6.44	7.44	8.46	9.47	10.51	11.56	13.14	2 / 4				
reaction time	0.158	interval	7 steps	1.07	1.00	1.00	1.00	1.00	1.02	1.01	1.04	1.05	1.58			3.07	3.02	3.10
wind	1.2 m/s	velocity	5.79	8.54	9.14	9.14	9.14	9.14	8.96	9.05	8.79	8.70	8.87	8.37		8.93	9.08	8.85

FINAL - 2008 USA Olympic Trials (Eugene, OR) *USATF Hurdle Development (2008)*

date	06-Jul-08	time	2.57	3.64	4.69	5.74	6.76	7.76	8.78	9.81	10.85	11.91	13.33	3 / 5				
reaction time	0.170	interval	7 steps	1.07	1.05	1.05	1.02	1.00	1.02	1.03	1.04	1.06	1.42			3.17	3.04	3.13
wind	3.5 m/s	velocity	5.34	8.54	8.70	8.70	8.96	9.14	8.96	8.87	8.79	8.62	9.87	8.25		8.65	9.02	8.76

Semi-Final 1 - 2007 USATF National Championships (Indianapolis, IN) *USATF Men's Hurdle Development (2007)*

date	24-Jun-07	time	2.59	3.69	4.79	5.86	6.89	7.96	8.99	10.08	11.14	12.25	13.75	6 / 7				
reaction time		interval	1.10	1.10	1.07	1.03	1.07	1.03	1.03	1.09	1.06	1.11	1.50			3.27	3.13	3.26
wind	-0.6 m/s	velocity	5.30	8.31	8.31	8.54	8.87	8.54	8.87	8.39	8.62	8.23	9.35	8.00		8.39	8.76	8.41

Heat 1 - 2007 USATF National Championships (Indianapolis, IN) *USATF Men's Hurdle Development (2007)*

date	23-Jun-07	time	2.57	3.64	4.70	5.77	6.81	7.82	8.88	9.91	10.96	12.05	13.49	7 / 2				
reaction time		interval	1.07	1.06	1.07	1.04	1.01	1.06	1.03	1.05	1.09	1.44			3.20	3.11	3.17	
wind	0.1 m/s	velocity	5.34	8.54	8.62	8.54	8.79	9.05	8.62	8.87	8.70	8.39	9.74	8.15		8.57	8.82	8.65

FINAL - 2006 USATF National Championships (Indianapolis, IN) *USATF Men's Hurdle Development (2006)*

date	25-Jun-06	time	2.65	3.74	4.79	5.84	6.89	7.93	8.98	10.08	11.13	12.23	13.71	/ 8				
reaction time		interval	1.09	1.05	1.05	1.05	1.04	1.05	1.10	1.05	1.10	1.48			3.19	3.14	3.25	
wind	-0.4 m/s	velocity	5.18	8.39	8.70	8.70	8.70	8.79	8.70	8.31	8.70	8.31	9.47	8.02		8.60	8.73	8.44

FINAL - 2005 USATF National Championships (Carson, CA) *USATF Women's Sprint Development (2005)*

date	24-Jun-05	time	2.61	3.67	4.71	5.71	6.76	7.78	8.83	9.84	10.89	11.95	13.35	1 / 6				
reaction time		interval	1.06	1.04	1.00	1.05	1.02	1.05	1.01	1.05	1.06	1.40	PB			3.10	3.12	3.12
wind	0.2 m/s	velocity	5.26	8.62	8.79	9.14	8.70	8.96	8.70	9.05	8.70	8.62	10.01	8.24		8.85	8.79	8.79

Higuchi, Hayato (JPN) (2003)

H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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FINAL - 2021 Japanese High School National Championships (Fukui, JPN) *Shibayama (2021) - national high school and U20 national championships*

date	01-Aug-21	time	2.62	3.70	4.80	5.88	6.97	8.06	9.18	10.30	11.40	12.53	13.95	6 / 3				
reaction time	0.121	interval	1.08	1.10	1.08	1.09	1.09	1.12	1.12	1.10	1.13	1.42	PB			3.26	3.30	3.35
wind	1.4 m/s	velocity	5.24	8.46	8.31	8.46	8.39	8.39	8.16	8.16	8.31	8.09	9.87	7.89		8.41	8.31	8.19

Higuchi, Rikuto (JPN) (1999)

H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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FINAL - 2022 Michitaka Kinami Memorial (Osaka, JPN) *Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season*

date	01-May-22	time	2.59	3.70	4.76	5.85	6.91	7.98	9.04	10.13	11.23	12.35	13.81	5 / 6				
reaction time	0.153	interval	7 steps	1.11	1.06	1.09	1.06	1.07	1.06	1.09	1.10	1.12	1.46			3.26	3.19	3.31
wind	0.8 m/s	velocity	5.30	8.23	8.62	8.39	8.62	8.54	8.62	8.39	8.31	8.16	9.60	7.97		8.41	8.60	8.28

FINAL - 2018 Japanese National Indoor U20 Championships (Osaka, JPN) (99cm) *(2018.03.04) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en*

date	03-Feb-18	time	2.62	3.71	4.75	5.77	6.81						7.71	4 / 1			
reaction time		interval	1.09	1.04	1.02	1.04						0.90	NJR			3.15	
		velocity	5.24	8.39	8.79	8.96	8.79					10.80	7.78			8.70	

U19 FINAL - 2017 National Sports Festival (Matsuyama, JPN) (99cm) *(2017.10.10) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en*

date	08-Oct-17	time	2.62	3.68	4.70	5.74	6.77	7.81	8.84	9.87	10.93	11.99	13.40	5 / 1			
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reaction time	0.172	interval	1.06	1.02	1.04	1.03	1.04	1.03	1.03	1.06	1.06	1.41	PB	3.12	3.10	3.15	
wind	-0.1 m/s	velocity	5.24	8.62	8.96	8.79	8.87	8.79	8.87	8.87	8.62	8.62	9.94	8.21	8.79	8.85	8.70

FINAL - 2017 Japanese National High School Championships (Yamagata, JPN) (99cm) *Kota (2017) - 70th high school championships: JAF scientific committee- biomechanics data*

date	02-Aug-17	time	2.70	3.82	4.95	6.08	7.22	8.35	9.48	10.61	11.76	12.92	14.34	6 / 3			
reaction time	0.169	interval	1.12	1.13	1.13	1.14	1.13	1.13	1.13	1.15	1.16	1.42			3.38	3.40	3.44
wind	-0.7 m/s	velocity	5.08	8.16	8.09	8.09	8.02	8.09	8.09	8.09	7.95	7.88	9.87	7.67	8.11	8.06	7.97

FINAL - 2017 Japanese National Indoor Junior Championships (Osaka, JPN) (99cm) *(2017.02.04) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en*

date	04-Feb-17	time	2.70	3.80	4.89	5.99	7.09						7.98	3 / 1			
reaction time		interval	1.10	1.09	1.10	1.10							0.89		PB	3.29	
wind		velocity	5.08	8.31	8.39	8.31	8.31						10.92	7.52		8.33	

FINAL - 2016 Japanese National Youth Championships (Mizuho, JPN) (91cm) *(2016.10.21) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en*

date	21-Oct-16	time	2.63	3.70	4.75	5.81	6.87	7.92	8.98	10.06	11.12	12.23	13.64	3 / 1			
reaction time		interval	1.07	1.05	1.06	1.06	1.05	1.06	1.08	1.06	1.11	1.41	NYR		3.18	3.17	3.25
wind	-0.1 m/s	velocity	5.22	8.54	8.70	8.62	8.62	8.70	8.62	8.46	8.62	8.23	9.94	8.06	8.62	8.65	8.44

Semi-Final 3 - 2016 Japanese National Youth Championships (Mizuho, JPN) (91cm) *(2016.11.11) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en*

date	21-Oct-16	time	2.60	3.66	4.71	5.76	6.81	7.87	8.94	10.02	11.10	12.22	13.70	4 / 1			
reaction time		interval	1.06	1.05	1.05	1.05	1.06	1.07	1.08	1.08	1.12	1.48			3.16	3.18	3.28
wind	-0.2 m/s	velocity	5.28	8.62	8.70	8.70	8.70	8.62	8.54	8.46	8.46	8.16	9.47	8.03	8.68	8.62	8.36

Heat 6 - 2016 Japanese National Youth Championships (Mizuho, JPN) (91cm) *(2016.11.08) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en*

date	21-Oct-16	time	2.63	3.69	4.75	5.79	6.86	7.92	9.00	10.10	11.21	12.36	13.98	4 / 1			
reaction time		interval	1.06	1.06	1.04	1.07	1.06	1.08	1.10	1.11	1.15	1.62			3.16	3.21	3.36
wind	1.2 m/s	velocity	5.22	8.62	8.62	8.79	8.54	8.62	8.46	8.31	8.23	7.95	8.65	7.87	8.68	8.54	8.16

FINAL - 2016 Japanese National High School Championships (Okayama, JPN) (99cm) *Kota (2016) - 69th high school championships: JAF scientific committee- biomechanics data*

date	02-Aug-16	time	2.68	3.78	4.86	5.96	7.07	8.21	9.35	10.47	11.60	12.77	14.25	2 / 5			
reaction time	0.168	interval	1.10	1.08	1.10	1.11	1.14	1.14	1.12	1.13	1.17	1.48	PB		3.28	3.39	3.42
wind	1.2 m/s	velocity	5.12	8.31	8.46	8.31	8.23	8.02	8.02	8.16	8.09	7.81	9.47	7.72	8.36	8.09	8.02

Hill, Thomas (USA) (1949)**FINAL - 1972 Olympic Games (Munich, FRG)** *Kay (1972) - BAAB Munich Technical Report*

date	07-Sep-72	time	2.5	3.5	4.6	5.6	6.6	7.6	8.7	9.8	10.9	12.0	13.48	7 / 3			
reaction time		interval	1.00	1.10	1.00	1.00	1.00	1.10	1.10	1.10	1.10	1.48			3.10	3.10	3.30
wind	0.3 m/s	velocity	5.49	9.14	8.31	9.14	9.14	9.14	8.31	8.31	8.31	8.31	9.47	8.16	8.85	8.85	8.31

Hiraga, Kentaro (JPN) (1999)**Heat 3 - 2018 IAAF World Junior Championships (Tampere, FIN) (99cm)** *Koyama (2018) - research on athlete performance and technique- 2018 data book*

date	11-Jul-18	time	2.63	3.72	4.80	5.86	6.92	8.02	9.10	10.19	11.29	12.38	13.80	5 / 4			
reaction time	0.147	interval	1.09	1.08	1.06	1.06	1.10	1.08	1.09	1.10	1.09	1.42			3.23	3.24	3.28
wind	0.7 m/s	velocity	5.22	8.39	8.46	8.62	8.62	8.31	8.46	8.39	8.31	8.39	9.87	7.97	8.49	8.46	8.36

FINAL - 2017 Japanese National High School Championships (Yamagata, JPN) (99cm) *Kota (2017) - 70th high school championships: JAF scientific committee- biomechanics data*

date	02-Aug-17	time	2.70	3.83	4.96	6.09	7.25	8.35	9.49	10.67	11.83	13.03	14.54	2 / 7			
reaction time	0.156	interval	1.13	1.13	1.13	1.16	1.10	1.14	1.18	1.16	1.20	1.51			3.39	3.40	3.54
wind	-0.7 m/s	velocity	5.08	8.09	8.09	8.09	7.88	8.31	8.02	7.75	7.88	7.62	9.28	7.57	8.09	8.06	7.75

Heat 1 - 2016 Japanese National Youth Championships (Mizuho, JPN) (91cm) *(2016.11.07) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en*

date	21-Oct-16	time	2.68	3.82	4.92	6.04	7.14	8.24	9.36	10.49	11.63	12.79	14.28	6 / 2			
reaction time		interval	1.14	1.10	1.12	1.10	1.10	1.12	1.13	1.14	1.16	1.49			3.36	3.32	3.43
wind	1.7 m/s	velocity	5.12	8.02	8.31	8.16	8.31	8.31	8.16	8.09	8.02	7.88	9.41	7.70	8.16	8.26	7.99

Hiramatsu, Papdamba (JPN) (1997)**Heat 1 - 2017 Japanese National Championships (Osaka, JPN)** *(2017) - tfdata-store.com/2017/07/13/post-1040/*

date	24-Jun-17	time	2.63	3.72	4.81	5.86	6.93	8.01	9.10	10.19	11.30	12.44	13.93	2 / 7			
reaction time	0.168	interval	7 steps	1.09	1.09	1.05	1.07	1.08	1.09	1.09	1.11	1.14	1.49		3.23	3.24	3.34
wind	1.3 m/s	velocity	5.22	8.39	8.39	8.70	8.54	8.46	8.39	8.39	8.23	8.02	9.41	7.90	8.49	8.46	8.21

FINAL - 2017 Mito Invitational (Mito, JPN) *(2017) - tfdata-store.com/2017/05/06/post-423/*

date	05-May-17	time	2.63	3.76	4.87	5.96	7.07	8.19	9.30	10.41	11.55	12.69	14.21	9 / 5			
reaction time		interval	7 steps	1.13	1.11	1.09	1.11	1.12	1.11	1.11	1.14	1.14	1.52		3.33	3.34	3.39
wind	-2.3 m/s	velocity	5.22	8.09	8.23	8.39	8.23	8.16	8.23	8.23	8.02	8.02	9.22	7.74	8.23	8.21	8.09

Heat 2 - 2017 Mito Invitational (Mito, JPN) *(2017) - tfdata-store.com/2017/05/06/post-423/*

date	05-May-17	time	2.59	3.70	4.80	5.88	6.98	8.06	9.16	10.29	11.41	12.56	14.05	2 / 2			
reaction time		interval	7 steps	1.11	1.10	1.08	1.10	1.08	1.10	1.13	1.12	1.15	1.49		3.29	3.28	3.40
wind	0.6 m/s	velocity	5.30	8.23	8.31	8.46	8.31	8.46	8.31	8.09	8.16	7.95	9.41	7.83	8.33	8.36	8.06

FINAL - 2016 Kanto Student Championships (Sagamihara, JPN) *(2016.09.17) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en*

date	17-Sep-16	time	2.64	3.74	4.84	5.90	6.95	8.04	9.13	10.20	11.30	12.42	13.90	6 / 2			
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reaction time	interval	7 steps	1.10	1.10	1.06	1.05	1.09	1.09	1.07	1.10	1.12	1.48		3.26	3.23	3.29	
wind	3.2 m/s	velocity	5.20	8.31	8.31	8.62	8.70	8.39	8.39	8.54	8.31	8.16	9.47	7.91	8.41	8.49	8.33

FINAL - 2015 Japanese National High School Championships (Wakayama, JPN) (99cm) *Jakashima (2015) - race analysis of 110m & 100m hurdles in Japan- results 2015 competitions*

date	02-Aug-15	time	2.64	3.73	4.82	5.91	6.99	8.09	9.22	10.36	11.49	12.64		14.19	5 / 3			
reaction time		interval	1.09	1.09	1.09	1.08	1.10	1.13	1.14	1.13	1.15	1.55		PB		3.27	3.31	3.42
wind	1.4 m/s	velocity	5.20	8.39	8.39	8.39	8.46	8.31	8.09	8.02	8.09	7.95	9.05	7.75		8.39	8.28	8.02

Hirotomi, Ato (JPN) (2004)**FINAL - 2021 Japanese U18 National Championships (Matsuyama, JPN) (99cm)** *Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season*

date	22-Oct-21	time	2.73	3.83	4.91	5.99	7.07	8.14	8.25	10.33	11.45	12.56		14.06	4 / 3			
reaction time	0.160	interval	1.10	1.08	1.08	1.08	1.07	0.11	2.08	1.12	1.11	1.50				3.26	2.26	4.31
wind	-0.6 m/s	velocity	5.03	8.31	8.46	8.46	8.46	8.54	83.09	4.39	8.16	8.23	9.35	7.82		8.41	12.13	6.36

FINAL - 2021 Japanese High School National Championships (Fukui, JPN)*Shibayama (2021) - national high school and U20 national championships*

date	01-Aug-21	time	2.73	3.80	4.92	5.99	7.10	8.22	9.33	10.45	11.58	12.70		14.17	2 / 5			
reaction time	0.136	interval	1.07	1.12	1.07	1.11	1.12	1.11	1.12	1.13	1.12	1.47		PB		3.26	3.34	3.37
wind	1.4 m/s	velocity	5.03	8.54	8.16	8.54	8.23	8.16	8.23	8.16	8.09	8.16	9.54	7.76		8.41	8.21	8.14

Hoffmann, Marek (CZE) (1998)**Heat 2 - 2014 Czech Republic National U18 Championships (Trinec, CZE) (91cm)** *Fehér (2014) - Final report from the U18 & U20 Czech Republic national championships*

date	28-Jun-14	time	2.93	4.11	5.29	6.49	7.70	8.95	10.21	11.58	12.93	14.45		16.54	8 / 7			
reaction time	0.215	interval	1.18	1.18	1.20	1.21	1.25	1.26	1.37	1.35	1.52	2.09				3.56	3.72	4.24
wind	-4.1 m/s	velocity	4.68	7.75	7.75	7.62	7.55	7.31	7.25	6.67	6.77	6.01	6.71	6.65		7.70	7.37	6.47

Holloway, Grant (USA) (1997)**FINAL - 2024 Weltklasse (Zürich, SUI)** *Omega Timing (2024) - diamond league race analysis*

date	05-Sep-24	time	2.36	3.37	4.35	5.31	6.30	7.29	8.30	9.31	10.35	11.41		12.99	6 / 1			
reaction time	0.144	interval	7 steps	1.01	0.98	0.96	0.99	0.99	1.01	1.01	1.04	1.06	1.58			2.95	2.99	3.11
wind	-0.3 m/s	velocity	5.81	9.05	9.33	9.52	9.23	9.23	9.05	9.05	8.79	8.62	8.87	8.47		9.29	9.17	8.82

FINAL - 2024 Kamila Skolimowska Memorial (Silesia, POL)*Omega Timing (2024) - diamond league race analysis*

date	25-Aug-24	time	2.35	3.34	4.34	5.31	6.30	7.30	8.30	9.33	10.37	11.44		13.04	6 / 1			
reaction time	0.157	interval	7 steps	0.99	1.00	0.97	0.99	1.00	1.00	1.03	1.04	1.07	1.60			2.96	2.99	3.14
wind	1.1 m/s	velocity	5.84	9.23	9.14	9.42	9.23	9.14	9.14	8.87	8.79	8.54	8.76	8.44		9.26	9.17	8.73

FINAL - 2024 Athletissima (Lausanne, SUI)*Omega Timing (2024) - diamond league race analysis*

date	22-Aug-24	time	2.32	3.35	4.34	5.32	6.31	7.30	8.31	9.34	10.41	11.51		13.14	6 / 2			
reaction time	0.146	interval	7 steps	1.03	0.99	0.98	0.99	0.99	1.01	1.03	1.07	1.10	1.63			3.00	2.99	3.20
wind	-0.1 m/s	velocity	5.91	8.87	9.23	9.33	9.23	9.23	9.05	8.87	8.54	8.31	8.60	8.37		9.14	9.17	8.57

FINAL - 2024 Olympic Games (Paris, FRA)*Paris 2024 Olympic Games - Results Book (2024)*

date	08-Aug-24	time	2.33	3.34	4.32	5.29	6.25	7.24	8.23	9.25	10.30	11.39		12.99	6 / 1			
reaction time	0.104	interval	7 steps	1.01	0.98	0.97	0.96	0.99	0.99	1.02	1.05	1.09	1.60			2.96	2.94	3.16
wind	-0.1 m/s	velocity	5.89	9.05	9.33	9.42	9.52	9.23	9.23	8.96	8.70	8.39	8.76	8.47		9.26	9.33	8.68

Semi-Final 1 - 2024 Olympic Games (Paris, FRA)*Paris 2024 Olympic Games - Results Book (2024)*

date	07-Aug-24	time	2.31	3.32	4.29	5.27	6.24	7.22	8.22	9.24	10.29	11.37		12.98	6 / 1			
reaction time	0.149	interval	7 steps	1.01	0.97	0.98	0.97	0.98	1.00	1.02	1.05	1.08	1.61			2.96	2.95	3.15
wind	0.1 m/s	velocity	5.94	9.05	9.42	9.33	9.42	9.33	9.14	8.96	8.70	8.46	8.71	8.47		9.26	9.29	8.70

Heat 5 - 2024 Olympic Games (Paris, FRA)*Paris 2024 Olympic Games - Results Book (2024)*

date	04-Aug-24	time	2.31	3.34	4.32	5.29	6.26	7.24	8.23	9.25	10.31	11.39		13.01	6 / 1			
reaction time	0.136	interval	7 steps	1.03	0.98	0.97	0.97	0.98	0.99	1.02	1.06	1.08	1.62			2.98	2.94	3.16
wind	0.7 m/s	velocity	5.94	8.87	9.33	9.42	9.42	9.33	9.23	8.96	8.62	8.46	8.65	8.46		9.20	9.33	8.68

FINAL - 2024 Herculis Meeting International d'Athlétisme (Monaco, MON)*Omega Timing (2024) - diamond league race analysis*

date	12-Jul-24	time	2.37	3.39	4.35	5.33	6.31	7.30	8.30	9.33	10.37	11.45		13.01	6 / 1			
reaction time	0.132	interval	7 steps	1.02	0.96	0.98	0.98	0.99	1.00	1.03	1.04	1.08	1.56			2.96	2.97	3.15
wind	-0.7 m/s	velocity	5.79	8.96	9.52	9.33	9.33	9.23	9.14	8.87	8.79	8.46	8.99	8.46		9.26	9.23	8.70

FINAL - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)*Henson (2024) - Athlete First: 2024 year end hurdle report*

date	28-Jun-24	time	2.44	3.42	4.40	5.37	6.34	7.32	8.31	9.32	10.36	11.42		12.86	6 / 1			
reaction time		interval	7 steps	0.98	0.98	0.97	0.97	0.98	0.99	1.01	1.04	1.06	1.44			2.93	2.94	3.11
wind	2.0 m/s	velocity	5.62	9.33	9.33	9.42	9.42	9.33	9.23	9.05	8.79	8.62	9.74	8.55		9.36	9.33	8.82

Semi-Final 1 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)*Henson (2024) - Athlete First: 2024 year end hurdle report*

date	27-Jun-24	time	2.44	3.42	4.41	5.37	6.35	7.34	8.34	9.34	10.41	11.48		12.96	7 / 1			
reaction time		interval	7 steps	0.98	0.99	0.96	0.98	0.99	1.00	1.00	1.07	1.07	1.48			2.93	2.97	3.14
wind	0.3 m/s	velocity	5.62	9.33	9.23	9.52	9.33	9.23	9.14	9.14	8.54	8.54	9.47	8.49		9.36	9.23	8.73

Heat 1 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)*Henson (2024) - Athlete First: 2024 year end hurdle report*

date	24-Jun-24	time	2.43	3.48	4.43	5.41	6.38	7.35	8.35	9.38	10.40	11.46		12.92	4 / 1			
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reaction time	interval	7 steps	1.05	0.95	0.98	0.97	0.97	1.00	1.03	1.02	1.06	1.46		2.98	2.94	3.11	
wind	0.8 m/s	velocity	5.65	8.70	9.62	9.33	9.42	9.42	9.14	8.87	8.96	8.62	9.60	8.51	9.20	9.33	8.82
FINAL - 2024 Prefontaine Classic (Eugene, OR)													<i>Omega Timing (2024) - diamond league race analysis</i>				
date	25-May-24	time	2.35	3.35	4.33	5.30	6.28	7.28	8.28	9.32	10.36	11.44		13.03	5 / 1		
reaction time	0.132	interval	7 steps	1.00	0.98	0.97	0.98	1.00	1.00	1.04	1.04	1.08	1.59		2.95	2.98	3.16
wind	-0.1 m/s	velocity	5.84	9.14	9.33	9.42	9.33	9.14	9.14	8.79	8.79	8.46	8.82	8.44	9.29	9.20	8.68
FINAL - 2024 Atlanta City Games (Atlanta, GA) (Street Race) (TV Analysis)													<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>				
date	18-May-24	time	2.45	3.45	4.44	5.42	6.42	7.42	8.42	9.44	10.48	11.58		13.07	3 / 1		
reaction time		interval	7 steps	1.00	0.99	0.98	1.00	1.00	1.00	1.02	1.04	1.10	1.49		2.97	3.00	3.16
wind	-0.7 m/s	velocity	5.60	9.14	9.23	9.33	9.14	9.14	9.14	8.96	8.79	8.31	9.41	8.42	9.23	9.14	8.68
FINAL - 2024 World Athletics Indoor Championships (Glasgow, GBR) (TV Analysis)													<i>Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record</i>				
date	02-Mar-24	time	2.48	3.50	4.47	5.42	6.40							7.29	5 / 1		
reaction time	0.153	interval	7 steps	1.02	0.97	0.95	0.98							7.29		2.94	
		velocity	5.53	8.96	9.42	9.62	9.33							1.92	8.23	9.33	
Heat 1 - 2024 World Athletics Indoor Championships (Glasgow, GBR) (TV Analysis)													<i>Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record</i>				
date	02-Mar-24	time	2.48	3.50	4.45	5.45	6.47							7.43	3 / 1		
reaction time	0.155	interval	7 steps	1.02	0.95	1.00	1.02							7.43		2.97	
		velocity	5.53	8.96	9.62	9.14	8.96							1.89	8.08	9.23	
Heat 1 - 2024 USATF National Indoor Championships (Albuquerque, NM) (Altitude) (TV Analysis)													<i>Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record</i>				
date	16-Feb-24	time	2.44	3.46	4.42	5.38	6.37							7.27	6 / 1		
reaction time	0.141	interval	7 steps	1.02	0.96	0.96	0.99							7.27		2.94	
		velocity	5.62	8.96	9.52	9.52	9.23							1.93	8.25	9.33	
FINAL - 2024 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)													<i>Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record</i>				
date	10-Feb-24	time	2.40	3.38	4.36	5.36	6.32							7.32	5 / 1		
reaction time	0.169	interval	7 steps	0.98	0.98	1.00	0.96							7.32		2.96	
		velocity	5.72	9.33	9.33	9.14	9.52							1.92	8.20	9.26	
Heat 2 - 2024 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)													<i>Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record</i>				
date	10-Feb-24	time	2.46	3.48	4.48	5.44	6.44							7.39	5 / 1		
reaction time	0.168	interval	7 steps	1.02	1.00	0.96	1.00							7.39		2.98	
		velocity	5.58	8.96	9.14	9.52	9.14							1.90	8.12	9.20	
FINAL - 2024 New Balance Indoor Grand Prix (Boston, MA) (TV Analysis)													<i>Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record</i>				
date	04-Feb-24	time	2.50	3.50	4.48	5.43	6.43							7.35	4 / 1		
reaction time	0.166	interval	7 steps	1.00	0.98	0.95	1.00							7.35		2.93	
		velocity	5.49	9.14	9.33	9.62	9.14							1.91	8.16	9.36	
FINAL - 2023 Prefontaine Classic (Eugene, OR)													<i>Omega Timing (2023) - diamond league race analysis</i>				
date	17-Sep-23	time	2.33	3.35	4.34	5.34	6.34	7.34	8.35	9.38	10.41	11.47		13.06	6 / 2		
reaction time	0.153	interval	7 steps	1.02	0.99	1.00	1.00	1.00	1.01	1.03	1.03	1.06	1.59		3.01	3.01	3.12
wind	0.9 m/s	velocity	5.89	8.96	9.23	9.14	9.14	9.14	9.05	8.87	8.87	8.62	8.82	8.42	9.11	9.11	8.79
FINAL - 2023 Xiamen Diamond League (Xiamen, CHN)													<i>Omega Timing (2023) - diamond league race analysis</i>				
date	02-Sep-23	time	2.32	3.34	4.32	5.30	6.29	7.28	8.28	9.31	10.36	11.43		13.12	6 / 3		
reaction time	0.141	interval	7 steps	1.02	0.98	0.98	0.99	0.99	1.00	1.03	1.05	1.07	1.69		2.98	2.98	3.15
wind	0.0 m/s	velocity	5.91	8.96	9.33	9.33	9.23	9.23	9.14	8.87	8.70	8.54	8.30	8.38	9.20	9.20	8.70
FINAL - 2023 World Athletics Championships (Budapest, HUN)													<i>Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season</i>				
date	21-Aug-23	time	2.45	3.45	4.42	5.38	6.37	7.36	8.37	9.39	10.43	11.53		12.96	5 / 1		
reaction time	0.135	interval	7 steps	1.00	0.97	0.96	0.99	0.99	1.01	1.02	1.04	1.10	1.43		2.93	2.99	3.16
wind	0.0 m/s	velocity	5.60	9.14	9.42	9.52	9.23	9.23	9.05	8.96	8.79	8.31	9.80	8.49	9.36	9.17	8.68
Semi-Final 2 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)													<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>				
date	21-Aug-23	time	2.44	3.44	4.42	5.40	6.38	7.38	8.40	9.42	10.46	11.53		13.02	5 / 1		
reaction time	0.137	interval	7 steps	1.00	0.98	0.98	0.98	1.00	1.02	1.02	1.04	1.07	1.49		2.96	3.00	3.13
wind	-0.2 m/s	velocity	5.62	9.14	9.33	9.33	9.33	9.14	8.96	8.96	8.79	8.54	9.41	8.45	9.26	9.14	8.76
Heat 4 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)													<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>				
date	20-Aug-23	time	2.45	3.47	4.47	5.47	6.47	7.47	8.50	9.57	10.63	11.68		13.18	5 / 1		
reaction time	0.153	interval	7 steps	1.02	1.00	1.00	1.00	1.00	1.03	1.07	1.06	1.05	1.50		3.02	3.03	3.18
wind	-0.6 m/s	velocity	5.60	8.96	9.14	9.14	9.14	9.14	8.87	8.54	8.62	8.70	9.35	8.35	9.08	9.05	8.62
FINAL - 2023 London Athletics Meet (London, GBR)													<i>Omega Timing (2023) - diamond league race analysis</i>				
date	23-Jul-23	time	2.36	3.35	4.33	5.30	6.29	7.28	8.29	9.32	10.37	11.43		13.01	5 / 1		
reaction time	0.165	interval	7 steps	0.99	0.98	0.97	0.99	0.99	1.01	1.03	1.05	1.06	1.58		2.94	2.99	3.14
wind	1.3 m/s	velocity	5.81	9.23	9.33	9.42	9.23	9.23	9.05	8.87	8.70	8.62	8.87	8.46	9.33	9.17	8.73

FINAL - 2023 Meeting de Paris (Paris, FRA)

date	09-Jun-23	time	2.30	3.30	4.28	5.25	6.24	7.23	8.24	9.26	10.30	11.36		<i>Omega Timing (2023) - diamond league race analysis</i>				
reaction time	0.157	interval	7 steps	1.00	0.98	0.97	0.99	0.99	1.01	1.02	1.04	1.06	1.62			2.95	2.99	3.12
wind	-0.5 m/s	velocity	5.97	9.14	9.33	9.42	9.23	9.23	9.05	8.96	8.79	8.62	8.65	8.47		9.29	9.17	8.79

Heat 2 - 2023 Meeting de Paris (Paris, FRA)

date	09-Jun-23	time	2.30	3.30	4.30	5.30	6.30	7.30	8.30	9.40	10.40	11.50		<i>Omega Timing (2023) - diamond league race analysis</i>				
reaction time	0.147	interval	7 steps	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.00	1.10	1.70			3.00	3.00	3.20
wind	-0.6 m/s	velocity	5.97	9.14	9.14	9.14	9.14	9.14	9.14	8.31	9.14	8.31	8.25	8.33		9.14	9.14	8.57

FINAL - 2023 FBK Games (Hengelo, NED) (TV Analysis)

date	04-Jun-23	time	2.53	3.53	4.51	5.49	6.45	7.43	8.45	9.47	10.53	11.60		<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>				
reaction time	0.187	interval	7 steps	1.00	0.98	0.98	0.96	0.98	1.02	1.02	1.06	1.07	1.43			2.96	2.96	3.15
wind	0.4 m/s	velocity	5.42	9.14	9.33	9.33	9.52	9.33	8.96	8.96	8.62	8.54	9.80	8.44		9.26	9.26	8.70

FINAL - 2023 Golden Gala Pietro Mennea (Firenze, ITA) (TV Analysis)

date	02-Jun-23	time	2.45	3.46	4.44	5.42	6.40	7.41	8.42	9.45	10.51	11.59		<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>				
reaction time	0.152	interval	7 steps	1.01	0.98	0.98	0.98	1.01	1.01	1.03	1.06	1.08	1.45			2.97	3.00	3.17
wind	-0.2 m/s	velocity	5.60	9.05	9.33	9.33	9.33	9.05	9.05	8.87	8.62	8.46	9.67	8.44		9.23	9.14	8.65

FINAL - 2023 Meeting International Mohammed VI d'Athlétisme (Rabat, MAR)

date	28-May-23	time	2.35	3.36	4.34	5.33	6.32	7.34	8.36	9.40	10.45	11.52		<i>Omega Timing (2023) - diamond league race analysis</i>				
reaction time	0.177	interval	7 steps	1.01	0.98	0.99	0.99	1.02	1.02	1.04	1.05	1.07	1.60			2.98	3.03	3.16
wind	-1.3 m/s	velocity	5.84	9.05	9.33	9.23	9.23	8.96	8.96	8.79	8.70	8.54	8.76	8.38		9.20	9.05	8.68

FINAL - 2023 Adidas Atlanta City Games (Atlanta, GA) (street) (TV Analysis)

date	05-May-23	time	2.50	3.48	4.48	5.48	6.45	7.45	8.47	9.50	10.53	11.60		<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>				
reaction time	0.181	interval	7 steps	0.98	1.00	1.00	0.97	1.00	1.02	1.03	1.03	1.07	1.41			2.98	2.99	3.13
wind	0.0 m/s	velocity	5.49	9.33	9.14	9.14	9.42	9.14	8.96	8.87	8.87	8.54	9.94	8.46		9.20	9.17	8.76

FINAL - 2022 Weltklasse (Zürich, SUI) (TV Analysis)

date	08-Sep-22	time	2.44	3.44	4.41	5.37	6.34	7.34	8.34	9.38	10.44	11.51		<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
reaction time	0.140	interval	7 steps	1.00	0.97	0.96	0.97	1.00	1.00	1.04	1.06	1.07	1.51			2.93	2.97	3.17
wind	-1.0 m/s	velocity	5.62	9.14	9.42	9.52	9.42	9.14	9.14	8.79	8.62	8.54	9.28	8.45		9.36	9.23	8.65

FINAL - 2022 ISTAF (Berlin, GER) (TV Analysis)

date	04-Sep-22	time	2.42	3.44	4.40	5.36	6.34	7.34	8.36	9.40	10.44	11.56		<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
reaction time	0.140	interval	7 steps	1.02	0.96	0.96	0.98	1.00	1.02	1.04	1.04	1.12	1.49			2.94	3.00	3.20
wind	0.6 m/s	velocity	5.67	8.96	9.52	9.52	9.33	9.14	8.96	8.79	8.79	8.16	9.41	8.43		9.33	9.14	8.57

FINAL - 2022 Athletissima (Lausanne, SUI) (TV Analysis)

date	26-Aug-22	time	2.50	3.54	4.54	5.54	6.52	7.54	8.58	9.61	10.64	11.69		<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
reaction time	0.122	interval	7 steps	1.04	1.00	1.00	0.98	1.02	1.04	1.03	1.03	1.05	1.42			3.04	3.04	3.11
wind	0.0 m/s	velocity	5.49	8.79	9.14	9.14	9.33	8.96	8.79	8.87	8.87	8.70	9.87	8.39		9.02	9.02	8.82

FINAL - 2022 Herculis Meeting International d'Athlétisme (Monaco, MON) (TV Analysis)

date	10-Aug-22	time	2.40	3.40	4.36	5.33	6.30	7.30	8.30	9.30	10.36	11.43		<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
reaction time	0.148	interval	7 steps	1.00	0.96	0.97	0.97	1.00	1.00	1.00	1.06	1.07	1.56			2.93	2.97	3.13
wind	0.6 m/s	velocity	5.72	9.14	9.52	9.42	9.42	9.14	9.14	9.14	8.62	8.54	8.99	8.47		9.36	9.23	8.76

FINAL - 2022 World Athletics Championships (Eugene, OR)

date	17-Jul-22	time	2.44	3.43	4.41	5.38	6.38	7.38	8.38	9.38	10.44	11.54		<i>Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season</i>				
reaction time	0.124	interval	7 steps	0.99	0.98	0.97	1.00	1.00	1.00	1.00	1.06	1.10	1.49			2.94	3.00	3.16
wind	1.2 m/s	velocity	5.62	9.23	9.33	9.42	9.14	9.14	9.14	9.14	8.62	8.31	9.41	8.44		9.33	9.14	8.68

Semi-Final 1 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)

date	17-Jul-22	time	2.43	3.40	4.40	5.37	6.37	7.37	8.37	9.40	10.43	11.48		<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
reaction time	0.128	interval	7 steps	0.97	1.00	0.97	1.00	1.00	1.00	1.03	1.03	1.05	1.53			2.94	3.00	3.11
wind	-0.6 m/s	velocity	5.65	9.42	9.14	9.42	9.14	9.14	9.14	8.87	8.87	8.70	9.16	8.46		9.33	9.14	8.82

Heat 2 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)

date	16-Jul-22	time	2.43	3.46	4.46	5.43	6.43	7.43	8.46	9.50	10.53	11.63		<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
reaction time	0.147	interval	7 steps	1.03	1.00	0.97	1.00	1.00	1.03	1.04	1.03	1.10	1.51			3.00	3.03	3.17
wind	0.4 m/s	velocity	5.65	8.87	9.14	9.42	9.14	9.14	8.87	8.79	8.87	8.31	9.28	8.37		9.14	9.05	8.65

Semi-Final 1 - 2022 USATF National Championships (Eugene, OR)

date	26-Jun-22	time	2.41	3.41	4.38	5.35	6.34	7.36	8.36	9.40	10.45	11.53		<i>USATF (2022) - Results powered by Karmarush.com</i>				
reaction time		interval	7 steps	1.00	0.97	0.97	0.99	1.02	1.00	1.04	1.05	1.08	1.50			2.94	3.01	3.17
wind	0.4 m/s	velocity	5.69	9.14	9.42	9.42	9.23	8.96	9.14	8.79	8.70	8.46	9.35	8.44		9.33	9.11	8.65

FINAL - 2022 New York Grand Prix (New York, NY) (TV Analysis)

date	12-Jun-22	time	2.35	3.35	4.33	5.33	6.30	7.28	8.30	9.35	10.38	11.52		<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
reaction time	0.116	interval	7 steps	1.00	0.98	1.00	0.97	0.98	1.02	1.05	1.03	1.14	1.54			2.98	2.97	3.22

wind	1.6 m/s	velocity	5.84	9.14	9.33	9.14	9.42	9.33	8.96	8.70	8.87	8.02	9.10	8.42	9.20	9.23	8.52
FINAL - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis) <i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>																	
date	20-Mar-22	time	2.36	3.40	4.38	5.38	6.38							7.39	4 / 1		
reaction time	0.151	interval	7 steps	1.04	0.98	1.00	1.00						1.01			3.02	
		velocity	5.81	8.79	9.33	9.14	9.14						9.62	8.12		9.08	
Semi-Final 2 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis) <i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>																	
date	20-Mar-22	time	2.36	3.36	4.34	5.32	6.32							7.29	6 / 1		
reaction time	0.130	interval	7 steps	1.00	0.98	0.98	1.00						0.97	=WR		2.96	
		velocity	5.81	9.14	9.33	9.33	9.14						10.02	8.23		9.26	
Heat 5 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis) <i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>																	
date	20-Mar-22	time	2.50	3.50	4.48	5.46	6.48							7.40	3 / 1		
reaction time	0.140	interval	7 steps	1.00	0.98	0.98	1.02						0.92			2.96	
		velocity	5.49	9.14	9.33	9.33	8.96						10.57	8.11		9.26	
FINAL - 2022 Müller Indoor Grand Prix (Birmingham, GBR) (TV Analysis) <i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>																	
date	19-Feb-22	time	2.37	3.38	4.39	5.39	6.39							7.41	3 / 1		
reaction time	0.149	interval	7 steps	1.01	1.01	1.00	1.00						1.02			3.02	
		velocity	5.79	9.05	9.05	9.14	9.14						9.53	8.10		9.08	
FINAL - 2022 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis) <i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>																	
date	17-Feb-22	time	2.39	3.40	4.38	5.36	6.36							7.35	4 / 1		
reaction time	0.167	interval	7 steps	1.01	0.98	0.98	1.00						0.99			2.97	
		velocity	5.74	9.05	9.33	9.33	9.14						9.82	8.16		9.23	
Heat 2 - 2022 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis) <i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>																	
date	17-Feb-22	time	2.35	3.38	4.37	5.37	6.38							7.40	4 / 1		
reaction time	0.153	interval	7 steps	1.03	0.99	1.00	1.01						1.02			3.02	
		velocity	5.84	8.87	9.23	9.14	9.05						9.53	8.11		9.08	
FINAL - 2022 New Balance Indoor Grand Prix (Staten Island, NY) (TV Analysis) <i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>																	
date	06-Feb-22	time	2.45	3.44	4.45	5.44	6.42							7.37	3 / 1		
reaction time	0.181	interval	7 steps	0.99	1.01	0.99	0.98						0.95			2.99	
		velocity	5.60	9.23	9.05	9.23	9.33						10.23	8.14		9.17	
FINAL - 2020 Olympic Games (Tokyo, JPN) (TV Analysis) <i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>																	
date	06-Aug-21	time	2.40	3.40	4.40	5.40	6.40	7.38	8.40	9.44	10.50	11.58			13.09	4 / 2	
reaction time	0.136	interval	7 steps	1.00	1.00	1.00	1.00	0.98	1.02	1.04	1.06	1.08	1.51			3.00	3.00
wind	-0.5 m/s	velocity	5.72	9.14	9.14	9.14	9.14	9.33	8.96	8.79	8.62	8.46	9.28	8.40		9.14	9.14
Semi-Final 3 - 2020 Olympic Games (Tokyo, JPN) (TV Analysis) <i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>																	
date	04-Aug-21	time	2.43	3.43	4.43	5.43	6.44	7.44	8.47	9.49	10.52	11.60			13.13	4 / 1	
reaction time	0.130	interval	7 steps	1.00	1.00	1.00	1.01	1.00	1.03	1.02	1.03	1.08	1.53			3.00	3.04
wind	-0.1 m/s	velocity	5.65	9.14	9.14	9.14	9.05	9.14	8.87	8.96	8.87	8.46	9.16	8.38		9.14	9.02
Heat 3 - 2020 Olympic Games (Tokyo, JPN) (TV Analysis) <i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>																	
date	02-Aug-21	time	2.37	3.37	4.35	5.34	6.31	7.31	8.31	9.34	10.41	11.47			13.02	9 / 1	
reaction time	0.127	interval	7 steps	1.00	0.98	0.99	0.97	1.00	1.00	1.03	1.07	1.06	1.55			2.97	2.97
wind	0.1 m/s	velocity	5.79	9.14	9.33	9.23	9.42	9.14	9.14	8.87	8.54	8.62	9.05	8.45		9.23	9.23
FINAL - 2021 István Gyulai Memorial (Székesfehérvár, HUN) (TV Analysis) <i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>																	
date	06-Jul-21	time	2.36	3.37	4.37	5.35	6.34	7.34	8.36	9.40	10.47	11.56			13.08	4 / 1	
reaction time	0.145	interval	7 steps	1.01	1.00	0.98	0.99	1.00	1.02	1.04	1.07	1.09	1.52			2.99	3.01
wind	-0.1 m/s	velocity	5.81	9.05	9.14	9.33	9.23	9.14	8.96	8.79	8.54	8.39	9.22	8.41		9.17	9.11
FINAL - 2020 USA Olympic Trials (Eugene, OR) (TV Analysis) <i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>																	
date	26-Jun-21	time	2.40	3.37	4.34	5.30	6.27	7.24	8.26	9.27	10.33	11.42			12.96	4 / 1	
reaction time	0.146	interval	7 steps	0.97	0.97	0.96	0.97	0.97	1.02	1.01	1.06	1.09	1.54			2.90	2.96
wind	0.4 m/s	velocity	5.72	9.42	9.42	9.52	9.42	9.42	8.96	9.05	8.62	8.39	9.10	8.49		9.46	9.26
Semi-Final 1 - 2020 USA Olympic Trials (Eugene, OR) <i>Vazel (2021) - https://twitter.com/pjvazel/status/1409323602432999426?s=21</i>																	
date	26-Jun-21	time	2.49	3.49	4.45	5.40	6.36	7.36	8.35	9.36	10.38	11.42			12.81	5 / 1	
reaction time	0.169	interval	7 steps	1.00	0.96	0.95	0.96	1.00	0.99	1.01	1.02	1.04	1.39	PB		2.91	2.95
wind	1.8 m/s	velocity	5.51	9.14	9.52	9.62	9.52	9.14	9.23	9.05	8.96	8.79	10.09	8.59		9.42	9.29
Heat 1 - 2020 USA Olympic Trials (Eugene, OR) (TV Analysis) <i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>																	
date	25-Jun-21	time	2.43	3.43	4.43	5.40	6.42	7.43	8.46	9.49	10.51	11.55			13.11	4 / 1	
reaction time	0.175	interval	7 steps	1.00	1.00	0.97	1.02	1.01	1.03	1.03	1.02	1.04	1.56			2.97	3.06
wind	0.7 m/s	velocity	5.65	9.14	9.14	9.42	8.96	9.05	8.87	8.87	8.96	8.79	8.99	8.39		9.23	8.96
FINAL - 2021 Tom Jones Invitational (Gainesville, FL) (TV Analysis) <i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>																	

date	17-Apr-21	time	2.50	3.52	4.49	5.47	6.45	7.44	8.42	9.47	10.53	11.59	13.07	6 / 1				
reaction time		interval	7 steps	1.02	0.97	0.98	0.98	0.99	0.98	1.05	1.06	1.06	1.48		2.97	2.95	3.17	
wind	1.3 m/s	velocity	5.49	8.96	9.42	9.33	9.33	9.23	9.33	8.70	8.62	8.62	9.47	8.42	9.23	9.29	8.65	
FINAL - 2021 Villa de Madrid (Madrid, ESP)														<i>Vazel (2021) - https://twitter.com/pjvazel/status/1364677209525485569</i>				
date	24-Feb-21	time	2.48	3.47	4.46	5.45	6.44							7.29	6 / 1			
reaction time		interval	7 steps	0.99	0.99	0.99	0.99						0.85	WR		2.97		
		velocity	5.53	9.23	9.23	9.23	9.23						11.44	8.23		9.23		
Heat 1 - 2021 Villa de Madrid (Madrid, ESP) (TV Analysis)														<i>Henson (2021) - men's 60m hurdles world record season - Grant Holloway</i>				
date	24-Feb-21	time	2.36	3.36	4.34	5.34	6.33							7.32	5 / 1			
reaction time	0.164	interval	7 steps	1.00	0.98	1.00	0.99						0.99	=AR		2.98		
		velocity	5.81	9.14	9.33	9.14	9.23						9.82	8.20		9.20		
FINAL - 2021 Copernicus Cup (Toruń, POL) (TV Analysis)														<i>Henson (2021) - men's 60m hurdles world record season - Grant Holloway</i>				
date	17-Feb-21	time	2.44	3.45	4.43	5.42	6.45							7.38	4 / 1			
reaction time	0.122	interval	7 steps	1.01	0.98	0.99	1.03						0.93			2.98		
		velocity	5.62	9.05	9.33	9.23	8.87						10.45	8.13		9.20		
FINAL - 2021 Meeting Elite en Salle de L'Eure (Val-de-Reuil, FRA) (TV Analysis)														<i>Henson (2021) - men's 60m hurdles world record season - Grant Holloway</i>				
date	14-Feb-21	time	2.40	3.40	4.40	5.42	6.42							7.41	5 / 1			
reaction time	0.161	interval	7 steps	1.00	1.00	1.02	1.00						0.99			3.02		
		velocity	5.72	9.14	9.14	8.96	9.14						9.82	8.10		9.08		
Heat 1 - 2021 Meeting Elite en Salle de L'Eure (Val-de-Reuil, FRA) (TV Analysis)														<i>Henson (2021) - men's 60m hurdles world record season - Grant Holloway</i>				
date	14-Feb-21	time	2.42	3.42	4.42	5.42	6.42							7.47	4 / 1			
reaction time	0.142	interval	7 steps	1.00	1.00	1.00	1.00						1.05			3.00		
		velocity	5.67	9.14	9.14	9.14	9.14						9.26	8.03		9.14		
FINAL - 2021 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA)														<i>Vazel (2021) - https://twitter.com/pjvazel/status/1359286403834724356</i>				
date	09-Feb-21	time	2.50	3.49	4.48	5.47	6.45							7.32	5 / 1			
reaction time	0.150	interval	7 steps	0.99	0.99	0.99	0.98						0.87	AR		2.97		
		velocity	5.49	9.23	9.23	9.23	9.33						11.17	8.20		9.23		
Heat 2 - 2021 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)														<i>Henson (2021) - men's 60m hurdles world record season - Grant Holloway</i>				
date	09-Feb-21	time	2.38	3.38	4.38	5.36	6.34							7.38	4 / 1			
reaction time	0.194	interval	7 steps	1.00	1.00	0.98	0.98						1.04			2.98		
		velocity	5.76	9.14	9.14	9.33	9.33						9.35	8.13		9.20		
FINAL - 2021 American Track League 1 (Fayetteville, AR) (TV Analysis)														<i>Henson (2021) - men's 60m hurdles world record season - Grant Holloway</i>				
date	24-Jan-21	time	2.42	3.43	4.43	5.42	6.39							7.35	4 / 1			
reaction time	0.174	interval	7 steps	1.01	1.00	0.99	0.97						0.96	=AR =PB		3.00		
		velocity	5.67	9.05	9.14	9.23	9.42						10.13	8.16		9.14		
FINAL - 2020 István Gyulai Memorial (Székesfehérvár, HUN) (TV Analysis)														<i>Henson (2020) - Athlete First: 2020 year end hurdle report</i>				
date	19-Aug-20	time	2.36	3.37	4.34	5.34	6.31	7.34	8.34	9.44	10.51	11.64		13.22	3 / 2			
reaction time	0.141	interval	7 steps	1.01	0.97	1.00	0.97	1.03	1.00	1.10	1.07	1.13	1.58			2.98	3.00	3.30
wind	0.3 m/s	velocity	5.81	9.05	9.42	9.14	9.42	8.87	9.14	8.31	8.54	8.09	8.87	8.32		9.20	9.14	8.31
FINAL - 2020 Herculis Meeting International d'Athletisme (Monaco, MON) (TV Analysis)														<i>Henson (2020) - Athlete First: 2020 year end hurdle report</i>				
date	14-Aug-20	time	2.50	3.50	4.50	5.50	6.50	7.50	8.54	9.57	10.64	11.74		13.19	3 / 4			
reaction time	0.163	interval	7 steps	1.00	1.00	1.00	1.00	1.00	1.04	1.03	1.07	1.10	1.45			3.00	3.04	3.20
wind	0.8 m/s	velocity	5.49	9.14	9.14	9.14	9.14	9.14	8.79	8.87	8.54	8.31	9.67	8.34		9.14	9.02	8.57
FINAL - 2019 IAAF World Championships (Doha, QAT)														<i>CAA Hurdle Development (2019)</i>				
date	02-Oct-19	time	2.46	3.46	4.44	5.41	6.41	7.40	8.42	9.44	10.50	11.60		13.10	6 / 1			
reaction time	0.158	interval	7 steps	1.00	0.98	0.97	1.00	0.99	1.02	1.02	1.06	1.10	1.50			2.95	3.01	3.18
wind	0.6 m/s	velocity	5.58	9.14	9.33	9.42	9.14	9.23	8.96	8.96	8.62	8.31	9.35	8.40		9.29	9.11	8.62
Semi-Final 1 - 2019 IAAF World Championships (Doha, QAT)														<i>CAA Hurdle Development (2019)</i>				
date	02-Oct-19	time	2.50	3.50	4.46	5.43	6.40	7.39	8.40	9.42	10.48	11.62		13.10	5 / 1			
reaction time	0.166	interval	7 steps	1.00	0.96	0.97	0.97	0.99	1.01	1.02	1.06	1.14	1.48			2.93	2.97	3.22
wind	1.1 m/s	velocity	5.49	9.14	9.52	9.42	9.42	9.23	9.05	8.96	8.62	8.02	9.47	8.40		9.36	9.23	8.52
Heat 4 - 2019 IAAF World Championships (Doha, QAT) (TV Analysis)														<i>Henson (2021) - Athlete First: 2019 year end hurdle report</i>				
date	30-Sep-19	time	2.38	3.38	4.34	5.32	6.32	7.30	8.32	9.36	10.42	11.56		13.22	8 / 1			
reaction time	0.160	interval	7 steps	1.00	0.96	0.98	1.00	0.98	1.02	1.04	1.06	1.14	1.66			2.94	3.00	3.24
wind	0.4 m/s	velocity	5.76	9.14	9.52	9.33	9.14	9.33	8.96	8.79	8.62	8.02	8.45	8.32		9.33	9.14	8.46
FINAL - 2019 Meeting de Paris (Paris, FRA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>				
date	24-Aug-19	time	2.44	3.44	4.44	5.44	6.42	7.44	8.44	9.50	10.58	11.66		13.25	5 / 6			
reaction time	0.162	interval	7 steps	1.00	1.00	1.00	0.98	1.02	1.00	1.06	1.08	1.08	1.59			3.00	3.00	3.22
wind	0.8 m/s	velocity	5.62	9.14	9.14	9.14	9.33	8.96	9.14	8.62	8.46	8.46	8.82	8.30		9.14	9.14	8.52

FINAL - 2019 USATF National Championships (Des Moines, IA) (TV Analysis)

date	28-Jul-19	time	2.46	3.50	4.48	5.47	6.47	7.48	8.54	9.58	10.67	11.77	13.36	7 / 2			
reaction time		interval	7 steps	1.04	0.98	0.99	1.00	1.01	1.06	1.04	1.09	1.10	1.59		3.01	3.07	3.23
wind	-0.8 m/s	velocity	5.58	8.79	9.33	9.23	9.14	9.05	8.62	8.79	8.39	8.31	8.82	8.23	9.11	8.93	8.49

Henson (2020) - Athlete First: 2019 year end hurdle report

FINAL - 2019 NCAA National Championships (Austin, TX) (TV Analysis)

date	07-Jun-19	time	2.47	3.47	4.47	5.44	6.41	7.40	8.40	9.43	10.47	11.54	12.98	5 / 1			
reaction time	0.180	interval	7 steps	1.00	1.00	0.97	0.97	0.99	1.00	1.03	1.04	1.07	1.44	PB	2.97	2.96	3.14
wind	0.8 m/s	velocity	5.55	9.14	9.14	9.42	9.42	9.23	9.14	8.87	8.79	8.54	9.74	8.47	9.23	9.26	8.73

Henson (2020) - Athlete First: 2019 year end hurdle report

Quarter-Final 1 - 2019 NCAA Championships - East Preliminary Round (Jacksonville, FL) (TV Analysis)

date	25-May-19	time	2.36	3.36	4.36	5.36	6.36	7.36	8.38	9.40	10.44	11.50	13.10	6 / 1			
reaction time		interval	7 steps	1.00	1.00	1.00	1.00	1.00	1.02	1.02	1.04	1.06	1.60		3.00	3.02	3.12
wind	1.3 m/s	velocity	5.81	9.14	9.14	9.14	9.14	9.14	8.96	8.96	8.79	8.62	8.76	8.40	9.14	9.08	8.79

Henson (2020) - Athlete First: 2019 year end hurdle report

FINAL - 2019 South Eastern Conference Championships (Fayetteville, AR) (TV Analysis)

date	11-May-19	time	2.53	3.53	4.53	5.53	6.50	7.50	8.50	9.53	10.58	11.68	13.12	5 / 2			
reaction time		interval	7 steps	1.00	1.00	1.00	0.97	1.00	1.00	1.03	1.05	1.10	1.44		3.00	2.97	3.18
wind	1.0 m/s	velocity	5.42	9.14	9.14	9.14	9.42	9.14	9.14	8.87	8.70	8.31	9.74	8.38	9.14	9.23	8.62

Henson (2020) - Athlete First: 2019 year end hurdle report

FINAL - 2019 NCAA National Indoor Championships (Birmingham, AL) (TV Analysis)

date	9-Mar-19	time	2.51	3.52	4.53	5.51	6.48						7.35	4 / 1			
reaction time	0.170	interval	7 steps	1.01	1.01	0.98	0.97						0.87	AR PB	3.00		
		velocity	5.47	9.05	9.05	9.33	9.42						11.17	8.16	9.14		

Henson (2020) - Athlete First: 2019 year end hurdle report

FINAL - 2019 South Eastern Conference Indoor Championships (Fayetteville, AR) (TV Analysis)

date	23-Feb-19	time	2.55	3.57	4.57	5.56	6.54						7.44	4 / 1			
reaction time		interval	7 steps	1.02	1.00	0.99	0.98						0.90		3.01		
		velocity	5.38	8.96	9.14	9.23	9.33						10.80	8.06	9.11		

Henson (2020) - Athlete First: 2019 year end hurdle report

FINAL - 2019 Tyson Indoor Invitational (Fayetteville, AR) (TV Analysis)

date	8-Feb-19	time	2.43	3.44	4.43	5.42	6.44						7.43	4 / 1			
reaction time		interval	7 steps	1.01	0.99	0.99	1.02						0.99		2.99		
		velocity	5.65	9.05	9.23	9.23	8.96						9.82	8.08	9.17		

Henson (2020) - Athlete First: 2019 year end hurdle report

FINAL - 2018 USATF Championships (Des Moines, IA) (TV Analysis)

date	24-Jun-18	time	2.43	3.44	4.46	5.48	6.50	7.52	8.57	9.65	10.74	11.88	13.46	5 / 2			
reaction time		interval	7 steps	1.01	1.02	1.02	1.02	1.02	1.05	1.08	1.09	1.14	1.58		3.05	3.09	3.31
wind	-1.8 m/s	velocity	5.65	9.05	8.96	8.96	8.96	8.96	8.70	8.46	8.39	8.02	8.87	8.17	8.99	8.87	8.28

Henson (2020) - Athlete First: 2018 year end hurdle report

FINAL - 2018 NCAA Championships (Eugene, OR) (TV Analysis)

date	08-Jun-18	time	2.45	3.48	4.52	5.53	6.56	7.58	8.65	9.72	10.78	11.92	13.42	4 / 1			
reaction time		interval	7 steps	1.03	1.04	1.01	1.03	1.02	1.07	1.07	1.06	1.14	1.50		3.08	3.12	3.27
wind	-1.1 m/s	velocity	5.60	8.87	8.79	9.05	8.87	8.96	8.54	8.54	8.62	8.02	9.35	8.20	8.90	8.79	8.39

Henson (2020) - Athlete First: 2018 year end hurdle report

Holloway, Trey (USA) (1994)

			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2021 American Track League 1 (Fayetteville, AR) (TV Analysis)																		
date	24-Jan-21	time	2.57	3.76	5.97	7.03								8.10	1 / 7			
reaction time	0.166	interval	7 steps	1.19	2.21	1.06							1.07			3.40		
		velocity	5.34	7.68	8.27	8.62							9.08	7.41		8.06		

Henson (2021) - men's 60m hurdles world record season - Grant Holloway

Holm, Jonatan (SWE) (1994)

			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL 2 - 2017 Windsprint (Sundsvall, SWE)																		
date	30-Jul-17	time	2.69	3.79	4.89	5.98	7.07	8.19	9.28	10.38	11.64	12.91		14.49	/ 2			
reaction time		interval		1.10	1.09	1.09	1.12	1.09	1.12	1.10	1.26	1.27	1.58			3.29	3.30	3.63
wind	1.0 m/s	velocity	5.10	8.31	8.31	8.39	8.39	8.16	8.39	8.31	7.25	7.20	8.87	7.59		8.33	8.31	7.55

(2017) - www.windsprint/Splittider/

FINAL - 2017 Windsprint (Sundsvall, SWE)

date	30-Jul-17	time	2.69	3.80	4.88	5.99	7.11	8.23	9.35	10.50	11.63	12.81		14.34	/ 2			
reaction time		interval		1.11	1.08	1.11	1.12	1.12	1.12	1.15	1.13	1.18	1.53			3.30	3.36	3.46
wind	1.0 m/s	velocity	5.10	8.23	8.46	8.23	8.16	8.16	8.16	7.95	8.09	7.75	9.16	7.67		8.31	8.16	7.92

(2017) - www.windsprint/Splittider/

Holek, Jakub (CZE) (1995)

			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Heat 1 - 2014 Czech Republic National U20 Championships (Trinec, CZE) (99cm)																		
date	28-Jun-14	time	2.99	4.26	5.52	6.77	7.98	9.20	10.44	11.66	12.91	14.18		15.89	3 / 5			
reaction time	0.287	interval		1.27	1.26	1.25	1.21	1.22	1.24	1.22	1.25	1.27	1.71			3.78	3.67	3.74
wind	-1.6 m/s	velocity	4.59	7.20	7.25	7.31	7.55	7.49	7.37	7.49	7.31	7.20	8.20	6.92		7.25	7.47	7.33

Feher (2014) - Final report from the U18 & U20 Czech Republic national championships

Homola, Tomáš (CZE) (1995)

			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2014 Czech Republic National U20 Championships (Trinec, CZE) (99cm)																		
date	28-Jun-14	time	2.68	3.80	4.90	5.99	7.10	8.20	9.30	10.43	11.56	12.73		14.28	4 / 1			
reaction time	0.147	interval		1.12	1.10	1.09	1.11	1.10	1.10	1.13	1.13	1.17	1.55			3.31	3.31	3.43

Feher (2014) - Final report from the U18 & U20 Czech Republic national championships

wind -2.2 m/s velocity 5.12 8.16 8.31 8.39 8.23 8.31 8.31 8.09 8.09 7.81 9.05 7.70 8.28 8.28 7.99

Heat 1 - 2014 Czech Republic National U20 Championships (Trinec, CZE) (99cm) *Feher (2014) - Final report from the U18 & U20 Czech Republic national championships*
 date 28-Jun-14 time 2.65 3.78 4.89 5.99 7.11 8.23 9.34 10.50 11.67 12.84 14.43 4 / 1
 reaction time 0.176 interval 1.13 1.11 1.10 1.12 1.12 1.11 1.16 1.17 1.17 1.59 3.34 3.35 3.50
 wind -1.6 m/s velocity 5.18 8.09 8.23 8.31 8.16 8.16 8.23 7.88 7.83 7.79 8.82 7.62 8.21 8.19 7.83

Hon, Brandon (USA) (1979) H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10
Heat 2 - 2007 USATF National Championships (Indianapolis, IN) *USATF Men's Hurdle Development (2007)*
 date 23-Jun-07 time 2.74 3.85 4.95 6.06 7.14 8.22 9.32 10.46 11.64 12.90 14.49 7 / 8
 reaction time 0.131 interval 1.11 1.10 1.11 1.08 1.08 1.10 1.14 1.18 1.26 1.59 3.32 3.26 3.58
 wind -1.9 m/s velocity 5.01 8.23 8.31 8.23 8.46 8.46 8.31 8.02 7.75 7.25 8.82 7.59 8.26 8.41 7.66

Hough, Nicholas (AUS) (1993) H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10
Semi-Final 3 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis) *Henson (2022) - Athlete First: 2022 year end hurdle report*
 date 17-Jul-22 time 2.63 3.70 4.73 5.76 6.76 7.80 8.83 9.86 10.90 11.96 13.42 1 / 7
 reaction time 0.131 interval 7 steps 1.07 1.03 1.03 1.00 1.04 1.03 1.03 1.04 1.06 1.46 3.13 3.07 3.13
 wind 2.5 m/s velocity 5.22 8.54 8.87 8.87 9.14 8.79 8.87 8.87 8.79 8.62 9.60 8.20 8.76 8.93 8.76

FINAL - 2022 Seiko Golden Grand Prix (Tokyo, JPN) *Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season*
 date 08-May-22 time 2.66 3.77 4.82 5.85 6.87 7.89 8.90 9.94 10.98 12.05 13.49 9 / 3
 reaction time 0.155 interval 7 steps 1.11 1.05 1.03 1.02 1.02 1.01 1.04 1.04 1.07 1.44 3.19 3.05 3.15
 wind 0.1 m/s velocity 5.16 8.23 8.70 8.87 8.96 8.96 9.05 8.79 8.79 8.54 9.74 8.15 8.60 8.99 8.70

FINAL - 2022 Michitaka Kinami Memorial (Osaka, JPN) *Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season*
 date 01-May-22 time 2.70 3.76 4.80 5.82 6.86 7.90 8.92 9.95 11.00 12.05 13.50 3 / 1
 reaction time 0.168 interval 7 steps 1.06 1.04 1.02 1.04 1.04 1.02 1.03 1.05 1.05 1.45 3.12 3.10 3.13
 wind 0.8 m/s velocity 5.08 8.62 8.79 8.96 8.79 8.79 8.96 8.87 8.70 8.70 9.67 8.15 8.79 8.85 8.76

FINAL - 2022 Mikio Oda Memorial (Hiroshima, JPN) *Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season*
 date 29-Apr-22 time 2.69 3.79 4.85 5.91 6.95 8.00 9.05 10.08 11.14 12.23 13.73 1 / 2
 reaction time 0.154 interval 7 steps 1.10 1.06 1.06 1.04 1.05 1.05 1.03 1.06 1.09 1.50 3.22 3.14 3.18
 wind -1.5 m/s velocity 5.10 8.31 8.62 8.62 8.79 8.70 8.70 8.87 8.62 8.39 9.35 8.01 8.52 8.73 8.62

Semi-Final 3 - 2019 IAAF World Championships (Doha, QAT) *CAA Hurdle Development (2019)*
 date 02-Oct-19 time 2.66 3.72 4.77 5.78 6.84 7.90 8.93 10.00 11.06 12.15 13.61 2 / 8
 reaction time 0.176 interval 7 steps 1.06 1.05 1.01 1.06 1.06 1.03 1.07 1.06 1.09 1.46 3.12 3.15 3.22
 wind 0.6 m/s velocity 5.16 8.62 8.70 9.05 8.62 8.62 8.87 8.54 8.62 8.39 9.60 8.08 8.79 8.70 8.52

FINAL - 2019 Müller Grand Prix (Birmingham, GBR) (TV Analysis) *Henson (2020) - Athlete First: 2019 year end hurdle report*
 date 18-Aug-19 time 2.62 3.69 4.75 5.77 6.77 7.78 8.84 9.90 10.94 12.10 13.66 8 / 6
 reaction time 0.149 interval 7 steps 1.07 1.06 1.02 1.00 1.01 1.06 1.06 1.04 1.16 1.56 3.15 3.07 3.26
 wind -0.2 m/s velocity 5.24 8.54 8.62 8.96 9.14 9.05 8.62 8.62 8.79 7.88 8.99 8.05 8.70 8.93 8.41

Hrelja, Max (SWE) (1998) H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10
Semi-Final 1 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis) *Henson (2023) - Athlete First: 2023 year end hurdle report*
 date 21-Aug-23 time 2.63 3.70 4.80 5.85 6.88 7.93 9.00 10.03 11.07 12.15 13.60 8 / 6
 reaction time 0.162 interval 7 steps 1.07 1.10 1.05 1.03 1.05 1.07 1.03 1.04 1.08 1.45 3.22 3.15 3.15
 wind -0.2 m/s velocity 5.22 8.54 8.31 8.70 8.87 8.70 8.54 8.87 8.79 8.46 9.67 8.09 8.52 8.70 8.70

Heat 5 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis) *Henson (2023) - Athlete First: 2023 year end hurdle report*
 date 20-Aug-23 time 2.63 3.71 4.74 5.76 6.78 7.81 8.86 9.91 10.95 12.05 13.42 7 / 4
 reaction time 0.138 interval 7 steps 1.08 1.03 1.02 1.02 1.03 1.05 1.05 1.04 1.10 1.37 PB 3.13 3.10 3.19
 wind -0.9 m/s velocity 5.22 8.46 8.87 8.96 8.96 8.87 8.70 8.70 8.79 8.31 10.23 8.20 8.76 8.85 8.60

Hromek, Vit (CZE) (1997) H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10
Heat 3 - 2014 Czech Republic National U18 Championships (Trinec, CZE) (91cm) *Feher (2014) - Final report from the U18 & U20 Czech Republic national championships*
 date 28-Jun-14 time 3.01 4.25 5.55 6.84 8.09 9.37 10.65 11.90 13.15 14.48 16.31 3 / 7
 reaction time 0.356 interval 1.24 1.30 1.29 1.25 1.28 1.28 1.25 1.25 1.33 1.83 3.83 3.81 3.83
 wind -1.6 m/s velocity 4.56 7.37 7.03 7.09 7.31 7.14 7.14 7.31 7.31 6.87 7.66 6.74 7.16 7.20 7.16

Hu Yufei (CHN) (1993) H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10
Decathlon - Heat 2 - 2021 Chinese National Championships (Chongqing, CHN) *CAA Hurdle Development (2021)*
 date 27-Jun-21 time 2.75 3.94 5.09 6.23 7.39 8.52 9.67 10.84 12.00 13.18 14.80 7 / 3
 reaction time 0.159 interval 7 steps 1.19 1.15 1.14 1.16 1.13 1.15 1.17 1.16 1.18 1.62 3.48 3.44 3.51
 wind -0.2 m/s velocity 4.99 7.68 7.95 8.02 7.88 8.09 7.95 7.81 7.88 7.75 8.65 7.43 7.88 7.97 7.81

Decathlon - Heat 2 - 2019 Chinese National Championships (Shenyang, CHN) *CAA Hurdle Development (2019)*
 date 11-Jul-19 time 2.72 3.85 4.97 6.07 7.20 8.35 9.51 10.66 11.84 12.98 14.56 7 / 1
 reaction time 0.162 interval 7 steps 1.13 1.12 1.10 1.13 1.15 1.16 1.15 1.18 1.14 1.58 3.35 3.44 3.47
 wind -0.1 m/s velocity 5.04 8.09 8.16 8.31 8.09 7.95 7.88 7.95 7.75 8.02 8.87 7.55 8.19 7.97 7.90

Hua Zihui (CHN) (2000) H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

Decathlon - Heat 2 - 2021 Chinese National Championships (Chongqing, CHN)

CAA Hurdle Development (2021)

date	27-Jun-21	time	2.78	3.97	5.17	6.37	7.59	8.82	10.04	11.29	12.53	13.82		15.45	8 / 4			
reaction time	0.164	interval		1.19	1.20	1.20	1.22	1.23	1.22	1.25	1.24	1.29	1.63			3.59	3.67	3.78
wind	-0.2 m/s	velocity	4.94	7.68	7.62	7.62	7.49	7.43	7.49	7.31	7.37	7.09	8.60	7.12		7.64	7.47	7.25

Decathlon - Heat 2 - 2019 Chinese National Grand Prix Final (Daqing, CHN)

CAA Hurdle Development (2019)

date	23-Aug-19	time	2.84	4.05	5.29	6.56	7.79	9.02	10.29	11.59	12.86	14.25		15.94	8 / 4			
reaction time	0.190	interval		1.21	1.24	1.27	1.23	1.23	1.27	1.30	1.27	1.39	1.69			3.72	3.73	3.96
wind	?? m/s	velocity	4.83	7.55	7.37	7.20	7.43	7.43	7.20	7.03	7.20	6.58	8.30	6.90		7.37	7.35	6.92

Huan Jiaxing (CHN) (2001)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

Heat 3 - 2021 Chinese National Championships (Chongqing, CHN)

CAA Hurdle Development (2021)

date	25-Jun-21	time	2.69	3.82	4.95	6.09	7.22	8.34	9.48	10.64	11.80	12.96		14.54	9 / 8			
reaction time	0.172	interval		1.13	1.13	1.14	1.13	1.12	1.14	1.16	1.16	1.16	1.58			3.40	3.39	3.48
wind	0.5 m/s	velocity	5.10	8.09	8.09	8.02	8.09	8.16	8.02	7.88	7.88	7.88	8.87	7.57		8.06	8.09	7.88

FINAL - 2021 Yangtze River Delta Athletics Meeting (Shaoxing, CHN)

CAA Hurdle Development (2021)

date	08-Apr-21	time	2.80	3.92	5.08	6.22	7.34	8.48	9.66	10.84	12.00	13.20		14.74	2 / 8			
reaction time		interval		1.12	1.16	1.14	1.12	1.14	1.18	1.18	1.16	1.20	1.54			3.42	3.44	3.54
wind	-0.1 m/s	velocity	4.90	8.16	7.88	8.02	8.16	8.02	7.75	7.75	7.88	7.62	9.10	7.46		8.02	7.97	7.75

U20 Heat 1 - 2019 Chinese National Youth Games (Taiyuan, CHN) (99cm)

CAA Hurdle Development (2019)

date	14-Aug-19	time	2.59	3.69	4.81	5.89	6.99	8.11	9.23	10.36	11.49	12.66		14.32	8 / 6			
reaction time	0.196	interval		1.10	1.12	1.08	1.10	1.12	1.12	1.13	1.13	1.17	1.66			3.30	3.34	3.43
wind	0.5 m/s	velocity	5.30	8.31	8.16	8.46	8.31	8.16	8.16	8.09	8.09	7.81	8.45	7.68		8.31	8.21	7.99

Hudec, Jiri (TCH) (1964)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

Semi-Final 2 - 1988 Olympic Games (Seoul, KOR)

Brüggemann (1990) - scientific research project at the games of the XXXIV Olympiad, Seoul 1988

date	26-Sep-88	time	2.56	3.64	4.68	5.74	6.78	7.82	8.90	9.99	11.11	12.23		13.73	1 / 5			
reaction time	0.158	interval		1.08	1.04	1.06	1.04	1.04	1.08	1.09	1.12	1.12	1.50			3.18	3.16	3.33
wind	-0.7 m/s	velocity	5.36	8.46	8.79	8.62	8.79	8.79	8.46	8.39	8.16	8.16	9.35	8.01		8.62	8.68	8.23

Hudson, Matt (GBR) (1988)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

FINAL - 2010 Windsprint (Sundsvall, SWE)

Blomkvist (2010) - www.sub13.se

date	08-Aug-10	time	2.63	3.72	4.79	5.84	6.90	7.96	9.05	10.15	11.26	12.40		13.91	/ 4			
reaction time		interval		1.09	1.07	1.05	1.06	1.06	1.09	1.10	1.11	1.14	1.51			3.21	3.21	3.35
wind	1.1 m/s	velocity	5.22	8.39	8.54	8.70	8.62	8.62	8.39	8.31	8.23	8.02	9.28	7.91		8.54	8.54	8.19

Hughes, Robby (USA) (1978)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

Heat 3 - 2007 USATF National Championships (Indianapolis, IN)

USATF Men's Hurdle Development (2007)

date	23-Jun-07	time	2.60	3.75	4.85	5.94	7.02	8.09	9.19	10.28	11.38	12.50		13.96	6 / 4			
reaction time		interval		1.15	1.10	1.09	1.08	1.07	1.10	1.09	1.10	1.12	1.46			3.34	3.25	3.31
wind	-3.2 m/s	velocity	5.28	7.95	8.31	8.39	8.46	8.54	8.31	8.39	8.31	8.16	9.60	7.88		8.21	8.44	8.28

FINAL - 2006 USATF National Championships (Indianapolis, IN)

USATF Men's Hurdle Development (2006)

date	25-Jun-06	time	2.62	3.64	4.66	5.71	6.69	7.74	8.78	9.81	10.86	11.93		13.30	/ 4			
reaction time		interval		1.02	1.02	1.05	0.98	1.05	1.04	1.03	1.05	1.07	1.37			3.09	3.07	3.15
wind	-0.4 m/s	velocity	5.24	8.96	8.96	8.70	9.33	8.70	8.79	8.87	8.70	8.54	10.23	8.27		8.87	8.93	8.70

Hunčovsky, Ondrej (CZE) (1990)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

Heat 2 - 2012 Czech Republic National Indoor Championships (Praha, CZE)

Feher (2012) - Czech Republic indoor national championships - men's 60m hurdles

date	25-Feb-12	time	2.80	4.01	5.22	6.42	7.62							8.67	7 / 5			
reaction time	0.141	interval		1.21	1.21	1.20	1.20						1.05			3.62		
		velocity	4.90	7.55	7.55	7.62	7.62						9.26	6.92		7.57		

Hunt, Riley (USA) (2001)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

Heat 2 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)

Henson (2024) - Athlete First: 2024 year end hurdle report

date	24-Jun-24	time	2.67	3.76	4.83	5.90	6.97	8.03	9.16	10.23	11.36	12.48		13.98	4 / 9			
reaction time		interval		1.09	1.07	1.07	1.07	1.06	1.13	1.07	1.13	1.12	1.50			3.23	3.26	3.32
wind	-0.3 m/s	velocity	5.14	8.39	8.54	8.54	8.54	8.62	8.09	8.54	8.09	8.16	9.35	7.87		8.49	8.41	8.26

Hunter, Myles (USA) (1995)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

Heat 1 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)

Henson (2024) - Athlete First: 2024 year end hurdle report

date	24-Jun-24	time	2.56	3.65	4.70	5.72	6.73	7.75	8.78	9.80	10.83	11.88		13.33	6 / 2			
reaction time		interval		1.09	1.05	1.02	1.01	1.02	1.03	1.02	1.03	1.05	1.45	PB		3.16	3.06	3.10
wind	0.8 m/s	velocity	5.36	8.39	8.70	8.96	9.05	8.96	8.87	8.96	8.87	8.70	9.67	8.25		8.68	8.96	8.85

FINAL - 2024 Atlanta City Games (Atlanta, GA) (Street Race) (TV Analysis)

Henson (2024) - Athlete First: 2024 year end hurdle report

date	18-May-24	time	2.55	3.64	4.71	5.75	6.80	7.84	8.88	9.92	10.96	12.05		13.60	5 / 5			
reaction time		interval		1.09	1.07	1.04	1.05	1.04	1.04	1.04	1.04	1.09	1.55			3.20	3.13	3.17
wind	-0.7 m/s	velocity	5.38	8.39	8.54	8.79	8.70	8.79	8.79	8.79	8.79	8.39	9.05	8.09		8.57	8.76	8.65

Iida, Masayuki (JPN) (1987)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

FINAL - 2009 Japanese National Championships (Hiroshima, JPN)														<i>Ryutarō (2010) - an attempt or a creation of a race pattern standard model for the 110m hurdles</i>				
date	27-Jun-09	time	2.68	3.77	4.87	5.95	7.03	8.09	9.17	10.25	11.33	12.44		13.86	2 / 5			
reaction time		interval		1.09	1.10	1.08	1.08	1.06	1.08	1.08	1.08	1.11	1.42			3.27	3.22	3.27
wind	1.6 m/s	velocity	5.12	8.39	8.31	8.46	8.46	8.62	8.46	8.46	8.46	8.23	9.87	7.94		8.39	8.52	8.39

Igarashi, Rai (JPN) (1997)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Heat 1 - 2017 Mito Invitational (Mito, JPN)														<i>(2017) - tfdata-store.com/2017/05/06/post-423/</i>															
date	05-May-17	time	2.76	3.91	5.06	6.23	7.38	8.54	9.70	10.86	12.05	13.24		14.84	3 / 6														
reaction time		interval		1.15	1.15	1.17	1.15	1.16	1.16	1.16	1.19	1.19	1.60			3.47	3.47	3.54											
wind	0.3 m/s	velocity	4.97	7.95	7.95	7.81	7.95	7.88	7.88	7.88	7.68	7.68	8.76	7.41		7.90	7.90	7.75											

FINAL - 2015 Japanese National High School Championships (Wakayama, JPN) (99cm)														<i>Jakashima (2015) - race analysis of 110m & 100m hurdles in Japan- results 2015 competitions</i>				
date	02-Aug-15	time	2.67	3.81	4.91	6.04	7.15	8.29	9.41	10.56	11.71	12.87		14.36	2 / 4			
reaction time		interval		1.14	1.10	1.13	1.11	1.14	1.12	1.15	1.15	1.16	1.49	PB		3.37	3.37	3.46
wind	1.4 m/s	velocity	5.14	8.02	8.31	8.09	8.23	8.02	8.16	7.95	7.95	7.88	9.41	7.66		8.14	8.14	7.92

Iizuka, Kaisei (JPN) (2001)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2018 Japanese National High School Championships (Nagoya, JPN) (99cm)														<i>(2018) - 71st high school championships: JAF scientific committee - biomechanics data collection</i>															
date	06-Aug-18	time	2.71	3.82	4.94	6.03	7.13	8.21	9.31	10.42	11.52	12.62		14.12	5 / 2														
reaction time		interval		1.11	1.12	1.09	1.10	1.08	1.10	1.11	1.10	1.10	1.50	PB		3.32	3.28	3.31											
wind	1.6 m/s	velocity	5.06	8.23	8.16	8.39	8.31	8.46	8.31	8.23	8.31	8.31	9.35	7.79		8.26	8.36	8.28											

Ikedo, Daisuke (JPN) (1986)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Decathlon - Heat 2 - 2009 Japanese National Championships (Hiroshima, JPN)														<i>Hisashi (2010) - the run performance analysis in the decathlon sprint events</i>															
date	26-Jun-09	time	2.50	3.64	4.79	5.91	7.04	8.18	9.32	10.48	11.64	12.82		14.53	4 / 1														
reaction time		interval		1.14	1.15	1.12	1.13	1.14	1.14	1.16	1.16	1.18	1.71			3.41	3.41	3.50											
wind	1.6 m/s	velocity	5.49	8.02	7.95	8.16	8.09	8.02	8.02	7.88	7.88	7.75	8.20	7.57		8.04	8.04	7.83											

Ikedo, Kai (JPN) (2002)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2023 Michitaka Kinami Memorial (Osaka, JPN)														<i>Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season</i>															
date	07-May-23	time	2.67	3.89	5.05	6.15	7.25	8.33	9.43	10.53	11.62	12.74		14.23	8 / 8														
reaction time	0.164	interval	7 steps	1.22	1.16	1.10	1.10	1.08	1.10	1.10	1.09	1.12	1.49			3.48	3.28	3.31											
wind	-0.3 m/s	velocity	5.14	7.49	7.88	8.31	8.31	8.46	8.31	8.31	8.39	8.16	9.41	7.73		7.88	8.36	8.28											

FINAL - 2021 Michitaka Kinami Memorial (Osaka, JPN)														<i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>				
date	01-Jun-21	time	2.76	3.88	4.95	6.03	7.10	8.16	9.24	10.32	11.39	12.50		13.97	4 / 6			
reaction time	0.185	interval	7 steps	1.12	1.07	1.08	1.07	1.06	1.08	1.08	1.07	1.11	1.47			3.27	3.21	3.26
wind	0.3 m/s	velocity	4.97	8.16	8.54	8.46	8.54	8.62	8.46	8.46	8.54	8.23	9.54	7.87		8.39	8.54	8.41

Imai, Junpei (JPN) (1998)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2016 Niigata Prefecture High School Meeting (Niigata, JPN)														<i>(2016.05.30) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>															
date	29-May-16	time	2.69	3.82	4.94	6.07	7.19	8.32	9.46	10.60	11.76	12.90		14.43	1 / 2														
reaction time		interval		1.13	1.12	1.13	1.12	1.13	1.14	1.14	1.16	1.14	1.53			3.38	3.39	3.44											
wind	-0.6 m/s	velocity	5.10	8.09	8.16	8.09	8.16	8.09	8.02	8.02	7.88	8.02	9.16	7.62		8.11	8.09	7.97											

Imai, Rikkoshi (JPN)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Heat 5 - 2016 Japanese National Youth Championships (Mizuho, JPN) (91cm)														<i>(2016.11.08) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>															
date	21-Oct-16	time	2.66	3.79	4.91	6.02	7.16	8.28	9.42	10.56	11.76	12.93		14.43	7 / 3														
reaction time		interval		1.13	1.12	1.11	1.14	1.12	1.14	1.14	1.20	1.17	1.50			3.36	3.40	3.51											
wind	1.3 m/s	velocity	5.16	8.09	8.16	8.23	8.02	8.16	8.02	8.02	7.62	7.81	9.35	7.62		8.16	8.06	7.81											

Imanishi, Ryota (JPN) (2004)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2022 Japanese National High School Championships (Naruto, JPN)														<i>Kishima (2022) - national high school championships biomechanics data collection</i>															
date	07-Aug-22	time	2.74	3.91	5.08	6.21	7.39	8.57	9.77	10.98	12.17	13.36		14.86	9 / 3														
reaction time	0.144	interval		1.17	1.17	1.13	1.18	1.18	1.20	1.21	1.19	1.19	1.50			3.47	3.56	3.59											
wind	-3.8 m/s	velocity	5.01	7.81	7.81	8.09	7.75	7.75	7.62	7.55	7.68	7.68	9.35	7.40		7.90	7.70	7.64											

FINAL - 2021 Japanese High School National Championships (Fukui, JPN)														<i>Shibayama (2021) - national high school and U20 national championships</i>				
date	01-Aug-21	time	2.74	3.87	4.97	6.07	7.16	8.28	9.39	10.50	11.63	12.76		14.22	8 / 6			
reaction time	0.187	interval		1.13	1.10	1.10	1.09	1.12	1.11	1.11	1.13	1.13	1.46	PB		3.33	3.32	3.37
wind	1.4 m/s	velocity	5.01	8.09	8.31	8.31	8.39	8.16	8.23	8.23	8.09	8.09	9.60	7.74		8.23	8.26	8.14

Inocencio, Mateus (BRA) (1981)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2010 Folsam GP (Sollentuna, SWE)														<i>Blomkvist (2010) - www.sub13.se</i>															
date	01-Jul-10	time	2.53	3.62	4.69	5.73	6.78	7.85	8.93	10.03	11.14	12.28		13.94	2 / 5														
reaction time		interval		1.09	1.07	1.04	1.05	1.07	1.08	1.10	1.11	1.14	1.66			3.20	3.20	3.35											
wind	0.4 m/s	velocity	5.42	8.39	8.54	8.79	8.70	8.54	8.46	8.31	8.23	8.02	8.45	7.89		8.57	8.57	8.19											

FINAL - 2004 Olympic Games (Athens, GRE)														<i>Ruiz (2004) - las carreras con vallas de juegos olimpicos de atenas '04</i>				
date	27-Aug-04	time	2.50	3.58	4.63	5.67	6.69	7.72	8.75	9.81	10.89	11.95		13.49	7 / 7			
reaction time	0.169	interval		1.08	1.05	1.04	1.02	1.03	1.03	1.06	1.08	1.06	1.54			3.17	3.08	3.20
wind	0.3 m/s	velocity	5.49	8.46	8.70	8.79	8.96	8.87	8.87	8.62	8.46	8.62	9.10	8.15		8.65	8.90	8.57

Inui, Daisuke (JPN) (1995)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
B FINAL - 2019 Mikio Oda Memorial (Hiroshima, JPN)												<i>Kobayashi (2019) - research on athlete performance and technique- 2019 data book</i>					
date	28-Apr-19	time	2.69	3.83	4.92	6.02	7.13	8.27	9.41	10.56	11.71	12.91	14.47	7 / 7			
reaction time		interval		1.14	1.09	1.10	1.11	1.14	1.14	1.15	1.15	1.20	1.56		3.33	3.39	3.50
wind	1.4 m/s	velocity	5.10	8.02	8.39	8.31	8.23	8.02	8.02	7.95	7.95	7.62	8.99	7.60	8.23	8.09	7.83
Iribarne, Roger (CUB) (1996)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2023 Kamila Skolimowska Memorial (Silesia, POL)												<i>Omega Timing (2023) - diamond league race analysis</i>					
date	16-Jul-23	time	2.37	3.42	4.45	5.46	6.47	7.49	8.52	9.56	10.61	11.68	13.25	4 / 1			
reaction time	0.147	interval	7 steps	1.05	1.03	1.01	1.01	1.02	1.03	1.04	1.05	1.07	1.57		3.09	3.06	3.16
wind	0.3 m/s	velocity	5.79	8.70	8.87	9.05	9.05	8.96	8.87	8.79	8.70	8.54	8.93	8.30	8.87	8.96	8.68
Heat 1 - 2023 Kamila Skolimowska Memorial (Silesia, POL)												<i>Omega Timing (2023) - diamond league race analysis</i>					
date	16-Jul-23	time	2.40	3.45	4.47	5.48	6.48	7.49	8.52	9.55	10.59	11.66	13.21	2 / 1			
reaction time	0.157	interval	7 steps	1.05	1.02	1.01	1.00	1.01	1.03	1.03	1.04	1.07	1.55	PB	3.08	3.04	3.14
wind	0.3 m/s	velocity	5.72	8.70	8.96	9.05	9.14	9.05	8.87	8.87	8.79	8.54	9.05	8.33	8.90	9.02	8.73
Heat 1 - 2023 Meeting de Paris (Paris, FRA)												<i>Omega Timing (2023) - diamond league race analysis</i>					
date	09-Jun-23	time	2.37	3.44	4.47	5.50	6.53	7.58	8.62	9.68	10.75	11.84	13.44	7 / 5			
reaction time	0.152	interval	7 steps	1.07	1.03	1.03	1.03	1.05	1.04	1.06	1.07	1.09	1.60		3.13	3.12	3.22
wind	-2.0 m/s	velocity	5.79	8.54	8.87	8.87	8.87	8.70	8.79	8.62	8.54	8.39	8.76	8.18	8.76	8.79	8.52
FINAL - 2023 Seiko Golden Grand Prix (Yokohama, JPN)												<i>Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season</i>					
date	21-May-23	time	2.53	3.57	4.60	5.60	6.62	7.64	8.68	9.76	10.84	11.93	13.37	4 / 4			
reaction time	0.151	interval	7 steps	1.04	1.03	1.00	1.02	1.02	1.04	1.08	1.08	1.09	1.44		3.07	3.08	3.25
wind	0.8 m/s	velocity	5.42	8.79	8.87	9.14	8.96	8.96	8.79	8.46	8.46	8.39	9.74	8.23	8.93	8.90	8.44
FINAL - 2018 IAAF World Indoor Championships (Birmingham, GBR)												<i>Walker (2019). Biomechanical Report for the IAAF World Indoor Championships 2018: 60 Metres Hurdles Men</i>					
date	04-Mar-18	time	2.52	3.58	4.68	5.77	6.83						7.77	8 / 7			
reaction time	0.172	interval	7 steps	1.06	1.10	1.09	1.06					0.94			3.25		
		velocity	5.44	8.62	8.31	8.39	8.62					10.34	7.72		8.44		
Semi-Final 2 - 2017 IAAF World Championships (London, GBR)												<i>Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles</i>					
date	06-Aug-17	time	2.39	3.44	4.46	5.49	6.51	7.58	8.62	9.67	10.73	11.83	13.43	3 / 6			
reaction time	0.175	interval	7 steps	1.05	1.02	1.03	1.02	1.07	1.04	1.05	1.06	1.10	1.60		3.10	3.13	3.21
wind	0.6 m/s	velocity	5.74	8.70	8.96	8.87	8.96	8.54	8.79	8.70	8.62	8.31	8.76	8.19	8.85	8.76	8.54
Irie, Yukito (JPN) (1983)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2009 Nambu Chuhei Memorial (Sapporo, JPN)												<i>Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdles</i>					
date	09-Jul-09	time	2.44	3.54	4.65	5.74	6.82	7.91	9.01	10.11	11.22	12.33	13.98	1 / 6			
reaction time		interval		1.10	1.11	1.09	1.08	1.09	1.10	1.10	1.11	1.11	1.65		3.30	3.27	3.32
wind	1.2 m/s	velocity	5.62	8.31	8.23	8.39	8.46	8.39	8.31	8.31	8.23	8.23	8.50	7.87	8.31	8.39	8.26
FINAL - 2009 Mikio Oda Memorial (Hiroshima, JPN)												<i>Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdles</i>					
date	29-Apr-09	time	2.63	3.72	4.75	5.83	6.91	7.96	9.05	10.14	11.25	12.37	13.79	1 / 6			
reaction time		interval		1.09	1.03	1.08	1.08	1.05	1.09	1.09	1.11	1.12	1.42	PB	3.20	3.22	3.32
wind	1.9 m/s	velocity	5.22	8.39	8.87	8.46	8.46	8.70	8.39	8.39	8.23	8.16	9.87	7.98	8.57	8.52	8.26
Ishida Thomas, Higashi (JPN) (1997)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2023 Fuse Sprint (Tottori, JPN)												<i>Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season</i>					
date	25-Jun-23	time	2.60	3.65	4.69	5.73	6.78	7.84	8.89	9.95	11.05	12.17	13.64	6 / 4			
reaction time	0.152	interval	7 steps	1.05	1.04	1.04	1.05	1.06	1.05	1.06	1.10	1.12	1.47		3.13	3.16	3.28
wind	1.1 m/s	velocity	5.28	8.70	8.79	8.79	8.70	8.62	8.70	8.62	8.31	8.16	9.54	8.06	8.76	8.68	8.36
FINAL - 2023 Seiko Golden Grand Prix (Yokohama, JPN)												<i>Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season</i>					
date	21-May-23	time	2.60	3.65	4.68	5.70	6.73	7.76	8.81	9.86	10.93	12.02	13.42	3 / 5			
reaction time	0.136	interval	7 steps	1.05	1.03	1.02	1.03	1.03	1.05	1.05	1.07	1.09	1.40	PB	3.10	3.11	3.21
wind	0.8 m/s	velocity	5.28	8.70	8.87	8.96	8.87	8.87	8.70	8.70	8.54	8.39	10.01	8.20	8.85	8.82	8.54
FINAL - 2023 Michitaka Kinami Memorial (Osaka, JPN)												<i>Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season</i>					
date	07-May-23	time	2.59	3.63	4.67	5.69	6.72	7.75	8.81	9.86	10.94	12.02	13.46	2 / 3			
reaction time	0.142	interval	7 steps	1.04	1.04	1.02	1.03	1.03	1.06	1.05	1.08	1.08	1.44		3.10	3.12	3.21
wind	-0.3 m/s	velocity	5.30	8.79	8.79	8.96	8.87	8.87	8.62	8.70	8.46	8.46	9.74	8.17	8.85	8.79	8.54
FINAL - 2023 Mikio Oda Memorial (Hiroshima, JPN)												<i>Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season</i>					
date	29-Apr-23	time	2.59	3.64	4.70	5.73	6.79	7.84	8.92	9.97	11.07	12.17	13.62	3 / 5			
reaction time	0.146	interval	7 steps	1.05	1.06	1.03	1.06	1.05	1.08	1.05	1.10	1.10	1.45		3.14	3.19	3.25
wind	0.3 m/s	velocity	5.30	8.70	8.62	8.87	8.62	8.70	8.46	8.70	8.31	8.31	9.67	8.08	8.73	8.60	8.44
FINAL - 2022 Japanese National Championships (Osaka, JPN)												<i>Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season</i>					
date	12-Jun-22	time	2.55	3.65	4.68	5.71	6.75	7.81	8.89	9.97	11.09	12.20	13.68	8 / 7			
reaction time	0.147	interval	7 steps	1.10	1.03	1.03	1.04	1.06	1.08	1.08	1.12	1.11	1.48		3.16	3.18	3.31
wind	-1.2 m/s	velocity	5.38	8.31	8.87	8.87	8.79	8.62	8.46	8.46	8.16	8.23	9.47	8.04	8.68	8.62	8.28

B FINAL - 2022 Mikio Oda Memorial (Hiroshima, JPN)*Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season*

date	29-Apr-22	time	2.65	3.73	4.79	5.85	6.90	7.98	9.06	10.16	11.26	12.39	13.87	5 / 2			
reaction time	0.153	interval	7 steps	1.08	1.06	1.06	1.05	1.08	1.08	1.10	1.10	1.13	1.48		3.20	3.21	3.33
wind	-0.7 m/s	velocity	5.18	8.46	8.62	8.62	8.70	8.46	8.46	8.31	8.31	8.09	9.47	7.93	8.57	8.54	8.23

FINAL - 2021 Michitaka Kinami Memorial (Osaka, JPN)*Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season*

date	01-Jun-21	time	2.70	3.78	4.85	5.92	6.98	8.05	9.13	10.22	11.32	12.43	13.87	2 / 5			
reaction time	0.208	interval	7 steps	1.08	1.07	1.07	1.06	1.07	1.08	1.09	1.10	1.11	1.44		3.22	3.21	3.30
wind	0.3 m/s	velocity	5.08	8.46	8.54	8.54	8.62	8.54	8.46	8.39	8.31	8.23	9.74	7.93	8.52	8.54	8.31

FINAL - 2020 Michitaka Kinami Memorial (Osaka, JPN)*Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season*

date	24-Oct-20	time	2.62	3.71	4.76	5.83	6.89	7.95	9.01	10.14	11.24	12.38	13.90	9 / 7			
reaction time		interval	7 steps	1.09	1.05	1.07	1.06	1.06	1.06	1.13	1.10	1.14	1.52		3.21	3.18	3.37
wind	0.6 m/s	velocity	5.24	8.39	8.70	8.54	8.62	8.62	8.62	8.09	8.31	8.02	9.22	7.91	8.54	8.62	8.14

FINAL - 2020 Japanese National Championships (Niigata, JPN)*Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season*

date	03-Oct-20	time	2.64	3.71	4.75	5.79	6.83	7.88	8.94	10.00	11.08	12.21	13.67	9 / 6			
reaction time	0.153	interval	7 steps	1.07	1.04	1.04	1.04	1.05	1.06	1.06	1.08	1.13	1.46		3.15	3.15	3.27
wind	-0.1 m/s	velocity	5.20	8.54	8.79	8.79	8.79	8.70	8.62	8.62	8.46	8.09	9.60	8.05	8.70	8.70	8.39

Heat 2 - 2020 Japanese National Championships (Niigata, JPN)*Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season*

date	02-Oct-20	time	2.62	3.68	4.72	5.75	6.81	7.86	8.92	10.00	11.06	12.17	13.61	7 / 3			
reaction time	0.151	interval	7 steps	1.06	1.04	1.03	1.06	1.05	1.06	1.08	1.06	1.11	1.44		3.13	3.17	3.25
wind	0.4 m/s	velocity	5.24	8.62	8.79	8.87	8.62	8.70	8.62	8.46	8.62	8.23	9.74	8.08	8.76	8.65	8.44

FINAL - 2020 Seiko Golden Grand Prix (Tokyo, JPN)*Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season*

date	23-Aug-20	time	2.70	3.79	4.86	5.93	7.01	8.11	9.23	10.34	11.46	12.61	14.09	7 / 6			
reaction time	0.146	interval	7 steps	1.09	1.07	1.07	1.08	1.10	1.12	1.11	1.12	1.15	1.48		3.23	3.30	3.38
wind	-0.4 m/s	velocity	5.08	8.39	8.54	8.54	8.46	8.31	8.16	8.23	8.16	7.95	9.47	7.81	8.49	8.31	8.11

Ishikawa, Shuhei (JPN) (1995)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Heat 2 - 2023 Kamila Skolimowska Memorial (Silesia, POL)***Omega Timing (2023) - diamond league race analysis*

date	16-Jul-23	time	2.41	3.48	4.53	5.58	6.62	7.67	8.74	9.82	10.91	12.00	13.64	2 / 8			
reaction time	0.133	interval	7 steps	1.07	1.05	1.05	1.04	1.05	1.07	1.08	1.09	1.09	1.64		3.17	3.16	3.26
wind	-0.2 m/s	velocity	5.69	8.54	8.70	8.70	8.79	8.70	8.54	8.46	8.39	8.39	8.55	8.06	8.65	8.68	8.41

FINAL - 2023 Japanese National Championships (Osaka, JPN)*Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season*

date	04-Jun-23	time	2.60	3.66	4.69	5.73	6.77	7.81	8.85	9.90	10.99	12.10	13.60	6 / 4			
reaction time	0.172	interval	7 steps	1.06	1.03	1.04	1.04	1.04	1.04	1.05	1.09	1.11	1.50		3.13	3.12	3.25
wind	-0.9 m/s	velocity	5.28	8.62	8.87	8.79	8.79	8.79	8.79	8.70	8.39	8.23	9.35	8.09	8.76	8.79	8.44

FINAL - 2023 Seiko Golden Grand Prix (Yokohama, JPN)*Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season*

date	21-May-23	time	2.56	3.61	4.63	5.65	6.68	7.72	8.75	9.80	10.86	11.95	13.36	7 / 3			
reaction time	0.129	interval	7 steps	1.05	1.02	1.02	1.03	1.04	1.03	1.05	1.06	1.09	1.41		3.09	3.10	3.20
wind	0.8 m/s	velocity	5.36	8.70	8.96	8.96	8.87	8.79	8.87	8.70	8.62	8.39	9.94	8.23	8.87	8.85	8.57

FINAL - 2023 Michitaka Kinami Memorial (Osaka, JPN)*Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season*

date	07-May-23	time	2.58	3.63	4.67	5.70	6.73	7.77	8.81	9.85	10.91	11.99	13.44	7 / 2			
reaction time	0.149	interval	7 steps	1.05	1.04	1.03	1.03	1.04	1.04	1.04	1.06	1.08	1.45		3.12	3.11	3.18
wind	-0.3 m/s	velocity	5.32	8.70	8.79	8.87	8.87	8.79	8.79	8.79	8.62	8.46	9.67	8.18	8.79	8.82	8.62

FINAL - 2023 Mikio Oda Memorial (Hiroshima, JPN)*Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season*

date	29-Apr-23	time	2.60	3.64	4.68	5.71	6.73	7.78	8.81	9.85	10.92	11.98	13.43	5 / 1			
reaction time	0.168	interval	7 steps	1.04	1.04	1.03	1.02	1.05	1.03	1.04	1.07	1.06	1.45		3.11	3.10	3.17
wind	0.3 m/s	velocity	5.28	8.79	8.79	8.87	8.96	8.70	8.87	8.79	8.54	8.62	9.67	8.19	8.82	8.85	8.65

Semi-Final 1 - 2022 World Athletics Championships (Eugene, OR)*Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season*

date	17-Jul-22	time	2.63	3.70	4.78	5.85	6.90	7.95	9.02	10.07	11.14	12.25	13.68	1 / 8			
reaction time	0.144	interval	7 steps	1.07	1.08	1.07	1.05	1.05	1.07	1.05	1.07	1.11	1.43		3.22	3.17	3.23
wind	-0.6 m/s	velocity	5.22	8.54	8.46	8.54	8.70	8.70	8.54	8.70	8.54	8.23	9.80	8.04	8.52	8.65	8.49

Heat 3 - 2022 World Athletics Championships (Eugene, OR)*Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season*

date	16-Jul-22	time	2.58	3.65	4.69	5.73	6.76	7.80	8.86	9.93	11.00	12.10	13.53	3 / 4			
reaction time	0.144	interval	7 steps	1.07	1.04	1.04	1.03	1.04	1.06	1.07	1.07	1.10	1.43		3.15	3.13	3.24
wind	-0.3 m/s	velocity	5.32	8.54	8.79	8.79	8.87	8.79	8.62	8.54	8.54	8.31	9.80	8.13	8.70	8.76	8.46

FINAL - 2022 Japanese National Championships (Osaka, JPN)*Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season*

date	12-Jun-22	time	2.60	3.67	4.70	5.72	6.75	7.77	8.83	9.88	10.93	12.03	13.48	4 / 3			
reaction time	0.155	interval	7 steps	1.07	1.03	1.02	1.03	1.02	1.06	1.05	1.05	1.10	1.45		3.12	3.11	3.20
wind	-1.2 m/s	velocity	5.28	8.54	8.87	8.96	8.87	8.96	8.62	8.70	8.70	8.31	9.67	8.16	8.79	8.82	8.57

FINAL - 2022 Seiko Golden Grand Prix (Tokyo, JPN)*Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season*

date	08-May-22	time	2.62	3.70	4.76	5.81	6.89	7.95	9.03	10.12	11.23	12.35	13.85	6 / 8			
reaction time	0.162	interval	7 steps	1.08	1.06	1.05	1.08	1.06	1.08	1.09	1.11	1.12	1.50		3.19	3.22	3.32
wind	0.1 m/s	velocity	5.24	8.46	8.62	8.70	8.46	8.62	8.46	8.39	8.23	8.16	9.35	7.94	8.60	8.52	8.26
FINAL - 2022 Michitaka Kinami Memorial (Osaka, JPN)														<i>Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season</i>			
date	01-May-22	time	2.60	3.65	4.70	5.75	6.80	7.83	8.89	9.95	11.02	12.12	13.58	6 / 3			
reaction time	0.157	interval	7 steps	1.05	1.05	1.05	1.05	1.03	1.06	1.06	1.07	1.10	1.46		3.15	3.14	3.23
wind	0.8 m/s	velocity	5.28	8.70	8.70	8.70	8.70	8.87	8.62	8.62	8.54	8.31	9.60	8.10	8.70	8.73	8.49
FINAL - 2022 Mikio Oda Memorial (Hiroshima, JPN)														<i>Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season</i>			
date	29-Apr-22	time	2.63	3.73	4.80	5.89	6.95	8.06	9.15	10.25	11.35	12.46	13.94	5 / 5			
reaction time	0.140	interval	7 steps	1.10	1.07	1.09	1.06	1.11	1.09	1.10	1.10	1.11	1.48		3.26	3.26	3.31
wind	-1.5 m/s	velocity	5.22	8.31	8.54	8.39	8.62	8.23	8.39	8.31	8.31	8.23	9.47	7.89	8.41	8.41	8.28
FINAL - 2021 Fuse Sprint (Tottori, JPN)														<i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>			
date	06-Jun-21	time	2.60	3.64	4.68	5.71	6.73	7.75	8.82	9.86	10.93	12.03	13.48	7 / 2			
reaction time	0.152	interval	7 steps	1.04	1.04	1.03	1.02	1.02	1.07	1.04	1.07	1.10	1.45		3.11	3.11	3.21
wind	1.8 m/s	velocity	5.28	8.79	8.79	8.87	8.96	8.96	8.54	8.79	8.54	8.31	9.67	8.16	8.82	8.82	8.54
FINAL - 2021 Michitaka Kinami Memorial (Osaka, JPN)														<i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>			
date	01-Jun-21	time	2.58	3.62	4.65	5.68	6.70	7.75	8.79	9.85	10.90	11.98	13.42	6 / 2			
reaction time	0.156	interval	7 steps	1.04	1.03	1.03	1.02	1.05	1.04	1.06	1.05	1.08	1.44		3.10	3.11	3.19
wind	0.3 m/s	velocity	5.32	8.79	8.87	8.87	8.96	8.70	8.79	8.62	8.70	8.46	9.74	8.20	8.85	8.82	8.60
FINAL - 2021 Ready Steady Tokyo (Tokyo, JPN)														<i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>			
date	09-May-21	time	2.65	3.74	4.77	5.80	6.86	7.93	8.99	10.07	11.15	12.25	13.67	8 / 6			
reaction time	0.141	interval	7 steps	1.09	1.03	1.03	1.06	1.07	1.06	1.08	1.08	1.10	1.42		3.15	3.19	3.26
wind	-0.8 m/s	velocity	5.18	8.39	8.87	8.87	8.62	8.54	8.62	8.46	8.46	8.31	9.87	8.05	8.70	8.60	8.41
FINAL - 2021 Mikio Oda Memorial (Hiroshima, JPN)														<i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>			
date	29-Apr-21	time	2.58	3.65	4.66	5.69	6.73	7.77	8.80	9.86	10.91	11.98	13.44	5 / 3			
reaction time		interval	7 steps	1.07	1.01	1.03	1.04	1.04	1.03	1.06	1.05	1.07	1.46		3.11	3.11	3.18
wind	1.7 m/s	velocity	5.32	8.54	9.05	8.87	8.79	8.79	8.87	8.62	8.70	8.54	9.60	8.18	8.82	8.82	8.62
FINAL - 2020 Michitaka Kinami Memorial (Osaka, JPN)														<i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>			
date	24-Oct-20	time	2.60	3.66	4.71	5.75	6.82	7.87	8.94	10.00	11.10	12.20	13.69	6 / 4			
reaction time		interval	7 steps	1.06	1.05	1.04	1.07	1.05	1.07	1.06	1.10	1.10	1.49		3.15	3.19	3.26
wind	0.6 m/s	velocity	5.28	8.62	8.70	8.79	8.54	8.70	8.54	8.62	8.31	8.31	9.41	8.04	8.70	8.60	8.41
FINAL - 2020 Japanese National Championships (Niigata, JPN)														<i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>			
date	03-Oct-20	time	2.61	3.68	4.75	5.81	6.87	7.94	9.00	10.07	11.15	12.25	13.71	2 / 7			
reaction time	0.159	interval	7 steps	1.07	1.07	1.06	1.06	1.07	1.06	1.07	1.08	1.10	1.46		3.20	3.19	3.25
wind	-0.1 m/s	velocity	5.26	8.54	8.54	8.62	8.62	8.54	8.62	8.54	8.46	8.31	9.60	8.02	8.57	8.60	8.44
FINAL - 2020 All Japan Corporate Championships (Kumagaya, JPN)														<i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>			
date	20-Sep-20	time	2.58	3.63	4.68	5.73	6.78	7.83	8.88	9.97	11.06	12.19	13.69	4 / 2			
reaction time	0.151	interval		1.05	1.05	1.05	1.05	1.05	1.05	1.09	1.09	1.13	1.50		3.15	3.15	3.31
wind	0.1 m/s	velocity	5.32	8.70	8.70	8.70	8.70	8.70	8.70	8.39	8.39	8.09	9.35	8.04	8.70	8.70	8.28
FINAL - 2020 Athlete Night Games (Fukui, JPN)														<i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>			
date	29-Aug-20	time	2.56	3.62	4.65	5.67	6.70	7.73	8.75	9.80	10.85	11.92	13.39	6 / 3			
reaction time		interval	7 steps	1.06	1.03	1.02	1.03	1.03	1.02	1.05	1.05	1.07	1.47	PB	3.11	3.08	3.17
wind	1.4 m/s	velocity	5.36	8.62	8.87	8.96	8.87	8.87	8.96	8.70	8.70	8.54	9.54	8.22	8.82	8.90	8.65
FINAL - 2019 Japanese World Championships Trials (Fujiyoshida, JPN)														<i>Shibayama (2019) - race analysis of men's 110m hurdles in the 2019 season</i>			
date	01-Sep-19	time	2.56	3.64	4.69	5.75	6.82	7.89	8.95	10.02	11.12	12.23	13.67	3 / 7			
reaction time		interval	7 steps	1.08	1.05	1.06	1.07	1.07	1.06	1.07	1.10	1.11	1.44		3.19	3.20	3.28
wind	1.4 m/s	velocity	5.36	8.46	8.70	8.62	8.54	8.54	8.62	8.54	8.31	8.23	9.74	8.05	8.60	8.57	8.36
FINAL - 2019 Japanese National Championships (Fukuoka, JPN)														<i>Yamanaka (2019) - research on athlete performance and technique- 2019 data book</i>			
date	30-Jun-19	time	2.57	3.65	4.71	5.76	6.83	7.87	8.93	10.00	11.08	12.20	13.67	4 / 3			
reaction time	0.137	interval	7 steps	1.08	1.06	1.05	1.07	1.04	1.06	1.07	1.08	1.12	1.47		3.19	3.17	3.27
wind	-0.6 m/s	velocity	5.34	8.46	8.62	8.70	8.54	8.79	8.62	8.54	8.46	8.16	9.54	8.05	8.60	8.65	8.39
FINAL - 2019 Fuse Sprint (Tottori, JPN)														<i>Kijima (2019) - research on athlete performance and technique- 2019 data book</i>			
date	02-Jun-19	time	2.57	3.62	4.66	5.70	6.73	7.77	8.83	9.88	10.94	12.04	13.49	5 / 2			
reaction time	0.149	interval	7 steps	1.05	1.04	1.04	1.03	1.04	1.06	1.05	1.06	1.10	1.45	PB	3.13	3.13	3.21
wind	1.9 m/s	velocity	5.34	8.70	8.79	8.79	8.87	8.79	8.62	8.70	8.62	8.31	9.67	8.15	8.76	8.76	8.54
FINAL - 2019 Seiko Golden Grand Prix (Osaka, JPN)														<i>Shibayama (2019) - race analysis of men's 110m hurdles in the 2019 season</i>			
date	19-May-19	time	2.60	3.68	4.76	5.83	6.88	7.92	8.99	10.03	11.10	12.20	13.63	9 / 5			
reaction time	0.172	interval	7 steps	1.08	1.08	1.07	1.05	1.04	1.07	1.04	1.07	1.10	1.43		3.23	3.16	3.21
wind	2.9 m/s	velocity	5.28	8.46	8.46	8.54	8.70	8.79	8.54	8.79	8.54	8.31	9.80	8.07	8.49	8.68	8.54

FINAL - 2019 Kinami Memorial (Osaka, JPN)*Matsubayashi (2019) - research on athlete performance and technique- 2019 data book*

date	06-May-19	time	2.57	3.61	4.66	5.72	6.77	7.81	8.85	9.91	10.96	12.06	13.50	6 / 2			
reaction time		interval	7 steps	1.04	1.05	1.06	1.05	1.04	1.04	1.06	1.05	1.10	1.44	PB	3.15	3.13	3.21
wind	0.3 m/s	velocity	5.34	8.79	8.70	8.62	8.70	8.79	8.79	8.62	8.70	8.31	9.74	8.15	8.70	8.76	8.54

A FINAL - 2019 Mikio Oda Memorial (Hiroshima, JPN)*Kobayashi (2019) - research on athlete performance and technique- 2019 data book*

date	28-Apr-19	time	2.59	3.36	4.68	5.70	6.74	7.77	8.81	9.86	10.97	12.09	13.54	6 / 1			
reaction time		interval	7 steps	0.77	1.32	1.02	1.04	1.03	1.04	1.05	1.11	1.12	1.45	PB	3.11	3.11	3.28
wind	0.6 m/s	velocity	5.30	11.87	6.92	8.96	8.79	8.87	8.79	8.70	8.23	8.16	9.67	8.12	8.82	8.82	8.36

A FINAL - 2018 National Sports Festival (Fukui, JPN)*Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season*

date	08-Oct-18	time	2.59	3.67	4.74	5.80	6.87	7.93	8.99	10.07	11.15	12.27	13.74	3 / 4			
reaction time	0.139	interval		1.08	1.07	1.06	1.07	1.06	1.06	1.08	1.08	1.12	1.47		3.21	3.19	3.28
wind	1.2 m/s	velocity	5.30	8.46	8.54	8.62	8.54	8.62	8.46	8.46	8.46	8.16	9.54	8.01	8.54	8.60	8.36

FINAL - 2018 Japanese National Championships (Yamaguchi, JPN)*Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season*

date	24-Jun-18	time	2.60	3.69	4.76	5.81	6.89	7.97	9.04	10.12	11.22	12.34	13.81	8 / 6			
reaction time	0.155	interval	7 steps	1.09	1.07	1.05	1.08	1.08	1.07	1.08	1.10	1.12	1.47		3.21	3.23	3.30
wind	0.7 m/s	velocity	5.28	8.39	8.54	8.70	8.46	8.46	8.54	8.46	8.31	8.16	9.54	7.97	8.54	8.49	8.31

FINAL - 2018 Fuse Sprint (Tottori, JPN)*Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season*

date	03-Jun-18	time	2.61	3.68	4.77	5.83	6.90	7.96	9.05	10.14	11.24	12.35	13.86	/ 4			
reaction time		interval		1.07	1.09	1.06	1.07	1.06	1.09	1.09	1.10	1.11	1.51		3.22	3.22	3.30
wind	0.5 m/s	velocity	5.26	8.54	8.39	8.62	8.54	8.62	8.39	8.39	8.31	8.23	9.28	7.94	8.52	8.52	8.31

FINAL - 2018 Mikio Oda Memorial (Hiroshima, JPN)*Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season*

date	29-Apr-18	time	2.69	3.77	4.81	5.87	6.93	8.00	9.08	10.18	11.29	12.41	13.85	1 / 7			
reaction time		interval		1.08	1.04	1.06	1.06	1.07	1.08	1.10	1.11	1.12	1.44		3.18	3.21	3.33
wind	2.6 m/s	velocity	5.10	8.46	8.79	8.62	8.62	8.54	8.46	8.31	8.23	8.16	9.74	7.94	8.62	8.54	8.23

FINAL - 2017 Japanese National Championships (Osaka, JPN)*(2017) - tfdata-store.com/2017/07/13/post-1040/*

date	25-Jun-17	time	2.59	3.66	4.72	5.78	6.85	7.93	9.01	10.10	11.19	12.32	13.80	3 / 7			
reaction time	0.136	interval	7 steps	1.07	1.06	1.06	1.07	1.08	1.08	1.09	1.09	1.13	1.48		3.19	3.23	3.31
wind	-0.2 m/s	velocity	5.30	8.54	8.62	8.62	8.54	8.46	8.46	8.39	8.39	8.09	9.47	7.97	8.60	8.49	8.28

Semi-Final 2 - 2017 Japanese National Championships (Osaka, JPN)*(2017) - tfdata-store.com/2017/07/13/post-1040/*

date	24-Jun-17	time	2.58	3.67	4.74	5.81	6.87	7.94	9.02	10.11	11.22	12.32	13.78	5 / 4			
reaction time	0.124	interval	7 steps	1.09	1.07	1.07	1.06	1.07	1.08	1.09	1.11	1.10	1.46		3.23	3.21	3.30
wind	0.3 m/s	velocity	5.32	8.39	8.54	8.54	8.62	8.54	8.46	8.39	8.23	8.31	9.60	7.98	8.49	8.54	8.31

Heat 1 - 2017 Japanese National Championships (Osaka, JPN)*(2017) - tfdata-store.com/2017/07/13/post-1040/*

date	24-Jun-17	time	2.57	3.65	4.73	5.80	6.86	7.91	8.96	10.03	11.10	12.20	13.67	4 / 2			
reaction time	0.156	interval	7 steps	1.08	1.08	1.07	1.06	1.05	1.05	1.07	1.07	1.10	1.47	PB	3.23	3.16	3.24
wind	1.3 m/s	velocity	5.34	8.46	8.46	8.54	8.62	8.70	8.70	8.54	8.54	8.31	9.54	8.05	8.49	8.68	8.46

FINAL - 2016 West Japan Carnival (Kita-Kyushu, JPN)*(2016.11.07) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en*

date	03-Nov-16	time	2.58	3.67	4.74	5.84	6.93	8.01	9.09	10.19	11.28	12.41	13.88	/ 2			
reaction time		interval		1.09	1.07	1.10	1.09	1.08	1.08	1.10	1.09	1.13	1.47		3.26	3.25	3.32
wind	1.1 m/s	velocity	5.32	8.39	8.54	8.31	8.39	8.46	8.46	8.31	8.39	8.09	9.54	7.93	8.41	8.44	8.26

Semi-Final 2 - 2016 Japanese University Championships (Kumagaya, JPN)*(2016.09.05) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en*

date	04-Sep-16	time	2.61	3.74	4.81	5.93	7.01	8.12	9.22	10.34	11.44	12.56	14.07	7 / 4			
reaction time	0.157	interval	7 steps	1.13	1.07	1.12	1.08	1.11	1.10	1.12	1.10	1.12	1.51		3.32	3.29	3.34
wind	0.7 m/s	velocity	5.26	8.09	8.54	8.16	8.46	8.23	8.31	8.16	8.31	8.16	9.28	7.82	8.26	8.33	8.21

Issei, Osaka (JPN) (2002)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL B - 2016 Japanese Junior Olympics (Yokohama, JPN) (91cm)***(2016.10.28) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en*

date	30-Oct-16	time	2.76	3.91	5.06	6.21	7.33	8.49	9.63	10.82	12.00	13.21	14.87	4 / 1			
reaction time		interval		1.15	1.15	1.15	1.12	1.16	1.14	1.19	1.18	1.21	1.66		3.45	3.42	3.58
wind	-0.8 m/s	velocity	4.97	7.95	7.95	7.95	8.16	7.88	8.02	7.68	7.75	7.55	8.45	7.40	7.95	8.02	7.66

Iwafune, Yoichi (JPN) (1985)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2017 Nambu Memorial (Sapporo, JPN)***(2017) - tfdata-store.com/2017/07/12/post-1025/*

date	09-Jul-17	time	2.68	3.78	4.85	5.93	7.00	8.06	9.15	10.26	11.37	12.52	14.01	5 / 3			
reaction time		interval		1.10	1.07	1.08	1.07	1.06	1.09	1.11	1.11	1.15	1.49		3.25	3.22	3.37
wind	2.7 m/s	velocity	5.12	8.31	8.54	8.46	8.54	8.62	8.39	8.23	8.23	7.95	9.41	7.85	8.44	8.52	8.14

Heat 4 - 2017 Japanese National Championships (Osaka, JPN)*(2017) - tfdata-store.com/2017/07/13/post-1040/*

date	24-Jun-17	time	2.71	3.81	4.88	5.97	7.05	8.15	9.24	10.37	11.50	12.63	14.14	7 / 6			
reaction time	0.151	interval		1.10	1.07	1.09	1.08	1.10	1.09	1.13	1.13	1.13	1.51		3.26	3.27	3.39
wind	0.0 m/s	velocity	5.06	8.31	8.54	8.39	8.46	8.31	8.39	8.09	8.09	8.09	9.28	7.78	8.41	8.39	8.09

FINAL - 2016 Fuse Sprint (Tottori, JPN)*Kota (2016) - race analysis of japanese top-ranked men 110m and women 100m hurdlers*

date	05-Jun-16	time	2.64	3.72	4.77	5.84	6.91	7.99	9.07	10.16	11.29	12.41	13.87	3 / 5			
reaction time		interval		1.08	1.05	1.07	1.07	1.08	1.08	1.09	1.13	1.12	1.46		3.20	3.23	3.34
wind	1.4 m/s	velocity	5.20	8.46	8.70	8.54	8.54	8.46	8.46	8.39	8.09	8.16	9.60	7.93	8.57	8.49	8.21

FINAL - 2009 Nambu Chuhei Memorial (Sapporo, JPN)*Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdles*

date	09-Jul-09	time	2.65	3.74	4.82	5.87	6.93	8.00	9.06	10.14	11.25	12.38	13.87	/ 3			
reaction time		interval		1.09	1.08	1.05	1.06	1.07	1.06	1.08	1.11	1.13	1.49		3.22	3.19	3.32
wind	1.2 m/s	velocity	5.18	8.39	8.46	8.70	8.62	8.54	8.62	8.46	8.23	8.09	9.41	7.93	8.52	8.60	8.26

Iwakiri, Yuki (JPN) (1998)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2016 Japanese National High School Championships (Okayama, JPN) (99cm)***Kota (2016) - 69th high school championships: JAF scientific committee- biomechanics data*

date	02-Aug-16	time	2.77	3.88	5.00	6.13	7.24	8.39	9.53	10.70	11.87	13.06	14.67	8 / 7			
reaction time	0.160	interval		1.11	1.12	1.13	1.11	1.15	1.14	1.17	1.17	1.19	1.61		3.36	3.40	3.53
wind	1.2 m/s	velocity	4.95	8.23	8.16	8.09	8.23	7.95	8.02	7.81	7.81	7.68	8.71	7.50	8.16	8.06	7.77

FINAL - 2016 Kagoshima Prefecture High School Meeting (Kagoshima, JPN)*(2016.06.02) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en*

date	28-May-16	time	2.78	3.94	5.07	6.19	7.32	8.45	9.59	10.75	11.91	13.10	14.60	3 / 1			
reaction time		interval		1.16	1.13	1.12	1.13	1.13	1.14	1.16	1.16	1.19	1.50		3.41	3.40	3.51
wind	0.0 m/s	velocity	4.94	7.88	8.09	8.16	8.09	8.09	8.02	7.88	7.88	7.68	9.35	7.53	8.04	8.06	7.81

Izumiyu, Shunsuke (JPN) (2000)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2024 Memorial van damme (Brussels, BEL)***Omega Timing (2024) - diamond league race analysis*

date	13-Sep-24	time	2.39	3.45	4.49	5.51	6.54	7.58	8.62	9.66	10.71	11.78	13.33	2 / 6			
reaction time	0.145	interval	7 steps	1.06	1.04	1.02	1.03	1.04	1.04	1.04	1.05	1.07	1.55		3.12	3.11	3.16
wind	0.4 m/s	velocity	5.74	8.62	8.79	8.96	8.87	8.79	8.79	8.79	8.70	8.54	9.05	8.25	8.79	8.82	8.68

Semi-Final 3 - 2024 Olympic Games (Paris, FRA)*Paris 2024 Olympc Games - Results Book (2024)*

date	07-Aug-24	time	2.35	3.43	4.45	5.49	6.52	7.57	8.61	9.64	10.67	11.75	13.32	5 / 3			
reaction time	0.165	interval	7 steps	1.08	1.02	1.04	1.03	1.05	1.04	1.03	1.03	1.08	1.57		3.14	3.12	3.14
wind	0.6 m/s	velocity	5.84	8.46	8.96	8.79	8.87	8.70	8.79	8.87	8.87	8.46	8.93	8.26	8.73	8.79	8.73

Heat 4 - 2024 Olympic Games (Paris, FRA)*Paris 2024 Olympc Games - Results Book (2024)*

date	04-Aug-24	time	2.36	3.44	4.51	5.51	6.51	7.52	8.56	9.61	10.66	11.70	13.27	9 / 3			
reaction time	0.150	interval	7 steps	1.08	1.07	1.00	1.00	1.01	1.04	1.05	1.05	1.04	1.57		3.15	3.05	3.14
wind	0.3 m/s	velocity	5.81	8.46	8.54	9.14	9.14	9.05	8.79	8.70	8.70	8.79	8.93	8.29	8.70	8.99	8.73

FINAL - 2024 Herculis Meeting International d'Athlétisme (Monaco, MON)*Omega Timing (2024) - diamond league race analysis*

date	12-Jul-24	time	2.41	3.48	4.52	5.53	6.57	7.59	8.60	9.62			dnf	8 / --			
reaction time	0.156	interval	7 steps	1.07	1.04	1.01	1.04	1.02	1.01	1.02					3.12	3.07	
wind	-0.7 m/s	velocity	5.69	8.54	8.79	9.05	8.79	8.96	9.05	8.96					8.79	8.93	

FINAL - 2024 Meeting de Paris (Paris, FRA)*Omega Timing (2024) - diamond league race analysis*

date	07-Jul-24	time	2.32	3.37	4.40	5.44	6.47	7.48	8.49	9.50	10.53	11.59	13.16	6 / 3			
reaction time	0.145	interval	7 steps	1.05	1.03	1.04	1.03	1.01	1.01	1.01	1.03	1.06	1.57		3.12	3.05	3.10
wind	-0.6 m/s	velocity	5.91	8.70	8.87	8.79	8.87	9.05	9.05	9.05	8.87	8.62	8.93	8.36	8.79	8.99	8.85

Heat 2 - 2024 Meeting de Paris (Paris, FRA)*Omega Timing (2024) - diamond league race analysis*

date	07-Jul-24	time	2.36	3.43	4.45	5.46	6.47	7.50	8.52	9.54	10.58	11.61	13.16	7 / 1			
reaction time	0.137	interval	7 steps	1.07	1.02	1.01	1.01	1.03	1.02	1.02	1.04	1.03	1.55		3.10	3.06	3.09
wind	0.4 m/s	velocity	5.81	8.54	8.96	9.05	9.05	8.87	8.96	8.96	8.79	8.87	9.05	8.36	8.85	8.96	8.87

FINAL - 2024 Prefontaine Classic (Eugene, OR)*Omega Timing (2024) - diamond league race analysis*

date	25-May-24	time	2.36	3.41	4.41	5.43	6.45	7.48	8.52	9.56	10.62	11.72	13.33	7 / 7			
reaction time	0.131	interval	7 steps	1.05	1.00	1.02	1.02	1.03	1.04	1.04	1.06	1.10	1.61		3.07	3.09	3.20
wind	-0.1 m/s	velocity	5.81	8.70	9.14	8.96	8.96	8.87	8.79	8.79	8.62	8.31	8.71	8.25	8.93	8.87	8.57

FINAL - 2024 Yangtze River Delta Athletics Diamond Gala (Suzhou, CHN) (TV Analysis)*Omega Timing (2024) - diamond league race analysis*

date	27-Apr-24	time	2.57	3.62	4.65	5.67	6.65	7.65	8.72	9.76	10.81	11.87	13.23	3 / 2			
reaction time	0.146	interval	7 steps	1.05	1.03	1.02	0.98	1.00	1.07	1.04	1.05	1.06	1.36		3.10	3.05	3.15
wind	0.8 m/s	velocity	5.34	8.70	8.87	8.96	9.33	9.14	8.54	8.79	8.70	8.62	10.31	8.31	8.85	8.99	8.70

FINAL - 2024 Xiamen Diamond League (Xiamen, CHN)*Omega Timing (2024) - diamond league race analysis*

date	20-Apr-24	time	2.41	3.46	4.48	5.48	6.48	7.48	8.50	9.53	10.58	11.63	13.17	4 / 3			
reaction time	0.172	interval	7 steps	1.05	1.02	1.00	1.00	1.00	1.02	1.03	1.05	1.05	1.54		3.07	3.02	3.13
wind	-0.3 m/s	velocity	5.69	8.70	8.96	9.14	9.14	9.14	8.96	8.87	8.70	8.70	9.10	8.35	8.93	9.08	8.76

FINAL - 2023 Prefontaine Classic (Eugene, OR)*Omega Timing (2023) - diamond league race analysis*

date	17-Sep-23	time	2.34	3.38	4.38	5.40	6.41	7.41	8.44	9.48	10.51	11.55	13.10	7 / 4			
reaction time	0.136	interval	7 steps	1.04	1.00	1.02	1.01	1.00	1.03	1.04	1.03	1.04	1.55		3.06	3.04	3.11
wind	0.9 m/s	velocity	5.86	8.79	9.14	8.96	9.05	9.14	8.87	8.79	8.87	8.79	9.05	8.40	8.96	9.02	8.82

FINAL - 2023 World Athletics Championships (Budapest, HUN)*Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season*

date	21-Aug-23	time	2.55	3.58	4.61	5.65	6.66	7.68	8.69	9.73	10.78	11.85	13.19	6 / 5			
reaction time	0.143	interval	7 steps	1.03	1.03	1.04	1.01	1.02	1.01	1.04	1.05	1.07	1.34		3.10	3.04	3.16
wind	0.0 m/s	velocity	5.38	8.87	8.87	8.79	9.05	8.96	9.05	8.79	8.70	8.54	10.46	8.34	8.85	9.02	8.68
Semi-Final 1 - 2023 World Athletics Championships (Budapest, HUN)														<i>Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season</i>			
date	21-Aug-23	time	2.56	3.63	4.63	5.65	6.68	7.70	8.72	9.75	10.76	11.83	13.16	6 / 1			
reaction time	0.129	interval	7 steps	1.07	1.00	1.02	1.03	1.02	1.02	1.03	1.01	1.07	1.33		3.09	3.07	3.11
wind	-0.2 m/s	velocity	5.36	8.54	9.14	8.96	8.87	8.96	8.96	8.87	9.05	8.54	10.54	8.36	8.87	8.93	8.82
Heat 2 - 2023 World Athletics Championships (Budapest, HUN)														<i>Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season</i>			
date	20-Aug-23	time	2.57	3.62	4.64	5.68	6.69	7.75	8.80	9.86	10.90	11.96	13.33	6 / 2			
reaction time	0.146	interval	7 steps	1.05	1.02	1.04	1.01	1.06	1.05	1.06	1.04	1.06	1.37		3.11	3.12	3.16
wind	0.5 m/s	velocity	5.34	8.70	8.96	8.79	9.05	8.62	8.70	8.62	8.79	8.62	10.23	8.25	8.82	8.79	8.68
FINAL - 2023 London Athletics Meet (London, GBR)														<i>Omega Timing (2023) - diamond league race analysis</i>			
date	23-Jul-23	time	2.35	3.39	4.41	5.42	6.41	7.41	8.42	9.45	10.49	11.54	13.06	3 / 2			
reaction time	0.138	interval	7 steps	1.04	1.02	1.01	0.99	1.00	1.01	1.03	1.04	1.05	1.52		3.07	3.00	3.12
wind	1.3 m/s	velocity	5.84	8.79	8.96	9.05	9.23	9.14	9.05	8.87	8.79	8.70	9.22	8.42	8.93	9.14	8.79
FINAL - 2023 Athletissima (Lausanne, SU)														<i>Omega Timing (2023) - diamond league race analysis</i>			
date	30-Jun-23	time	2.33	3.40	4.42	5.45	6.46	7.47	8.50	9.55	10.60	11.67	13.22	4 / 1			
reaction time	0.101	interval	7 steps	1.07	1.02	1.03	1.01	1.01	1.03	1.05	1.05	1.07	1.55		3.12	3.05	3.17
wind	-1.0 m/s	velocity	5.89	8.54	8.96	8.87	9.05	9.05	8.87	8.70	8.70	8.54	9.05	8.32	8.79	8.99	8.65
FINAL - 2023 Japanese National Championships (Osaka, JPN)														<i>Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season</i>			
date	04-Jun-23	time	2.56	3.59	4.62	5.61	6.61	7.63	8.62	9.63	10.66	11.68	13.04	5 / 1			
reaction time	0.132	interval	7 steps	1.03	1.03	0.99	1.00	1.02	0.99	1.01	1.03	1.02	1.36	NR PB	3.05	3.01	3.06
wind	-0.9 m/s	velocity	5.36	8.87	8.87	9.23	9.14	8.96	9.23	9.05	8.87	8.96	10.31	8.44	8.99	9.11	8.96
FINAL - 2023 Seiko Golden Grand Prix (Yokohama, JPN)														<i>Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season</i>			
date	21-May-23	time	2.53	3.58	4.58	5.58	6.60	7.61	8.63	9.64	10.67	11.72	13.07	6 / 1			
reaction time	0.125	interval	7 steps	1.05	1.00	1.00	1.02	1.01	1.02	1.01	1.03	1.05	1.35		3.05	3.05	3.09
wind	0.8 m/s	velocity	5.42	8.70	9.14	9.14	8.96	9.05	8.96	9.05	8.87	8.70	10.39	8.42	8.99	8.99	8.87
FINAL - 2023 Michitaka Kinami Memorial (Osaka, JPN)														<i>Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season</i>			
date	07-May-23	time	2.61	3.65	4.68	5.70	6.71	7.71	8.77	9.78	10.84	11.91	13.25	6 / 1			
reaction time	0.138	interval	7 steps	1.04	1.03	1.02	1.01	1.00	1.06	1.01	1.06	1.07	1.34		3.09	3.07	3.14
wind	-0.3 m/s	velocity	5.26	8.79	8.87	8.96	9.05	9.14	8.62	9.05	8.62	8.54	10.46	8.30	8.87	8.93	8.73
FINAL - 2022 ISTAF (Berlin, GER) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>			
date	04-Sep-22	time	2.50	3.54	4.58	5.60	6.62	7.66	8.68	9.74	10.78	11.88	13.26	8 / 4			
reaction time	0.129	interval	7 steps	1.04	1.04	1.02	1.02	1.04	1.02	1.06	1.04	1.10	1.38		3.10	3.08	3.20
wind	0.6 m/s	velocity	5.49	8.79	8.79	8.96	8.96	8.79	8.96	8.62	8.79	8.31	10.16	8.30	8.85	8.90	8.57
Semi-Final 2 - 2022 World Athletics Championships (Eugene, OR)														<i>Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season</i>			
date	17-Jul-22	time	2.59	3.65	4.68	5.72	6.77	7.81	8.85	9.91	10.97	12.04	13.42	8 / 5			
reaction time	0.112	interval	7 steps	1.06	1.03	1.04	1.05	1.04	1.04	1.06	1.06	1.07	1.38		3.13	3.13	3.19
wind	0.3 m/s	velocity	5.30	8.62	8.87	8.79	8.70	8.79	8.79	8.62	8.62	8.54	10.16	8.20	8.76	8.76	8.60
Heat 5 - 2022 World Athletics Championships (Eugene, OR)														<i>Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season</i>			
date	16-Jul-22	time	2.62	3.67	4.73	5.77	6.81	7.85	8.93	9.98	11.07	12.17	13.56	1 / 3			
reaction time	0.128	interval	7 steps	1.05	1.06	1.04	1.04	1.04	1.08	1.05	1.09	1.10	1.39		3.15	3.16	3.24
wind	0.4 m/s	velocity	5.24	8.70	8.62	8.79	8.79	8.79	8.46	8.70	8.39	8.31	10.09	8.11	8.70	8.68	8.46
FINAL - 2022 Japanese National Championships (Osaka, JPN)														<i>Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season</i>			
date	12-Jun-22	time	2.52	3.55	4.58	5.60	6.63	7.54	8.66	9.71	10.77	11.83	13.21	5 / 1			
reaction time	0.142	interval	7 steps	1.03	1.03	1.02	1.03	0.91	1.12	1.05	1.06	1.06	1.38		3.08	3.06	3.17
wind	-1.2 m/s	velocity	5.44	8.87	8.87	8.96	8.87	10.04	8.16	8.70	8.62	8.62	10.16	8.33	8.90	8.96	8.65
FINAL - 2021 Japanese National Championships (Osaka, JPN)														<i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>			
date	27-Jun-21	time	2.55	3.57	4.61	5.63	6.64	7.65	8.67	9.68	10.69	11.75	13.06	6 / 1			
reaction time	0.155	interval	7 steps	1.02	1.04	1.02	1.01	1.01	1.02	1.01	1.01	1.06	1.31	NR PB	3.08	3.04	3.08
wind	1.2 m/s	velocity	5.38	8.96	8.79	8.96	9.05	9.05	8.96	9.05	9.05	8.62	10.70	8.42	8.90	9.02	8.90
FINAL - 2021 Ready Steady Tokyo (Tokyo, JPN)														<i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>			
date	09-May-21	time	2.51	3.60	4.63	5.71	6.76	7.83	8.90	9.94	11.01	12.06	13.43	7 / 2			
reaction time	0.132	interval	7 steps	1.09	1.03	1.08	1.05	1.07	1.07	1.04	1.07	1.05	1.37		3.20	3.19	3.16
wind	-0.8 m/s	velocity	5.47	8.39	8.87	8.46	8.70	8.54	8.54	8.79	8.54	8.70	10.23	8.19	8.57	8.60	8.68
FINAL - 2021 Mikio Oda Memorial (Hiroshima, JPN)														<i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>			
date	29-Apr-21	time	2.57	3.65	4.66	5.69	6.70	7.74	8.79	9.83	10.88	11.93	13.33	3 / 2			
reaction time		interval	7 steps	1.08	1.01	1.03	1.01	1.04	1.05	1.04	1.05	1.05	1.40	PB	3.12	3.10	3.14
wind	1.7 m/s	velocity	5.34	8.46	9.05	8.87	9.05	8.79	8.70	8.79	8.70	8.70	10.01	8.25	8.79	8.85	8.73

FINAL - 2020 Japanese National Championships (Niigata, JPN)

date	03-Oct-20	time	2.59	3.65	4.69	5.71	6.74	7.81	8.85	9.92	10.97	12.07	13.48	5 / 3			
reaction time	0.130	interval		1.06	1.04	1.02	1.03	1.07	1.04	1.07	1.05	1.10	1.41		3.12	3.14	3.22
wind	-0.1 m/s	velocity	5.30	8.62	8.79	8.96	8.87	8.54	8.79	8.54	8.70	8.31	9.94	8.16	8.79	8.73	8.52

Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season

Heat 1 - 2020 Japanese National Championships (Niigata, JPN)

date	02-Oct-20	time	2.58	3.62	4.67	5.70	6.73	7.79	8.81	9.87	10.92	11.99	13.45	4 / 2			
reaction time	0.128	interval		1.04	1.05	1.03	1.03	1.06	1.02	1.06	1.05	1.07	1.46		3.12	3.11	3.18
wind	0.8 m/s	velocity	5.32	8.79	8.70	8.87	8.87	8.62	8.96	8.62	8.70	8.54	9.60	8.18	8.79	8.82	8.62

Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season

FINAL - 2019 Japanese National Championships (Fukuoka, JPN)

date	30-Jun-19	time	2.55	3.59	4.63	5.65	6.68	7.72	8.75	9.80	10.89	11.97	13.36	6 / 2			
reaction time	0.144	interval		1.04	1.04	1.02	1.03	1.04	1.03	1.05	1.09	1.08	1.39	=NR NJR PB	3.10	3.10	3.22
wind	-0.6 m/s	velocity	5.38	8.79	8.79	8.96	8.87	8.79	8.87	8.70	8.39	8.46	10.09	8.23	8.85	8.85	8.52

Yamanaka (2019) - research on athlete performance and technique- 2019 data book

FINAL - 2019 Seiko Golden Grand Prix (Osaka, JPN)

date	19-May-19	time	2.53	3.60	4.62	5.66	6.71	7.72	8.74	9.79	10.84	11.93	13.26	3 / 1			
reaction time	0.121	interval		1.07	1.02	1.04	1.05	1.01	1.02	1.05	1.05	1.09	1.33		3.13	3.08	3.19
wind	2.9 m/s	velocity	5.42	8.54	8.96	8.79	8.70	9.05	8.96	8.70	8.70	8.39	10.54	8.30	8.76	8.90	8.60

Shibayama (2019) - race analysis of men's 110m hurdles in the 2019 season

FINAL - 2019 Kinami Memorial (Osaka, JPN)

date	06-May-19	time	2.59	3.63	4.71	5.76	6.78	7.87	8.96	10.01	11.07	12.20	13.58	7 / 3			
reaction time		interval		1.04	1.08	1.05	1.02	1.09	1.09	1.05	1.06	1.13	1.38		3.17	3.20	3.24
wind	0.3 m/s	velocity	5.30	8.79	8.46	8.70	8.96	8.39	8.39	8.70	8.62	8.09	10.16	8.10	8.65	8.57	8.46

Matsubayashi (2019) - research on athlete performance and technique- 2019 data book

A FINAL - 2019 Mikio Oda Memorial (Hiroshima, JPN)

date	28-Apr-19	time	2.56	3.62	4.68	5.72	6.77	7.82	8.88	9.95	11.04	12.13	13.56	4 / 2			
reaction time		interval		1.06	1.06	1.04	1.05	1.05	1.06	1.07	1.09	1.09	1.43	NJR PB	3.16	3.16	3.25
wind	0.6 m/s	velocity	5.36	8.62	8.62	8.79	8.70	8.70	8.62	8.54	8.39	8.39	9.80	8.11	8.68	8.68	8.44

Kobayashi (2019) - research on athlete performance and technique- 2019 data book

FINAL - 2018 Japanese U20 National Championships (Nagoya, JPN) (99cm)

date	19-Oct-18	time	2.53	3.57	4.61	5.64	6.63	7.66	8.68	9.71	10.75	11.81	13.19	6 / 1			
reaction time	0.123	interval		1.04	1.04	1.03	0.99	1.03	1.02	1.03	1.04	1.06	1.38	NJR PB	3.11	3.04	3.13
wind	-0.6 m/s	velocity	5.42	8.79	8.79	8.87	9.23	8.87	8.96	8.87	8.79	8.62	10.16	8.34	8.82	9.02	8.76

Shibayama (2021) race analysis of men's 110m hurdles in the 2021 season

FINAL - 2018 Japanese University National Championships (Nagoya, JPN)

date	09-Sep-18	time	2.60	3.65	4.69	5.77	6.80	7.88	8.94	10.04	11.15	12.28	13.75	/ 1			
reaction time		interval		1.05	1.04	1.08	1.03	1.08	1.06	1.10	1.11	1.13	1.47	PB	3.17	3.17	3.34
wind	-1.1 m/s	velocity	5.28	8.70	8.79	8.46	8.87	8.46	8.62	8.31	8.23	8.09	9.54	8.00	8.65	8.65	8.21

Shibayama (2021) race analysis of men's 110m hurdles in the 2021 season

FINAL - 2018 IAAF World Junior Championships (Tampere, FIN) (99cm)

date	12-Jul-18	time	2.59	3.63	4.70	5.69	6.70	7.73	8.78	9.81	10.87	11.92	13.38	2 / 3			
reaction time	0.170	interval		1.04	1.07	0.99	1.01	1.03	1.05	1.03	1.06	1.05	1.46	PB	3.10	3.09	3.14
wind	0.3 m/s	velocity	5.30	8.79	8.54	9.23	9.05	8.87	8.70	8.87	8.62	8.70	9.60	8.22	8.85	8.87	8.73

Koyama (2018) - research on athlete performance and technique- 2018 data book

Jackson, Colin (GBR) (1967)

			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
date	10-Aug-02	time	2.57	3.59	4.59	5.59	6.59	7.61	8.63	9.66	10.71	11.77	13.11	/ 1				
reaction time	0.117	interval		1.02	1.00	1.00	1.00	1.02	1.02	1.03	1.05	1.06	1.34			3.02	3.04	3.14
wind	0.4 m/s	velocity	5.34	8.96	9.14	9.14	9.14	8.96	8.96	8.87	8.70	8.62	10.46	8.39		9.08	9.02	8.73

Graubner (2009) - <http://www.fgs.uni-halle.de>**Semi-Final 2 - 2002 European Championships (Munich, GER)**

date	10-Aug-02	time	2.58	3.62	4.64	5.66	6.66	7.68	8.70	9.73	10.76	11.82	13.21	/ 1				
reaction time	0.112	interval		1.04	1.02	1.02	1.00	1.02	1.02	1.03	1.03	1.06	1.39			3.08	3.04	3.12
wind	0.8 m/s	velocity	5.32	8.79	8.96	8.96	9.14	8.96	8.96	8.87	8.87	8.62	10.09	8.33		8.90	9.02	8.79

Graubner (2009) - <http://www.fgs.uni-halle.de>**Heat 1 - 2002 European Championships (Munich, GER)**

date	09-Aug-02	time	2.59	3.63	4.66	5.67	6.69	7.72	8.75	9.79	10.85	11.95	13.41	/ 1				
reaction time	0.107	interval		1.04	1.03	1.01	1.02	1.03	1.03	1.04	1.06	1.10	1.46			3.08	3.08	3.20
wind	-0.9 m/s	velocity	5.30	8.79	8.87	9.05	8.96	8.87	8.87	8.79	8.62	8.31	9.60	8.20		8.90	8.90	8.57

Graubner (2009) - <http://www.fgs.uni-halle.de>**FINAL - 1999 IAAF World Championships (Sevilla, ESP)**

date	25-Aug-99	time	2.51	3.52	4.52	5.50	6.51	7.52	8.52	9.55	10.58	11.64	13.04	5 / 1				
reaction time	0.116	interval		1.01	1.00	0.98	1.01	1.01	1.00	1.03	1.03	1.06	1.40			2.99	3.02	3.12
wind	1.0 m/s	velocity	5.47	9.05	9.14	9.33	9.05	9.05	9.14	8.87	8.87	8.62	10.01	8.44		9.17	9.08	8.79

Sanchez (1999) - Sevilla '99: análisis de la carreras con villas

Semi-Final 2 - 1999 IAAF World Championships (Sevilla, ESP)

date	24-Aug-99	time	2.50	3.52	4.53	5.54	6.54	7.56	8.57	9.60	10.66	11.72	13.19	6 / 2				
reaction time	0.110	interval		1.02	1.01	1.01	1.00	1.02	1.01	1.03	1.06	1.06	1.47			3.04	3.03	3.15
wind	0.0 m/s	velocity	5.49	8.96	9.05	9.05	9.14	8.96	9.05	8.87	8.62	8.62	9.54	8.34		9.02	9.05	8.70

Sanchez (1999) - Sevilla '99: análisis de la carreras con villas

Quarter-Final 2 - 1999 IAAF World Championships (Sevilla, ESP)

Sanchez (1999) - Sevilla '99: análisis de la carreras con villas

date	23-Aug-99	time	2.50	3.52	4.53	5.53	6.52	7.53	8.54	9.57	10.63	11.71	13.21	6 / 1			
reaction time	0.117	interval		1.02	1.01	1.00	0.99	1.01	1.01	1.03	1.06	1.08	1.50		3.03	3.01	3.17
wind	-0.2 m/s	velocity	5.49	8.96	9.05	9.14	9.23	9.05	9.05	8.87	8.62	8.46	9.35	8.33	9.05	9.11	8.65
Heat 5 - 1999 IAAF World Championships (Sevilla, ESP)														<i>Sanchez (1999) - Sevilla '99: análisis de la carreras con villas</i>			
date	23-Aug-99	time	2.49	3.50	4.50	5.50	6.51	7.52	8.55	9.57	10.61	11.67	13.19	1 / 1			
reaction time	0.115	interval		1.01	1.00	1.00	1.01	1.01	1.03	1.02	1.04	1.06	1.52		3.01	3.05	3.12
wind	-0.5 m/s	velocity	5.51	9.05	9.14	9.14	9.05	9.05	8.87	8.96	8.79	8.62	9.22	8.34	9.11	8.99	8.79
FINAL - 1999 Sydney Grand Prix (Sydney, AUS)														<i>Arnold (2009) - UK Athletics - Hurdling Masterclass</i>			
date	20-Feb-99	time	2.57	3.62	4.66	5.68	6.70	7.72	8.76	9.79	10.85	11.92	13.30	1 / 1			
reaction time		interval		1.05	1.04	1.02	1.02	1.02	1.04	1.03	1.06	1.07	1.38		3.11	3.08	3.16
wind	0.6 m/s	velocity	5.34	8.70	8.79	8.96	8.96	8.96	8.79	8.87	8.62	8.54	10.16	8.27	8.82	8.90	8.68
FINAL - 1998 European Championships (Budapest, HUN)														<i>Sanchez (1998) - Budapest '98: análisis de la carreras con villas</i>			
date	22-Aug-98	time	2.56	3.58	4.60	5.58	6.59	7.59	8.57	9.59	10.63	11.69	13.02	3 / 1			
reaction time		interval		1.02	1.02	0.98	1.01	1.00	0.98	1.02	1.04	1.06	1.33	CR	3.02	2.99	3.12
wind	1.5 m/s	velocity	5.36	8.96	8.96	9.33	9.05	9.14	9.33	8.96	8.79	8.62	10.54	8.45	9.08	9.17	8.79
FINAL - 1997 IAAF World Championships (Athens, GRE)														<i>Hommel (1997) - biomechanical research project at the VI th world championships in athletics, Athens 1997</i>			
date	07-Aug-97	time	2.58	3.62	4.62	5.62	6.62	7.62	8.62	9.64	10.68	11.72	13.05	5 / 2			
reaction time	0.118	interval		1.04	1.00	1.00	1.00	1.00	1.00	1.02	1.04	1.04	1.33		3.04	3.00	3.10
wind	0.0 m/s	velocity	5.32	8.79	9.14	9.14	9.14	9.14	9.14	8.96	8.79	8.79	10.54	8.43	9.02	9.14	8.85
FINAL - 1997 European Cup (Munich, GER)														<i>Jung (2003) - http://www.fgs.uni-halle.de</i>			
date	22-Jun-97	time	2.57	3.60	4.62	5.62	6.62	7.64	8.68	9.72	10.77	11.85	13.28	1 / 2			
reaction time		interval		1.03	1.02	1.00	1.00	1.02	1.04	1.04	1.05	1.08	1.43		3.05	3.06	3.17
wind	0.2 m/s	velocity	5.34	8.87	8.96	9.14	9.14	8.96	8.79	8.79	8.70	8.46	9.80	8.28	8.99	8.96	8.65
FINAL - 1996 Olympic Games (Atlanta, GA)														<i>Butler (2016) - IAAF statistics handbook- special edition: Games of the XXXI Olympiad- Rio 2016</i>			
date	26-Jul-96	time	2.36	3.42	4.42	5.48	6.43	7.40	8.48	9.54	10.56	11.62	13.19	5 / 4			
reaction time	0.133	interval		1.06	1.00	1.06	0.95	0.97	1.08	1.06	1.02	1.06	1.57		3.12	3.00	3.14
wind	0.8 m/s	velocity	5.81	8.62	9.14	8.62	9.62	9.42	8.46	8.62	8.96	8.62	8.93	8.34	8.79	9.14	8.73
FINAL - 1994 Hallensportfest (Sindelfingen, GER)														<i>Vazel (2020) - coaching observations</i>			
date	6-Mar-94	time	2.51	3.53	4.52	5.51	6.49						7.30	2 / 1			
reaction time		interval		1.02	0.99	0.99	0.98						0.81	WR	3.00		
		velocity	5.47	8.96	9.23	9.23	9.33						12.00	8.22	9.14		
FINAL - 1993 IAAF World Championships (Stuttgart, GER)														<i>Graubner (2009) - http://www.fgs.uni-halle.de</i>			
date	20-Aug-93	time	2.53	3.54	4.53	5.51	6.49	7.47	8.47	9.48	10.51	11.55	12.91	3 / 1			
reaction time	0.122	interval		1.01	0.99	0.98	0.98	0.98	1.00	1.01	1.03	1.04	1.36	WR	2.98	2.96	3.08
wind	0.5 m/s	velocity	5.42	9.05	9.23	9.33	9.33	9.33	9.14	9.05	8.87	8.79	10.31	8.52	9.20	9.26	8.90
FINAL - 1992 Olympic Games (Barcelona, ESP)														<i>Knight (1992) - 1992 Olympic report: the hurdling events</i>			
date	03-Aug-92	time	2.57	3.59	4.58	5.66	6.77	7.80	8.83	9.87	10.88	11.90	13.46	3 / 7			
reaction time	0.133	interval		1.02	0.99	1.08	1.11	1.03	1.03	1.04	1.01	1.02	1.56		3.09	3.17	3.07
wind	0.8 m/s	velocity	5.34	8.96	9.23	8.46	8.23	8.87	8.87	8.79	9.05	8.96	8.99	8.17	8.87	8.65	8.93
FINAL - 1991 European Cup (Frankfurt, GER)														<i>Federle (2003) - http://www.fgs.uni-halle.de</i>			
date	30-Jun-91	time	2.55	3.61	4.64	5.66	6.69	7.72	8.75	9.79	10.83	11.89	13.31	1 / 1			
reaction time		interval		1.06	1.03	1.02	1.03	1.03	1.03	1.04	1.04	1.06	1.42		3.11	3.09	3.14
wind	-0.9 m/s	velocity	5.38	8.62	8.87	8.96	8.87	8.87	8.87	8.79	8.79	8.62	9.87	8.26	8.82	8.87	8.73
FINAL - 1989 IAAF World Cup (Barcelona, ESP)														<i>Gill (1990) - atletismo (I) carreras y marcha</i>			
date	10-Sep-89	time	2.55	3.59	4.60	5.61	6.61	7.60	8.61	9.62	10.63	11.67	12.95	4 / 2			
reaction time		interval		1.04	1.01	1.01	1.00	0.99	1.01	1.01	1.01	1.04	1.28		3.06	3.00	3.06
wind	2.6 m/s	velocity	5.38	8.79	9.05	9.05	9.14	9.23	9.05	9.05	9.05	8.79	10.95	8.49	8.96	9.14	8.96
FINAL - 1988 Olympic Games (Seoul, KOR)														<i>Brüggemann (1990) - scientific research project at the games of the XXXIV Olympiad, Seoul 1988</i>			
date	26-Sep-88	time	2.57	3.61	4.65	5.67	6.70	7.72	8.75	9.79	10.82	11.87	13.28	1 / 2			
reaction time	0.131	interval		1.04	1.04	1.02	1.03	1.02	1.03	1.04	1.03	1.05	1.41		3.10	3.08	3.12
wind	1.5 m/s	velocity	5.34	8.79	8.79	8.96	8.87	8.96	8.87	8.79	8.87	8.70	9.94	8.28	8.85	8.90	8.79
Semi-Final 1 - 1988 Olympic Games (Seoul, KOR)														<i>Brüggemann (1990) - scientific research project at the games of the XXXIV Olympiad, Seoul 1988</i>			
date	26-Sep-88	time	2.58	3.69	4.73	5.74	6.78	7.81	8.85	9.89	10.97	12.05	13.55	4 / 3			
reaction time	0.137	interval		1.11	1.04	1.01	1.04	1.03	1.04	1.04	1.08	1.08	1.50		3.16	3.11	3.20
wind	0.00 m/s	velocity	5.32	8.23	8.79	9.05	8.79	8.87	8.79	8.79	8.46	8.46	9.35	8.12	8.68	8.82	8.57
FINAL - 1987 IAAF World Championships (Rome, ITA)														<i>Susanka (1988) - time analysis of the sprint hurdle events at the II World Championships in Athletics</i>			
date	03-Sep-87	time	2.60	3.65	4.71	5.75	6.76	7.80	8.83	9.88	10.94	11.99	13.38	2 / 3			
reaction time		interval		1.05	1.06	1.04	1.01	1.04	1.03	1.05	1.06	1.05	1.39		3.15	3.08	3.16
wind	0.5 m/s	velocity	5.28	8.70	8.62	8.79	9.05	8.79	8.87	8.70	8.62	8.70	10.09	8.22	8.70	8.90	8.68

Semi-Final 2 - 1987 IAAF World Championships (Rome, ITA)*Susanka (1988) - time analysis of the sprint hurdle events at the II World Championships in Athletics*

date	01-Sep-87	time	2.64	3.68	4.77	5.80	6.84	7.88	8.92	10.00	11.08	12.17	13.58	6 / 4			
reaction time		interval		1.04	1.09	1.03	1.04	1.04	1.04	1.08	1.08	1.09	1.41		3.16	3.12	3.25
wind	-1.2 m/s	velocity	5.20	8.79	8.39	8.87	8.79	8.79	8.79	8.46	8.46	8.39	9.94	8.10	8.68	8.79	8.44

Heat 1 - 1987 IAAF World Championships (Rome, ITA)*Susanka (1988) - time analysis of the sprint hurdle events at the II World Championships in Athletics*

date	01-Sep-87	time	2.61	3.67	4.70	5.71	6.73	7.73	8.75	9.79	10.87	11.95	13.37	7 / 2				
reaction time		interval		1.06	1.03	1.01	1.02	1.00	1.02	1.04	1.08	1.08	1.42		PB	3.10	3.04	3.20
wind	1.4 m/s	velocity	5.26	8.62	8.87	9.05	8.96	9.14	8.96	8.79	8.46	8.46	9.87	8.23	8.85	9.02	8.57	

FINAL - 1986 IAAF World Junor Championships (Athens, GRE) (1.07m)*Miskos (1986) - IAAF biomechanical research - Athens 1986 - hurdle races*

date	19-Jul-86	time	2.58	3.63	4.68	5.70	6.71	7.79	8.83	9.90	10.98	12.07	13.44	1 / 1				
reaction time		interval		1.05	1.05	1.02	1.01	1.08	1.04	1.07	1.08	1.09	1.37		CR / AJR	3.12	3.13	3.24
wind	-0.8 m/s	velocity	5.32	8.70	8.70	8.96	9.05	8.46	8.79	8.54	8.46	8.39	10.23	8.18	8.79	8.76	8.46	

FINAL - 1985 European Junior Championships (Cottbus, GDR) (99cm)*Warburton (1985) - 1985 european junior championships - hurdles*

date	23-Aug-85	time	2.32	3.41	4.44	5.51	6.57	7.63	8.69	9.76	10.87	11.96	13.69	1 / 2			
reaction time		interval		1.09	1.03	1.07	1.06	1.06	1.06	1.07	1.11	1.09	1.73		3.19	3.18	3.27
wind	1.8 m/s	velocity	5.91	8.39	8.87	8.54	8.62	8.62	8.62	8.54	8.23	8.39	8.10	8.04	8.60	8.62	8.39

Semi-Final 2 - 1985 European Junior Championships (Cottbus, GDR) (99cm)*Warburton (1985) - 1985 european junior championships - hurdles*

date	23-Aug-85	time	2.42	3.51	4.57	5.64	6.70	7.73	8.86	9.91	11.00	12.13	14.05	1 / 1			
reaction time		interval		1.09	1.06	1.07	1.06	1.03	1.13	1.05	1.09	1.13	1.92		3.22	3.22	3.27
wind	-0.8 m/s	velocity	5.67	8.39	8.62	8.54	8.62	8.87	8.09	8.70	8.39	8.09	7.30	7.83	8.52	8.52	8.39

Heat 2 - 1985 European Junior Championships (Cottbus, GDR) (99cm)*Warburton (1985) - 1985 european junior championships - hurdles*

date	23-Aug-85	time	2.32	3.40	4.47	5.51	6.62	7.74	8.82	9.88	10.94	12.08	13.97	1 / 1			
reaction time		interval		1.08	1.07	1.04	1.11	1.12	1.08	1.06	1.06	1.14	1.89		3.19	3.31	3.26
wind	1.7 m/s	velocity	5.91	8.46	8.54	8.79	8.23	8.16	8.46	8.62	8.62	8.02	7.42	7.87	8.60	8.28	8.41

Jackson, Dashaun (USA) (1997)**FINAL - 2019 NCAA National Championships (Austin, TX) (TV Analysis)***Henson (2020) - Athlete First: 2019 year end hurdle report*

date	07-Jun-19	time	2.54	3.60	4.64	5.67	6.70	7.70	8.71	9.76	10.81	11.91	13.38	6 / 4			
reaction time	0.175	interval		1.06	1.04	1.03	1.03	1.00	1.01	1.05	1.05	1.10	1.47		3.13	3.04	3.20
wind	0.8 m/s	velocity	5.40	8.62	8.79	8.87	8.87	9.14	9.05	8.70	8.70	8.31	9.54	8.22	8.76	9.02	8.57

Semi-Final 1 - 2019 NCAA National Championships (Austin, TX) (TV Analysis)*Henson (2020) - Athlete First: 2019 year end hurdle report*

date	05-Jun-19	time	2.38	3.43	4.46	5.48	6.50	7.50	8.60	9.63	10.68	11.74	13.37	7 / 2				
reaction time	0.213	interval		1.05	1.03	1.02	1.02	1.00	1.10	1.03	1.05	1.06	1.63		PB	3.10	3.12	3.14
wind	0.9 m/s	velocity	5.76	8.70	8.87	8.96	8.96	9.14	8.31	8.87	8.70	8.62	8.60	8.23	8.85	8.79	8.73	

Ján, Jan (CZE) (1993)**Heat 3 - 2012 Czech Republic National Indoor Championships (Praha, CZE)***Feher (2012) - Czech Republic indoor national championships - men's 60m hurdles*

date	25-Feb-12	time	2.75	3.92	5.04	6.21	7.34						8.39	2 / 5			
reaction time	0.141	interval		1.17	1.12	1.17	1.13						1.05		3.46		
		velocity	4.99	7.81	8.16	7.81	8.09						9.26	7.15	7.92		

Jarrett, Tony (GBR) (1968)**Heat 4 - 2002 European Championships (Munich, GER)***Graubner (2009) - http://www.fgs.uni-halle.de*

date	09-Aug-02	time	2.66	3.72	4.78	5.80	6.86	7.90	8.96	10.01	11.09	12.19	13.63	1 / 2			
reaction time	0.153	interval		1.06	1.06	1.02	1.06	1.04	1.06	1.05	1.08	1.10	1.44		3.14	3.16	3.23
wind	-0.1 m/s	velocity	5.16	8.62	8.62	8.96	8.62	8.79	8.62	8.70	8.46	8.31	9.74	8.07	8.73	8.68	8.49

FINAL - 2001 European Cup (Bremen, GER)*Graubner (2007) - http://www.fgs.uni-halle.de*

date	24-Jun-01	time	2.64	3.70	4.76	5.80	6.84	7.91	8.95	10.01	11.10	12.17	13.58	4 / 3			
reaction time	0.150	interval		1.06	1.06	1.04	1.04	1.07	1.04	1.06	1.09	1.07	1.41		3.16	3.15	3.22
wind	1.3 m/s	velocity	5.20	8.62	8.62	8.79	8.79	8.54	8.79	8.62	8.39	8.54	9.94	8.10	8.68	8.70	8.52

FINAL - 1998 European Championships (Budapest, HUN)*Sanchez (1998) - Budapest '98: análisis de la carreras con villas*

date	22-Aug-98	time	2.58	3.61	4.66	5.69	6.74	7.74	8.74	9.76	10.80	11.89	13.32	8 / 6			
reaction time		interval		1.03	1.05	1.03	1.05	1.00	1.00	1.02	1.04	1.09	1.43		3.11	3.05	3.15
wind	1.5 m/s	velocity	5.32	8.87	8.70	8.87	8.70	9.14	9.14	8.96	8.79	8.39	9.80	8.26	8.82	8.99	8.70

FINAL - 1992 Olympic Games (Barcelona, ESP)*Knight (1992) - 1992 Olympic report: the hurdling events*

date	03-Aug-92	time	2.63	3.69	4.71	5.72	6.75	7.78	8.79	9.82	10.88	11.93	13.26	8 / 4			
reaction time	0.163	interval		1.06	1.02	1.01	1.03	1.03	1.01	1.03	1.06	1.05	1.33		3.09	3.07	3.14
wind	0.8 m/s	velocity	5.22	8.62	8.96	9.05	8.87	8.87	9.05	8.87	8.62	8.70	10.54	8.30	8.87	8.93	8.73

FINAL - 1988 Olympic Games (Seoul, KOR)*Brüggemann (1990) - scientific research project at the games of the XXXIV Olympiad, Seoul 1988*

date	26-Sep-88	time	2.58	3.65	4.73	5.77	6.84	7.89	8.93	9.99	11.05	12.15	13.54	2 / 6			
reaction time	0.164	interval		1.07	1.08	1.04	1.07	1.05	1.04	1.06	1.06	1.10	1.39		3.19	3.16	3.22
wind	1.5 m/s	velocity	5.32	8.54	8.46	8.79	8.54	8.70	8.79	8.62	8.62	8.31	10.09	8.12	8.60	8.68	8.52

Semi-Final 2 - 1988 Olympic Games (Seoul, KOR)*Brüggemann (1990) - scientific research project at the games of the XXXIV Olympiad, Seoul 1988*

date	26-Sep-88	time	2.54	3.62	4.69	5.74	6.78	7.82	8.90	9.96	11.04	12.11	13.56	6 / 4			
reaction time	0.152	interval		1.08	1.07	1.05	1.04	1.04	1.08	1.06	1.08	1.07	1.45		3.20	3.16	3.21
wind	-0.7 m/s	velocity	5.40	8.46	8.54	8.70	8.79	8.79	8.46	8.62	8.46	8.54	9.67	8.11	8.57	8.68	8.54

Jelinek, Erik (CZE) (1998)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10**FINAL - 2015 Czech Republic National U18 Indoor Championships (Praha, CZE) (91cm) *Feher (2015) - Final report U18 & U20 Czech Republic indoor national champs*

date	14-Feb-15	time	2.78	3.94	5.06	6.19	7.31						8.33	1 / 8			
reaction time	0.153	interval		1.16	1.12	1.13	1.12						1.02		3.41		
wind		velocity	4.94	7.88	8.16	8.09	8.16						9.53	7.20	8.04		

Ji Haohao (CHN) (2001)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10**Heat 3 - 2021 Chinese National Championships (Chongqing, CHN) *CAA Hurdle Development (2021)*

date	25-Jun-21	time	2.72	3.84	4.94	6.07	7.18	8.29	9.43	10.56	11.71	12.88	14.44	7 / 7			
reaction time	0.177	interval		1.12	1.10	1.13	1.11	1.11	1.14	1.13	1.15	1.17	1.56		3.35	3.36	3.45
wind	0.5 m/s	velocity	5.04	8.16	8.31	8.09	8.23	8.23	8.02	8.09	7.95	7.81	8.99	7.62	8.19	8.16	7.95

U20 FINAL - 2019 Chinese National Youth Games (Taiyuan, CHN) (99cm) *CAA Hurdle Development (2019)*

date	14-Aug-19	time	2.69	3.77	4.84	5.90	6.94	8.04	9.09	10.19	11.31	12.43	13.96	2 / 6			
reaction time	0.187	interval		1.08	1.07	1.06	1.04	1.10	1.05	1.10	1.12	1.12	1.53		3.21	3.19	3.34
wind	-0.3 m/s	velocity	5.10	8.46	8.54	8.62	8.79	8.31	8.70	8.31	8.16	8.16	9.16	7.88	8.54	8.60	8.21

U20 Heat 1 - 2019 Chinese National Youth Games (Taiyuan, CHN) (99cm) *CAA Hurdle Development (2019)*

date	14-Aug-19	time	2.56	3.64	4.71	5.77	6.82	7.88	8.96	10.05	11.16	12.28	13.91	6 / 3			
reaction time	0.168	interval		1.08	1.07	1.06	1.05	1.06	1.08	1.09	1.11	1.12	1.63		3.21	3.19	3.32
wind	0.5 m/s	velocity	5.36	8.46	8.54	8.62	8.70	8.62	8.46	8.39	8.23	8.16	8.60	7.91	8.54	8.60	8.26

Ji Wei (CHN) (1984)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10**FINAL - 2017 Chinese National Games (Tianjin, CHN) *Henson (2017) - coaching observations*

date	03-Sep-17	time	2.73	3.84	4.92	5.99	7.03	8.08	9.16	10.26	11.36	12.50	14.01	9 / 6			
reaction time		interval		1.11	1.08	1.07	1.04	1.05	1.08	1.10	1.10	1.14	1.51		3.26	3.17	3.34
wind	0.3 m/s	velocity	5.03	8.23	8.46	8.54	8.79	8.70	8.46	8.31	8.31	8.02	9.28	7.85	8.41	8.65	8.21

FINAL - 2009 IAAF World Championships (Berlin, GER) *Graubner (2009) - biomechanical analyses at the 12th IAAF world championships*

date	20-Aug-09	time	2.68	3.77	4.80	5.84	6.86	7.92	8.96	10.02	11.09	12.17	13.57	1 / 8			
reaction time	0.144	interval		1.09	1.03	1.04	1.02	1.06	1.04	1.06	1.07	1.08	1.40		3.16	3.12	3.21
wind	0.1 m/s	velocity	5.12	8.39	8.87	8.79	8.96	8.62	8.79	8.62	8.54	8.46	10.01	8.11	8.68	8.79	8.54

Semi-Final 1 - 2009 IAAF World Championships (Berlin, GER) *Graubner (2009) - biomechanical analyses at the 12th IAAF world championships*

date	20-Aug-09	time	2.64	3.71	4.74	5.77	6.79	7.82	8.84	9.89	10.95	12.01	13.41	4 / 3			
reaction time	0.147	interval		1.07	1.03	1.03	1.02	1.03	1.02	1.05	1.06	1.06	1.40		3.13	3.07	3.17
wind	0.9 m/s	velocity	5.20	8.54	8.87	8.87	8.96	8.87	8.96	8.70	8.62	8.62	10.01	8.20	8.76	8.93	8.65

Heat 5 - 2009 IAAF World Championships (Berlin, GER) *Graubner (2009) - biomechanical analyses at the 12th IAAF world championships*

date	19-Aug-09	time	2.64	3.71	4.75	5.79	6.81	7.86	8.91	9.95	11.03	12.11	13.51	2 / 1			
reaction time	0.124	interval		1.07	1.04	1.04	1.02	1.05	1.05	1.04	1.08	1.08	1.40		3.15	3.12	3.20
wind	0.0 m/s	velocity	5.20	8.54	8.79	8.79	8.96	8.70	8.70	8.79	8.46	8.46	10.01	8.14	8.70	8.79	8.57

FINAL - 2009 Osaka Grand Prix (Osaka, JPN) *Ryutaro (2010) - an attempt or a creation of a race pattern standard model for the 110m hurdles*

date	09-May-09	time	2.63	3.69	4.73	5.77	6.78	7.80	8.81	9.84	10.91	11.99	13.51	1 / 3			
reaction time		interval		1.06	1.04	1.04	1.01	1.02	1.01	1.03	1.07	1.08	1.52		3.14	3.04	3.18
wind	0.2 m/s	velocity	5.22	8.62	8.79	8.79	9.05	8.96	9.05	8.87	8.54	8.46	9.22	8.14	8.73	9.02	8.62

Jia Qihang (CHN) (2001)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10**U20 Heat 1 - 2019 Chinese National Youth Games (Taiyuan, CHN) (99cm) *CAA Hurdle Development (2019)*

date	14-Aug-19	time	2.59	3.72	4.81	5.91	6.99	8.14	9.26	10.41	11.51	12.70	14.30	7 / 5			
reaction time	0.177	interval		1.13	1.09	1.10	1.08	1.15	1.12	1.15	1.10	1.19	1.60		3.32	3.35	3.44
wind	0.5 m/s	velocity	5.30	8.09	8.39	8.31	8.46	7.95	8.16	7.95	8.31	7.68	8.76	7.69	8.26	8.19	7.97

Jian Jinlong (CHN) (2000)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10**Heat 1 - 2021 East China District Meeting (Zhaoying, CHN) *CAA Hurdle Development (2021)*

date	24-Apr-21	time	2.75	3.93	5.06	6.20	7.32	8.46	9.59	10.74	11.90	13.10	14.66	2 / 6			
reaction time	0.166	interval		1.18	1.13	1.14	1.12	1.14	1.13	1.15	1.16	1.20	1.56	PB	3.45	3.39	3.51
wind	-1.1 m/s	velocity	4.99	7.75	8.09	8.02	8.16	8.02	8.09	7.95	7.88	7.62	8.99	7.50	7.95	8.09	7.81

Jiang Fan (CHN) (1990)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10**Heat 2 - 2020 Chinese National Championships (Shaoxing, CHN) *CAA Hurdle Development (2020)*

date	16-Sep-20	time	2.69	3.82	4.92	6.01	7.12	8.21	9.30	10.45	11.59	12.74	14.27	4 / 5			
reaction time	0.140	interval		1.13	1.10	1.09	1.11	1.09	1.09	1.15	1.14	1.15	1.53		3.32	3.29	3.44
wind	-0.5 m/s	velocity	5.10	8.09	8.31	8.39	8.23	8.39	8.39	7.95	8.02	7.95	9.16	7.71	8.26	8.33	7.97

FINAL - 2020 Don Kirby Elite Invitational (Albuquerque, NM) (Altitude) *CAA Hurdle Development (2020)*

date	14-Feb-20	time	2.70	3.82	4.90	6.01	7.11							8.14	2 / 6				
reaction time		interval		1.12	1.08	1.11	1.10						1.03			3.31			
		velocity	5.08	8.16	8.46	8.23	8.31					9.44	7.37			8.28			
Semi-Final 3 - 2020 Don Kirby Elite Invitational (Albuquerque, NM) (Altitude)																	<i>CAA Hurdle Development (2020)</i>		
date	14-Feb-20	time	2.68	3.80	4.85	5.94	7.00							7.96	1 / 2				
reaction time		interval		1.12	1.05	1.09	1.06						0.96			3.26			
		velocity	5.12	8.16	8.70	8.39	8.62					10.13	7.54			8.41			
Heat 2 - 2020 Don Kirby Elite Invitational (Albuquerque, NM) (Altitude)																	<i>CAA Hurdle Development (2020)</i>		
date	14-Feb-20	time	2.55	3.65	4.72	5.79	6.87							7.94	2 / 1				
reaction time		interval		1.10	1.07	1.07	1.08						1.07			3.24			
		velocity	5.38	8.31	8.54	8.54	8.46					9.08	7.56			8.46			
FINAL - 2020 Mountain T's Invitational (Flagstaff AZ) (Altitude)																	<i>CAA Hurdle Development (2020)</i>		
date	01-Feb-20	time	2.72	3.81	4.89	5.98	7.04							7.97	2 / 5				
reaction time		interval		1.09	1.08	1.09	1.06						0.93			3.26			
		velocity	5.04	8.39	8.46	8.39	8.62					10.45	7.53			8.41			
Heat 2 - 2020 Mountain T's Invitational (Flagstaff AZ) (Altitude)																	<i>CAA Hurdle Development (2020)</i>		
date	01-Feb-20	time	2.72	3.82	4.91	5.97	7.02							7.97	5 / 2				
reaction time		interval		1.10	1.09	1.06	1.05						0.95			3.25			
		velocity	5.04	8.31	8.39	8.62	8.70					10.23	7.53			8.44			
Heat 2 - 2019 Chinese National Grand Prix Final (Daqing, CHN)																	<i>CAA Hurdle Development (2019)</i>		
date	23-Aug-19	time	2.70	3.84	4.95	6.06	7.17	8.29	9.41	10.59	11.83	13.09		14.80	9 / 6				
reaction time	0.159	interval		1.14	1.11	1.11	1.11	1.12	1.12	1.18	1.24	1.26	1.71			3.36	3.35	3.68	
wind	-0.2 m/s	velocity	5.08	8.02	8.23	8.23	8.23	8.16	8.16	7.75	7.37	7.25	8.20	7.43		8.16	8.19	7.45	
FINAL - 2019 Chinese World Championship Trials (Shenyang, CHN)																	<i>CAA Hurdle Development (2019)</i>		
date	02-Aug-19	time	2.65	3.74	4.80	5.87	6.92	7.99	9.07	10.16	11.26	12.38		13.89	5 / 4				
reaction time	0.148	interval		1.09	1.06	1.07	1.05	1.07	1.08	1.09	1.10	1.12	1.51			3.22	3.20	3.31	
wind	0.0 m/s	velocity	5.18	8.39	8.62	8.54	8.70	8.54	8.46	8.39	8.31	8.16	9.28	7.92		8.52	8.57	8.28	
Heat 1 - 2019 Chinese World Championship Trials (Shenyang, CHN)																	<i>CAA Hurdle Development (2019)</i>		
date	02-Aug-19	time	2.68	3.78	4.88	5.97	7.05	8.12	9.24	10.36	11.48	12.61		14.13	7 / 2				
reaction time	0.144	interval		1.10	1.10	1.09	1.08	1.07	1.12	1.12	1.12	1.13	1.52			3.29	3.27	3.37	
wind	-0.3 m/s	velocity	5.12	8.31	8.31	8.39	8.46	8.54	8.16	8.16	8.16	8.09	9.22	7.78		8.33	8.39	8.14	
FINAL - 2019 Chinese National Championships (Shenyang, CHN)																	<i>CAA Hurdle Development (2019)</i>		
date	08-Jul-19	time	2.63	3.73	4.80	5.89	6.97	8.06	9.15	10.24	11.34	12.48		13.96	7 / 5				
reaction time	0.143	interval		1.10	1.07	1.09	1.08	1.09	1.09	1.09	1.10	1.14	1.48			3.26	3.26	3.33	
wind	0.1 m/s	velocity	5.22	8.31	8.54	8.39	8.46	8.39	8.39	8.39	8.31	8.02	9.47	7.88		8.41	8.41	8.23	
Heat 1 - 2019 Chinese National Championships (Shenyang, CHN)																	<i>CAA Hurdle Development (2019)</i>		
date	08-Jul-19	time	2.69	3.80	4.87	5.95	7.05	8.12	9.22	10.34	11.44	12.59		14.12	6 / 2				
reaction time	0.150	interval		1.11	1.07	1.08	1.10	1.07	1.10	1.12	1.10	1.15	1.53			3.26	3.27	3.37	
wind	0.1 m/s	velocity	5.10	8.23	8.54	8.46	8.31	8.54	8.31	8.16	8.31	7.95	9.16	7.79		8.41	8.39	8.14	
Heat 4 - 2019 Chinese National Grand Prix 2 (Huangshi, CHN)																	<i>CAA Hurdle Development (2019)</i>		
date	13-Apr-19	time	2.69	3.84	4.96	6.08	7.22	8.40						dnf	8 / --				
reaction time	0.153	interval		1.15	1.12	1.12	1.14	1.18								3.39			
wind	-0.8 m/s	velocity	5.10	7.95	8.16	8.16	8.02	7.75								8.09			
FINAL - 2019 Chinese National Grand Prix 1 (Zhaoqing, CHN)																	<i>CAA Hurdle Development (2019)</i>		
date	09-Apr-19	time	2.76	3.88	4.97	6.11	7.21	8.34	9.48	10.63	11.80	12.98		14.65	8 / 7				
reaction time	0.209	interval		1.12	1.09	1.14	1.10	1.13	1.14	1.15	1.17	1.18	1.67			3.35	3.37	3.50	
wind	0.2 m/s	velocity	4.97	8.16	8.39	8.02	8.31	8.09	8.02	7.95	7.81	7.75	8.40	7.51		8.19	8.14	7.83	
Heat 2 - 2019 Chinese National Grand Prix 1 (Zhaoqing, CHN)																	<i>CAA Hurdle Development (2019)</i>		
date	08-Apr-19	time	2.71	3.85	4.95	6.05	7.15	8.26	9.38	10.50	11.65	12.79		14.33	5 / 2				
reaction time	0.176	interval		1.14	1.10	1.10	1.10	1.11	1.12	1.12	1.15	1.14	1.54			3.34	3.33	3.41	
wind	-0.6 m/s	velocity	5.06	8.02	8.31	8.31	8.31	8.23	8.16	8.16	7.95	8.02	9.10	7.68		8.21	8.23	8.04	
A-FINAL - 2019 Chinese Indoor National Grand Prix 2 (Nanjing, CHN)																	<i>CAA Hurdle Development (2019)</i>		
date	24-Feb-19	time	2.68	3.80	4.89	5.99	7.09							8.03	5 / 3				
reaction time		interval		1.12	1.09	1.10	1.10						0.94			3.31			
		velocity	5.12	8.16	8.39	8.31	8.31					10.34	7.47			8.28			
A-FINAL - 2019 Chinese Indoor National Grand Prix 1 (Nanjing, CHN)																	<i>CAA Hurdle Development (2019)</i>		
date	20-Feb-19	time	2.67	3.79	4.85	5.94	7.02							7.94	5 / 1				
reaction time		interval		1.12	1.06	1.09	1.08						0.92			3.27			
		velocity	5.14	8.16	8.62	8.39	8.46					10.57	7.56			8.39			

FINAL - 2017 Chinese National Games (Tianjin, CHN)														<i>Henson (2017) - coaching observations</i>				
date	03-Sep-17	time	2.65	3.72	4.79	5.84	6.89	7.94	9.02	10.11	11.20	12.31	13.78	2 / 2				
reaction time		interval		1.07	1.07	1.05	1.05	1.05	1.08	1.09	1.09	1.11	1.47		3.19	3.18	3.29	
wind	0.3 m/s	velocity	5.18	8.54	8.54	8.70	8.70	8.70	8.46	8.39	8.39	8.23	9.54	7.98	8.60	8.62	8.33	
Jiang Jinlong (CHN) (2000)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
U20 Heat 2 - 2019 Chinese National Youth Games (Taiyuan, CHN) (99cm)														<i>CAA Hurdle Development (2019)</i>				
date	14-Aug-19	time	2.70	3.80	4.90	5.99	7.09	8.18	9.26	10.37	11.48	12.61	14.16	3 / 5				
reaction time	0.168	interval		1.10	1.10	1.09	1.10	1.09	1.08	1.11	1.11	1.13	1.55		3.29	3.27	3.35	
wind	-0.3 m/s	velocity	5.08	8.31	8.31	8.39	8.31	8.39	8.46	8.23	8.23	8.09	9.05	7.77	8.33	8.39	8.19	
Jiang Wei (CHN) (1994)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Heat 4 - 2021 Chinese National Championships (Chongqing, CHN)														<i>CAA Hurdle Development (2021)</i>				
date	25-Jun-21	time	2.69	3.82	4.97	6.09	7.21	8.31	9.43	10.56	11.73	12.90	14.49	4 / 5				
reaction time	0.162	interval		1.13	1.15	1.12	1.12	1.10	1.12	1.13	1.17	1.17	1.59		3.40	3.34	3.47	
wind	-0.2 m/s	velocity	5.10	8.09	7.95	8.16	8.16	8.31	8.16	8.09	7.81	7.81	8.82	7.59	8.06	8.21	7.90	
FINAL - 2021 Philippe Cup Athletics Invitational (Wuhan, CHN)														<i>CAA Hurdle Development (2021)</i>				
date	19-May-21	time	2.74	3.89	5.00	6.10	7.22	8.36	9.44	10.59	11.73	12.90	14.43	2 / 5				
reaction time	0.194	interval		1.15	1.11	1.10	1.12	1.14	1.08	1.15	1.14	1.17	1.53		3.36	3.34	3.46	
wind	1.9 m/s	velocity	5.01	7.95	8.23	8.31	8.16	8.02	8.46	7.95	8.02	7.81	9.16	7.62	8.16	8.21	7.92	
Heat 2 - 2019 Chinese National Grand Prix Final (Daqing, CHN)														<i>CAA Hurdle Development (2019)</i>				
date	23-Aug-19	time	2.72	3.87	4.99	6.11	7.26	8.39	9.51	10.68	11.84	13.04	14.60	3 / 4				
reaction time	0.200	interval		7 steps	1.15	1.12	1.12	1.15	1.13	1.12	1.17	1.16	1.20	1.56		3.39	3.40	3.53
wind	-0.2 m/s	velocity	5.04	7.95	8.16	8.16	7.95	8.09	8.16	7.81	7.88	7.62	8.99	7.53	8.09	8.06	7.77	
B-FINAL - 2019 Chinese Indoor National Grand Prix 4 (Xi'an, CHN)														<i>CAA Hurdle Development (2019)</i>				
date	4-Mar-19	time	2.69	3.79	4.87	5.93	7.01						7.98	3 / 2				
reaction time		interval		7 steps	1.10	1.08	1.06	1.08					0.97		3.24			
		velocity	5.10	8.31	8.46	8.62	8.46						10.02	7.52	8.46			
Heat 2 - 2018 Chinese National Championships (Taiyuan, CHN)														<i>Henson (2018) - coaching observations</i>				
date	15-Sep-18	time	2.68	3.78	4.87	5.94	7.02	8.12	9.22	10.36	11.50	12.66	14.22	8 / 5				
reaction time		interval		7 steps	1.10	1.09	1.07	1.08	1.10	1.10	1.14	1.14	1.16	1.56		3.26	3.28	3.44
wind	0.7 m/s	velocity	5.12	8.31	8.39	8.54	8.46	8.31	8.31	8.02	8.02	7.88	8.99	7.74	8.41	8.36	7.97	
Jiang Yuhong (CHN) (1997)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Decathlon - Heat 2 - 2019 Chinese National Championships (Shenyang, CHN)														<i>CAA Hurdle Development (2019)</i>				
date	11-Jul-19	time	2.98	4.25	5.51	6.79	8.10	9.56	11.04	12.50	13.98	15.48	17.39	4 / 6				
reaction time	0.247	interval		1.27	1.26	1.28	1.31	1.46	1.48	1.46	1.48	1.50	1.91		3.81	4.25	4.44	
wind	-0.1 m/s	velocity	4.60	7.20	7.25	7.14	6.98	6.26	6.18	6.26	6.18	6.09	7.34	6.33	7.20	6.45	6.18	
Jiles-Tindall, Julius (USA) (1986)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Heat 4 - 2007 USATF National Championships (Indianapolis, IN)														<i>USATF Men's Hurdle Development (2007)</i>				
date	23-Jun-07	time	2.69	3.79	4.90	5.99	7.08	8.16	9.28	10.38	11.47	12.61	14.10	6 / 7				
reaction time		interval		1.10	1.11	1.09	1.09	1.08	1.12	1.10	1.09	1.14	1.49		3.30	3.29	3.33	
wind	-2.8 m/s	velocity	5.10	8.31	8.23	8.39	8.39	8.46	8.16	8.31	8.39	8.02	9.41	7.80	8.31	8.33	8.23	
FINAL - 2003 USATF National Junior Championships (Palo Alto, CA) (99cm)														<i>USATF Women's Sprint Development (2003)</i>				
date	21-Jun-03	time	2.70	3.84	4.94	6.04	7.14	8.29	9.41	10.54	11.71	12.89	14.51	2 / 7				
reaction time		interval		1.14	1.10	1.10	1.10	1.15	1.12	1.13	1.17	1.18	1.62		3.34	3.37	3.48	
wind	-2.4 m/s	velocity	5.08	8.02	8.31	8.31	8.31	7.95	8.16	8.09	7.81	7.75	8.65	7.58	8.21	8.14	7.88	
John, Alexander (GER) (1986)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Semi-Final 2 - 2009 IAAF World Championships (Berlin, GER)														<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>				
date	20-Aug-09	time	2.65	3.71	4.77	5.84	6.89	7.95	9.03	10.09	11.17	12.27	13.64	6 / 8				
reaction time	0.185	interval		1.06	1.06	1.07	1.05	1.06	1.08	1.06	1.08	1.10	1.37		3.19	3.19	3.24	
wind	0.6 m/s	velocity	5.18	8.62	8.62	8.54	8.70	8.62	8.46	8.62	8.46	8.31	10.23	8.06	8.60	8.60	8.46	
Heat 4 - 2009 IAAF World Championships (Berlin, GER)														<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>				
date	19-Aug-09	time	2.63	3.70	4.75	5.81	6.84	7.88	8.93	9.96	11.01	12.08	13.41	5 / 2				
reaction time	0.114	interval		1.07	1.05	1.06	1.03	1.04	1.05	1.03	1.05	1.07	1.33		3.18	3.12	3.15	
wind	0.5 m/s	velocity	5.22	8.54	8.70	8.62	8.87	8.79	8.70	8.87	8.70	8.54	10.54	8.20	8.62	8.79	8.70	
Johnson, Allen (USA) (1971)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2007 IAAF World Athletics Final (Stuttgart, GER)														<i>Graubner (2007) - http://www.fgs.uni-halle.de</i>				
date	23-Sep-07	time	2.59	3.63	4.66	5.68	6.71	7.74	8.77	9.81	10.87	11.95	13.36	2 / 6				
reaction time	0.158	interval		1.04	1.03	1.02	1.03	1.03	1.03	1.04	1.06	1.08	1.41		3.09	3.09	3.18	
wind	0.0 m/s	velocity	5.30	8.79	8.87	8.96	8.87	8.87	8.87	8.79	8.62	8.46	9.94	8.23	8.87	8.87	8.62	
FINAL - 2007 USATF National Championships (Indianapolis, IN)														<i>USATF Men's Hurdle Development (2007)</i>				

date	24-Jun-07	time	2.59	3.62	4.64	5.64	6.67	7.69	8.76	9.78	10.93	12.03	13.60	2 / 7			
reaction time		interval		1.03	1.02	1.00	1.03	1.02	1.07	1.02	1.15	1.10	1.57		3.05	3.12	3.27
wind	0.5 m/s	velocity	5.30	8.87	8.96	9.14	8.87	8.96	8.54	8.96	7.95	8.31	8.93	8.09	8.99	8.79	8.39
Semi-Final 1 - 2007 USATF National Championships (Indianapolis, IN)														<i>USATF Men's Hurdle Development (2007)</i>			
date	24-Jun-07	time	2.57	3.64	4.64	5.67	6.69	7.71	8.76	9.81	10.86	11.95	13.42	8 / 4			
reaction time		interval		1.07	1.00	1.03	1.02	1.02	1.05	1.05	1.05	1.09	1.47		3.10	3.09	3.19
wind	-0.6 m/s	velocity	5.34	8.54	9.14	8.87	8.96	8.96	8.70	8.70	8.70	8.39	9.54	8.20	8.85	8.87	8.60
Heat 1 - 2007 USATF National Championships (Indianapolis, IN)														<i>USATF Men's Hurdle Development (2007)</i>			
date	23-Jun-07	time	2.57	3.62	4.64	5.67	6.71	7.73	8.77	9.86	10.93	12.02	13.52	3 / 3			
reaction time		interval		1.05	1.02	1.03	1.04	1.02	1.04	1.09	1.07	1.09	1.50		3.10	3.10	3.25
wind	0.1 m/s	velocity	5.34	8.70	8.96	8.87	8.79	8.96	8.79	8.39	8.54	8.39	9.35	8.14	8.85	8.85	8.44
FINAL - 2006 IAAF World Cup (Athens, GRE) (TV Analysis)														<i>Graubner (2009) - http://www.fgs.uni-halle.de</i>			
date	17-Sep-06	time	2.55	3.54	4.54	5.53	6.51	7.50	8.49	9.49	10.51	11.55	12.96	3 / 1			
reaction time	0.164	interval		0.99	1.00	0.99	0.98	0.99	0.99	1.00	1.02	1.04	1.41	CR	2.98	2.96	3.06
wind	0.4 m/s	velocity	5.38	9.23	9.14	9.23	9.33	9.23	9.23	9.14	8.96	8.79	9.94	8.49	9.20	9.26	8.96
FINAL - 2005 USATF National Championships (Carson, CA)														<i>USATF Women's Sprint Development (2005)</i>			
date	24-Jun-05	time	2.56	3.57	4.58	5.58	6.56	7.56	8.58	9.56	10.58	11.64	12.99	2 / 1			
reaction time		interval		1.01	1.01	1.00	0.98	1.00	1.02	0.98	1.02	1.06	1.35		3.02	3.00	3.06
wind	0.2 m/s	velocity	5.36	9.05	9.05	9.14	9.33	9.14	8.96	9.33	8.96	8.62	10.39	8.47	9.08	9.14	8.96
FINAL - 2003 IAAF World Championships (Paris, FRA)														<i>Leynier (2003) - Paris 2003 - Haies: Le 110m haies</i>			
date	30-Aug-03	time	2.56	3.60	4.60	5.60	6.60	7.62	8.62	9.64	10.68	11.72	13.12	4 / 1			
reaction time	0.159	interval		1.04	1.00	1.00	1.00	1.02	1.00	1.02	1.04	1.04	1.40		3.04	3.02	3.10
wind	0.3 m/s	velocity	5.36	8.79	9.14	9.14	9.14	8.96	9.14	8.96	8.79	8.79	10.01	8.38	9.02	9.08	8.85
FINAL - 2003 Athletissima Meeting (Lausanne, SUI)														<i>Xu (2004) - an analysis of Liu Xiang's technique in 100m hurdle final at the Athens Olympic Games</i>			
date	01-Jul-03	time	2.56	3.58	4.60	5.60	6.58	7.58	8.60	9.60	10.62	11.66	13.06	1 / 1			
reaction time		interval		1.02	1.02	1.00	0.98	1.00	1.02	1.00	1.02	1.04	1.40		3.04	3.00	3.06
wind	0.0 m/s	velocity	5.36	8.96	8.96	9.14	9.33	9.14	8.96	9.14	8.96	8.79	10.01	8.42	9.02	9.14	8.96
FINAL - 2003 USATF National Championships (Palo Alto, CA)														<i>USATF Women's Sprint Development (2003)</i>			
date	21-Jun-03	time	2.35	3.44	4.44	5.49	6.51	7.52	8.56	9.59	10.64	11.70	13.37	6 / 1			
reaction time		interval		1.09	1.00	1.05	1.02	1.01	1.04	1.03	1.05	1.06	1.67		3.14	3.07	3.14
wind	-2.4 m/s	velocity	5.84	8.39	9.14	8.70	8.96	9.05	8.79	8.87	8.70	8.62	8.40	8.23	8.73	8.93	8.73
FINAL - 2002 IAAF World Cup (Madrid, ESP)														<i>Sanchez (2002) - copa del mundo de Madrid '02: análisis de la carreras con villas</i>			
date	21-Sep-02	time	2.48	3.49	4.51	5.51	6.52	7.55	8.59	9.65	10.71	11.78	13.45	5 / 2			
reaction time	0.135	interval		1.01	1.02	1.00	1.01	1.03	1.04	1.06	1.06	1.07	1.67		3.03	3.08	3.19
wind	-2.2 m/s	velocity	5.53	9.05	8.96	9.14	9.05	8.87	8.79	8.62	8.62	8.54	8.40	8.18	9.05	8.90	8.60
FINAL - 2001 ISTAF (Berlin, GER)														<i>Graubner (2009) - http://www.fgs.uni-halle.de</i>			
date	31-Aug-09	time	2.58	3.59	4.60	5.58	6.58	7.58	8.58	9.60	10.62	11.66	13.04	4 / 1			
reaction time	0.170	interval		1.01	1.01	0.98	1.00	1.00	1.00	1.02	1.02	1.04	1.38		3.00	3.00	3.08
wind	1.0 m/s	velocity	5.32	9.05	9.05	9.33	9.14	9.14	9.14	8.96	8.96	8.79	10.16	8.44	9.14	9.14	8.90
FINAL - 1997 IAAF World Championships (Athens, GRE)														<i>Hommel (1997) - biomechanical research project at the VI th world championships in athletics, Athens 1997</i>			
date	07-Aug-97	time	2.56	3.56	4.54	5.54	6.52	7.54	8.52	9.57	10.59	11.62	12.93	4 / 1			
reaction time	0.128	interval		1.00	0.98	1.00	0.98	1.02	0.98	1.05	1.02	1.03	1.31		2.98	2.98	3.10
wind	0.0 m/s	velocity	5.36	9.14	9.33	9.14	9.33	8.96	9.33	8.70	8.96	8.87	10.70	8.51	9.20	9.20	8.85
FINAL - 1996 Memorial Van Damme (Brussels, BEL)														<i>Shi (2013) - comprehensive research on the "three characteristics" of the men's 110m hurdles</i>			
date	23-Aug-96	time	2.56	3.56	4.54	5.54	6.52	7.53	8.51	9.56	10.58	11.61	12.92	1 / 1			
reaction time		interval		1.00	0.98	1.00	0.98	1.01	0.98	1.05	1.02	1.03	1.31	=AR =PB	2.98	2.97	3.10
wind	0.2 m/s	velocity	5.36	9.14	9.33	9.14	9.33	9.05	9.33	8.70	8.96	8.87	10.70	8.51	9.20	9.23	8.85
FINAL - 1996 Olympic Games (Atlanta, GA)														<i>Butler (2016) - IAAF statistics handbook- special edition: Games of the XXXI Olympiad- Rio 2016</i>			
date	26-Jul-96	time	2.34	3.38	4.39	5.36	6.32	7.30	8.30	9.33	10.36	11.38	12.95	6 / 1			
reaction time	0.170	interval		1.04	1.01	0.97	0.96	0.98	1.00	1.03	1.03	1.02	1.57	OR	3.02	2.94	3.08
wind	0.8 m/s	velocity	5.86	8.79	9.05	9.42	9.52	9.33	9.14	8.87	8.87	8.96	8.93	8.49	9.08	9.33	8.90
FINAL - 1996 USA Olympic Trials (Atlanta, GA)														<i>McNichols (2000) - Hurdle technique study through video analysis</i>			
date	23-Jun-96	time	2.36	3.40	4.40	5.36	6.36	7.33	8.32	9.32	10.36	11.42	12.92	6 / 1			
reaction time		interval		1.04	1.00	0.96	1.00	0.97	0.99	1.00	1.04	1.06	1.50	AR PB	3.00	2.96	3.10
wind	0.9 m/s	velocity	5.81	8.79	9.14	9.52	9.14	9.42	9.23	9.14	8.79	8.62	9.35	8.51	9.14	9.26	8.85
Joseph, Jason (SUI) (1998)																	
		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2024 Weltklasse (Zürich, SUI)														<i>Omega Timing (2024) - diamond league race analysis</i>			
date	05-Sep-24	time	2.50	3.59	4.62	5.61	6.62	7.66	8.71	9.77	10.85	11.93	13.60	9 / 9			
reaction time	0.170	interval	7 steps	1.09	1.03	0.99	1.01	1.04	1.05	1.06	1.08	1.08	1.67		3.11	3.10	3.22

wind	-0.3 m/s	velocity	5.49	8.39	8.87	9.23	9.05	8.79	8.70	8.62	8.46	8.46	8.40	8.09	8.82	8.85	8.52	
FINAL - 2024 Athletissima (Lausanne, SUI)															<i>Omega Timing (2024) - diamond league race analysis</i>			
date	22-Aug-24	time	2.48	3.56	4.60	5.59	6.61	7.64	8.69	9.76	10.86	11.97		13.78	2 / 8			
reaction time	0.148	interval	7 steps	1.08	1.04	0.99	1.02	1.03	1.05	1.07	1.10	1.11	1.81		3.11	3.10	3.28	
wind	-0.1 m/s	velocity	5.53	8.46	8.79	9.23	8.96	8.87	8.70	8.54	8.31	8.23	7.75	7.98	8.82	8.85	8.36	
Semi-Final 2 - 2024 Olympic Games (Paris, FRA)															<i>Paris 2024 Olympic Games - Results Book (2024)</i>			
date	07-Aug-24	time	2.45	3.54	4.58	5.60	6.61	7.64	8.68	9.73	10.79	11.86		13.43	5 / 6			
reaction time	0.180	interval	7 steps	1.09	1.04	1.02	1.01	1.03	1.04	1.05	1.06	1.07	1.57		3.15	3.08	3.18	
wind	-0.1 m/s	velocity	5.60	8.39	8.79	8.96	9.05	8.87	8.79	8.70	8.62	8.54	8.93	8.19	8.70	8.90	8.62	
Heat 4 - 2024 Olympic Games (Paris, FRA)															<i>Paris 2024 Olympic Games - Results Book (2024)</i>			
date	04-Aug-24	time	2.48	3.56	4.58	5.57	6.56	7.56	8.56	9.61	10.66	11.70		13.26	6 / 1			
reaction time	0.170	interval	7 steps	1.08	1.02	0.99	0.99	1.00	1.00	1.05	1.05	1.04	1.56		3.09	2.99	3.14	
wind	0.3 m/s	velocity	5.53	8.46	8.96	9.23	9.23	9.14	9.14	8.70	8.70	8.79	8.99	8.30	8.87	9.17	8.73	
FINAL - 2024 Herculis Meeting International d'Athlétisme (Monaco, MON)															<i>Omega Timing (2024) - diamond league race analysis</i>			
date	12-Jul-24	time	2.54	3.62	4.64	5.66	6.68	7.71	8.74	9.78	10.85	11.93		13.54	1 / 6			
reaction time	0.154	interval	7 steps	1.08	1.02	1.02	1.02	1.03	1.03	1.04	1.07	1.08	1.61		3.12	3.08	3.19	
wind	-0.7 m/s	velocity	5.40	8.46	8.96	8.96	8.96	8.87	8.87	8.79	8.54	8.46	8.71	8.12	8.79	8.90	8.60	
Heat 1 - 2024 Meeting de Paris (Paris, FRA)															<i>Omega Timing (2024) - diamond league race analysis</i>			
date	07-Jul-24	time	2.52	3.60	4.62	5.63	6.65	7.67	8.71	9.74	10.80	11.86		13.41	2 / 6			
reaction time	0.158	interval	7 steps	1.08	1.02	1.01	1.02	1.02	1.04	1.03	1.06	1.06	1.55		3.11	3.08	3.15	
wind	0.1 m/s	velocity	5.44	8.46	8.96	9.05	8.96	8.96	8.79	8.87	8.62	8.62	9.05	8.20	8.82	8.90	8.70	
FINAL - 2024 European Athletics Championships (Roma, ITA) (TV Analysis)															<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>			
date	08-Jun-24	time	2.60	3.63	4.65	5.70	6.74	7.78	8.82	9.86	10.95	12.00		13.43	6 / 3			
reaction time	0.155	interval	7 steps	1.03	1.02	1.05	1.04	1.04	1.04	1.04	1.09	1.05	1.43		3.10	3.12	3.18	
wind	0.6 m/s	velocity	5.28	8.87	8.96	8.70	8.79	8.79	8.79	8.79	8.39	8.70	9.80	8.19	8.85	8.79	8.62	
FINAL - 2023 Prefontaine Classic (Eugene, OR)															<i>Omega Timing (2023) - diamond league race analysis</i>			
date	17-Sep-23	time	2.43	3.49	4.52	5.52	6.51	7.50	8.51	9.52	10.54	11.57		13.12	8 / 5			
reaction time	0.156	interval	7 steps	1.06	1.03	1.00	0.99	0.99	1.01	1.01	1.02	1.03	1.55		3.09	2.99	3.06	
wind	0.9 m/s	velocity	5.65	8.62	8.87	9.14	9.23	9.23	9.05	9.05	8.96	8.87	9.05	8.38	8.87	9.17	8.96	
FINAL - 2023 Weltklasse (Zürich, SUI)															<i>Omega Timing (2023) - diamond league race analysis</i>			
date	31-Aug-23	time	2.40	3.46	4.46	5.45	6.45	7.45	8.46	9.46	10.49	11.54		13.08	5 / 1			
reaction time	0.137	interval	7 steps	1.06	1.00	0.99	1.00	1.00	1.01	1.00	1.03	1.05	1.54	NR PB	3.05	3.01	3.08	
wind	-0.1 m/s	velocity	5.72	8.62	9.14	9.23	9.14	9.14	9.05	9.14	8.87	8.70	9.10	8.41	8.99	9.11	8.90	
FINAL - 2023 World Athletics Championships (Budapest, HUN)															<i>Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season</i>			
date	21-Aug-23	time	2.56	3.58	4.57	5.59	6.61	7.66	8.70	9.75	10.78	11.84		13.28	9 / 7			
reaction time	0.143	interval	7 steps	1.02	0.99	1.02	1.02	1.05	1.04	1.05	1.03	1.06	1.44		3.03	3.11	3.14	
wind	0.0 m/s	velocity	5.36	8.96	9.23	8.96	8.96	8.70	8.79	8.70	8.87	8.62	9.74	8.28	9.05	8.82	8.73	
Semi-Final 3 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)															<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>			
date	21-Aug-23	time	2.56	3.66	4.68	5.70	6.72	7.73	8.73	9.73	10.77	11.80		13.25	8 / 4			
reaction time	0.163	interval	7 steps	1.10	1.02	1.02	1.02	1.01	1.00	1.00	1.04	1.03	1.45		3.14	3.03	3.07	
wind	-0.1 m/s	velocity	5.36	8.31	8.96	8.96	8.96	9.05	9.14	9.14	8.79	8.87	9.67	8.30	8.73	9.05	8.93	
Heat 4 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)															<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>			
date	20-Aug-23	time	2.53	3.60	4.62	5.64	6.68	7.72	8.78	9.82	10.86	11.90		13.38	2 / 4			
reaction time	0.159	interval	7 steps	1.07	1.02	1.02	1.04	1.04	1.06	1.04	1.04	1.04	1.48		3.11	3.14	3.12	
wind	-0.6 m/s	velocity	5.42	8.54	8.96	8.96	8.79	8.79	8.62	8.79	8.79	8.79	9.47	8.22	8.82	8.73	8.79	
FINAL - 2023 Athletissima (Lausanne, SUI)															<i>Omega Timing (2023) - diamond league race analysis</i>			
date	30-Jun-23	time	2.40	3.47	4.49	5.50	6.50	7.50	8.52	9.58	10.63	11.68		13.23	5 / 2			
reaction time	0.153	interval	7 steps	1.07	1.02	1.01	1.00	1.00	1.02	1.06	1.05	1.05	1.55		3.10	3.02	3.16	
wind	-1.0 m/s	velocity	5.72	8.54	8.96	9.05	9.14	9.14	8.96	8.62	8.70	8.70	9.05	8.31	8.85	9.08	8.68	
FINAL - 2023 Meeting de Paris (Paris, FRA)															<i>Omega Timing (2023) - diamond league race analysis</i>			
date	09-Jun-23	time	2.43	3.47	4.49	5.49	6.50	7.51	8.53	9.56	10.61	11.67		13.29	3 / 7			
reaction time	0.195	interval	7 steps	1.04	1.02	1.00	1.01	1.01	1.02	1.03	1.05	1.06	1.62		3.06	3.04	3.14	
wind	-0.5 m/s	velocity	5.65	8.79	8.96	9.14	9.05	9.05	8.96	8.87	8.70	8.62	8.65	8.28	8.96	9.02	8.73	
Heat 1 - 2023 Meeting de Paris (Paris, FRA)															<i>Omega Timing (2023) - diamond league race analysis</i>			
date	09-Jun-23	time	2.47	3.54	4.57	5.59	6.60	7.62	8.65	9.68	10.71	11.78		13.36	4 / 2			
reaction time	0.201	interval	7 steps	1.07	1.03	1.02	1.01	1.02	1.03	1.03	1.03	1.07	1.58		3.12	3.06	3.13	
wind	-2.0 m/s	velocity	5.55	8.54	8.87	8.96	9.05	8.96	8.87	8.87	8.87	8.54	8.87	8.23	8.79	8.96	8.76	
FINAL - 2023 Golden Gala Pietro Mennea (Firenze, ITA) (TV Analysis)															<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>			

date	02-Jun-23	time	2.53	3.56	4.54	5.52	6.54	7.54	8.54	9.57	10.60	11.66	13.10	3 / 2			
reaction time	0.164	interval	7 steps	1.03	0.98	0.98	1.02	1.00	1.00	1.03	1.03	1.06	1.44	NR	2.99	3.02	3.12
wind	-0.2 m/s	velocity	5.42	8.87	9.33	9.33	8.96	9.14	9.14	8.87	8.87	8.62	9.74	8.40	9.17	9.08	8.79
FINAL - 2022 Weltklasse (Zürich, SUI) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>			
date	08-Sep-22	time	2.60	3.64	4.68	5.70	6.74	7.76	8.81	9.88	10.96	12.04	13.54	9 / 6			
reaction time	0.178	interval	7 steps	1.04	1.04	1.02	1.04	1.02	1.05	1.07	1.08	1.08	1.50		3.10	3.11	3.23
wind	-1.0 m/s	velocity	5.28	8.79	8.79	8.96	8.79	8.96	8.70	8.54	8.46	8.46	9.35	8.12	8.85	8.82	8.49
FINAL - 2022 Athletissima (Lausanne, SUI) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>			
date	26-Aug-22	time	2.58	3.65	4.72	5.77	6.81	7.84	8.91	9.98	11.08	12.18	13.66	2 / 8			
reaction time	0.158	interval	7 steps	1.07	1.07	1.05	1.04	1.03	1.07	1.07	1.10	1.10	1.48		3.19	3.14	3.27
wind	0.0 m/s	velocity	5.32	8.54	8.54	8.70	8.79	8.87	8.54	8.54	8.31	8.31	9.47	8.05	8.60	8.73	8.39
FINAL - 2022 European Athletics Championships (Munich, GER) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>			
date	17-Aug-22	time	2.52	3.58	4.62	5.66	6.68	7.72	8.76	9.80	10.84	11.88	13.35	8 / 4			
reaction time	0.169	interval	7 steps	1.06	1.04	1.04	1.02	1.04	1.04	1.04	1.04	1.04	1.47		3.14	3.10	3.12
wind	-0.2 m/s	velocity	5.44	8.62	8.79	8.79	8.96	8.79	8.79	8.79	8.79	8.79	9.54	8.24	8.73	8.85	8.79
Semi-Final 1 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>			
date	17-Jul-22	time	2.58	3.63	4.66	5.70	6.75	7.80	8.86	9.96	11.03	12.17	13.67	7 / 7			
reaction time	0.149	interval	7 steps	1.05	1.03	1.04	1.05	1.05	1.06	1.10	1.07	1.14	1.50		3.12	3.16	3.31
wind	-0.6 m/s	velocity	5.32	8.70	8.87	8.79	8.70	8.70	8.62	8.31	8.54	8.02	9.35	8.05	8.79	8.68	8.28
Heat 1 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>			
date	16-Jul-22	time	2.53	3.56	4.60	5.60	6.63	7.66	8.76	9.80	10.86	11.96	13.49	7 / 4			
reaction time	0.140	interval	7 steps	1.03	1.04	1.00	1.03	1.03	1.10	1.04	1.06	1.10	1.53		3.07	3.16	3.20
wind	-0.5 m/s	velocity	5.42	8.87	8.79	9.14	8.87	8.87	8.31	8.79	8.62	8.31	9.16	8.15	8.93	8.68	8.57
FINAL - 2022 Bislett Games (Oslo, NOR) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>			
date	16-Jun-22	time	2.56	3.62	4.64	5.68	6.68	7.72	8.76	9.84	10.92	12.02	13.55	7 / 5			
reaction time	0.159	interval	7 steps	1.06	1.02	1.04	1.00	1.04	1.04	1.08	1.08	1.10	1.53		3.12	3.08	3.26
wind	-1.2 m/s	velocity	5.36	8.62	8.96	8.79	9.14	8.79	8.79	8.46	8.46	8.31	9.16	8.12	8.79	8.90	8.41
FINAL - 2021 Athletissima (Lausanne, SUI) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>			
date	26-Aug-21	time	2.56	3.60	4.64	5.62	6.60	7.60	8.60	9.60	10.62	11.62	13.11	3 / 2			
reaction time	0.149	interval	7 steps	1.04	1.04	0.98	0.98	1.00	1.00	1.00	1.02	1.00	1.49		3.06	2.98	3.02
wind	2.5 m/s	velocity	5.36	8.79	8.79	9.33	9.33	9.14	9.14	9.14	8.96	9.14	9.41	8.39	8.96	9.20	9.08
FINAL - 2020 Doha Diamond League (Doha, QAT) (TV Analysis)														<i>Henson (2020) - Athlete First: 2020 year end hurdle report</i>			
date	25-Sep-20	time	2.56	3.64	4.68	5.70	6.72	7.76	8.80	9.82	10.82	11.88	13.40	3 / 2			
reaction time	0.196	interval	7 steps	1.08	1.04	1.02	1.02	1.04	1.04	1.02	1.00	1.06	1.52		3.14	3.10	3.08
wind	0.3 m/s	velocity	5.36	8.46	8.79	8.96	8.96	8.79	8.79	8.96	9.14	8.62	9.22	8.21	8.73	8.85	8.90
FINAL - 2020 Herculis Meeting International d'Athletisme (Monaco, MON) (TV Analysis)														<i>Henson (2020) - Athlete First: 2020 year end hurdle report</i>			
date	14-Aug-20	time	2.73	3.80	4.87	5.90	6.92	7.97	9.00	10.07	11.18	12.31	13.84	2 / 7			
reaction time	0.233	interval	7 steps	1.07	1.07	1.03	1.02	1.05	1.03	1.07	1.11	1.13	1.53		3.17	3.10	3.31
wind	0.8 m/s	velocity	5.03	8.54	8.54	8.87	8.96	8.70	8.87	8.54	8.23	8.09	9.16	7.95	8.65	8.85	8.28
Semi-Final 2 - 2019 IAAF World Championships (Doha, QAT)														<i>CAA Hurdle Development (2019)</i>			
date	02-Oct-19	time	2.62	3.67	4.71	5.75	6.77	7.79	8.82	9.90	10.97	12.08	13.53	4 / 7			
reaction time	0.158	interval	7 steps	1.05	1.04	1.04	1.02	1.02	1.03	1.08	1.07	1.11	1.45		3.13	3.07	3.26
wind	0.9 m/s	velocity	5.24	8.70	8.79	8.79	8.96	8.96	8.87	8.46	8.54	8.23	9.67	8.13	8.76	8.93	8.41
Juránek, Martin (CZE) (1991)																	
Heat 1 - 2012 Czech Republic National Indoor Championships (Praha, CZE)														<i>Feher (2012) - Czech Republic indoor national championships - men's 60m hurdles</i>			
date	25-Feb-12	time	2.85	4.06	5.29	6.54	7.76							8.78	1 / 7		
reaction time	0.174	interval		1.21	1.23	1.25	1.22						1.02		3.69		
		velocity	4.81	7.55	7.43	7.31	7.49						9.53	6.83	7.43		
Kagimoto, Masahiro (JPN) (1995)																	
FINAL - 2019 Kinami Memorial (Osaka, JPN)														<i>Matsubayashi (2019) - research on athlete performance and technique- 2019 data book</i>			
date	06-May-19	time	2.66	3.74	4.80	5.90	6.97	8.05	9.16	10.26	11.38	12.49	13.95	9 / 8			
reaction time		interval		1.08	1.06	1.10	1.07	1.08	1.11	1.10	1.12	1.11	1.46		3.24	3.26	3.33
wind	0.3 m/s	velocity	5.16	8.46	8.62	8.31	8.54	8.46	8.23	8.31	8.16	8.23	9.60	7.89	8.46	8.41	8.23
B FINAL - 2019 Mikio Oda Memorial (Hiroshima, JPN)														<i>Kobayashi (2019) - research on athlete performance and technique- 2019 data book</i>			
date	28-Apr-19	time	2.67	3.76	4.83	5.90	6.98	8.07	9.18	10.29	11.40	12.51	13.97	5 / 1			
reaction time		interval		1.09	1.07	1.07	1.08	1.09	1.11	1.11	1.11	1.11	1.46		3.23	3.28	3.33
wind	1.4 m/s	velocity	5.14	8.39	8.54	8.54	8.46	8.39	8.23	8.23	8.23	8.23	9.60	7.87	8.49	8.36	8.23
A FINAL - 2018 National Sports Festival (Fukui, JPN)														<i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>			
date	08-Oct-18	time	2.66	3.79	4.92	5.99	7.09	8.20	9.29	10.39	11.50	12.62	14.09	7 / 8			

reaction time	0.144	interval	1.13	1.13	1.07	1.10	1.11	1.09	1.10	1.11	1.12	1.47		3.33	3.30	3.33			
wind	1.2 m/s	velocity	5.16	8.09	8.09	8.54	8.31	8.23	8.39	8.31	8.23	8.16	9.54	7.81	8.23	8.31	8.23		
FINAL - 2018 Fuse Sprint (Tottori, JPN)			<i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>																
date	03-Jun-18	time	2.65	3.74	4.80	5.86	6.93	8.02	9.11	10.23	11.33	12.46		13.93		1 / 6			
reaction time		interval	1.09	1.06	1.06	1.07	1.09	1.09	1.09	1.12	1.10	1.13	1.47			3.21	3.25	3.35	
wind	0.5 m/s	velocity	5.18	8.39	8.62	8.62	8.54	8.39	8.39	8.16	8.31	8.09	9.54	7.90		8.54	8.44	8.19	
FINAL - 2018 Kinami Michitaka Memorial (Osaka, JPN)			<i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>																
date	06-May-18	time	2.65	3.72	4.80	5.86	6.94	8.00	9.10	10.20	11.33	12.47		13.91		8 / 4			
reaction time		interval	1.07	1.08	1.06	1.08	1.06	1.10	1.10	1.10	1.13	1.14	1.44			3.21	3.24	3.37	
wind	1.6 m/s	velocity	5.18	8.54	8.46	8.62	8.46	8.62	8.31	8.31	8.09	8.02	9.74	7.91		8.54	8.46	8.14	
Semi-Final 2 - 2017 Japanese National Championships (Osaka, JPN)			<i>(2017) - tfdata-store.com/2017/07/13/post-1040/</i>																
date	24-Jun-17	time	2.64	3.72	4.79	5.88	6.95	8.03	9.11	10.21	11.33	12.45		13.93		8 / 6			
reaction time	0.144	interval	1.08	1.07	1.09	1.07	1.08	1.08	1.10	1.12	1.12	1.48				3.24	3.23	3.34	
wind	0.3 m/s	velocity	5.20	8.46	8.54	8.39	8.54	8.46	8.46	8.31	8.16	8.16	9.47	7.90		8.46	8.49	8.21	
Heat 3 - 2017 Japanese National Championships (Osaka, JPN)			<i>(2017) - tfdata-store.com/2017/07/13/post-1040/</i>																
date	24-Jun-17	time	2.62	3.72	4.78	5.86	6.92	8.00	9.09	10.18	11.30	12.44		13.88		2 / 2			
reaction time	0.140	interval	1.10	1.06	1.08	1.06	1.08	1.09	1.09	1.12	1.14	1.44				3.24	3.23	3.35	
wind	0.5 m/s	velocity	5.24	8.31	8.62	8.46	8.62	8.46	8.39	8.39	8.16	8.02	9.74	7.93		8.46	8.49	8.19	
FINAL - 2017 Kansai Regional University Championships (Osaka, JPN)			<i>(2017) - tfdata-store.com/2017/05/13/post-441/</i>																
date	11-May-17	time	2.64	3.72	4.81	5.89	6.98	8.06	9.15	10.25	11.35	12.48		13.93		7 / 1			
reaction time		interval	1.08	1.09	1.08	1.09	1.08	1.09	1.10	1.10	1.13	1.45				3.25	3.26	3.33	
wind	1.6 m/s	velocity	5.20	8.46	8.39	8.46	8.39	8.46	8.39	8.31	8.31	8.09	9.67	7.90		8.44	8.41	8.23	
FINAL - 2017 Mito Invitational (Mito, JPN)			<i>(2017) - tfdata-store.com/2017/05/06/post-423/</i>																
date	05-May-17	time	2.68	3.76	4.90	6.01	7.12	8.24	9.37	10.49	11.64	12.81		14.33		3 / 7			
reaction time		interval	1.08	1.14	1.11	1.11	1.12	1.13	1.12	1.15	1.17	1.52				3.33	3.36	3.44	
wind	-2.3 m/s	velocity	5.12	8.46	8.02	8.23	8.23	8.16	8.09	8.16	7.95	7.81	9.22	7.68		8.23	8.16	7.97	
Heat 2 - 2017 Mito Invitational (Mito, JPN)			<i>(2017) - tfdata-store.com/2017/05/06/post-423/</i>																
date	05-May-17	time	2.67	3.77	4.83	5.93	7.03	8.12	9.21	10.34	11.48	12.64		14.11		6 / 3			
reaction time		interval	1.10	1.06	1.10	1.10	1.09	1.09	1.13	1.14	1.16	1.47				3.26	3.28	3.43	
wind	0.6 m/s	velocity	5.14	8.31	8.62	8.31	8.31	8.39	8.39	8.09	8.02	7.88	9.54	7.80		8.41	8.36	7.99	
B FINAL - 2017 Mikio Oda Memorial (Hiroshima, JPN)			<i>(2017) - tfdata-store.com/2017/05/01/458/</i>																
date	29-Apr-17	time	2.67	3.75	4.86	5.97	7.06	8.18	9.31	10.47	11.60	12.76		14.28		6 / 6			
reaction time		interval	1.08	1.11	1.11	1.09	1.12	1.13	1.16	1.13	1.16	1.52				3.30	3.34	3.45	
wind	-1.5 m/s	velocity	5.14	8.46	8.23	8.23	8.39	8.16	8.09	7.88	8.09	7.88	9.22	7.70		8.31	8.21	7.95	
FINAL - 2017 Kyoto University Meeting (Kyoto, JPN)			<i>(2017) - tfdata-store.com/2017/04/12/post-362/</i>																
date	09-Apr-17	time	2.68	3.77	4.85	5.95	7.02	8.11	9.21	10.31	11.41	12.51		13.97		6 / 1			
reaction time		interval	1.09	1.08	1.10	1.07	1.09	1.10	1.10	1.10	1.10	1.46				3.27	3.26	3.30	
wind	1.5 m/s	velocity	5.12	8.39	8.46	8.31	8.54	8.39	8.31	8.31	8.31	8.31	9.60	7.87		8.39	8.41	8.31	
FINAL - 2016 Japanese University Championships (Kumagaya, JPN)			<i>(2016.09.06) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>																
date	04-Sep-16	time	2.71	3.83	4.94	6.06	7.17	8.27	9.39	10.51	11.64	12.80		14.32		9 / 5			
reaction time	0.169	interval	1.12	1.11	1.12	1.11	1.10	1.12	1.12	1.13	1.16	1.52				3.35	3.33	3.41	
wind	-1.9 m/s	velocity	5.06	8.16	8.23	8.16	8.23	8.31	8.16	8.16	8.09	7.88	9.22	7.68		8.19	8.23	8.04	
Semi-Final 1 - 2016 Japanese University Championships (Kumagaya, JPN)			<i>(2016.09.05) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>																
date	04-Sep-16	time	2.71	3.80	4.88	5.98	7.08	8.18	9.29	10.37	11.47	12.59		14.01		7 / 2			
reaction time	0.159	interval	1.09	1.08	1.10	1.10	1.10	1.11	1.08	1.10	1.12	1.42				3.27	3.31	3.30	
wind	0.6 m/s	velocity	5.06	8.39	8.46	8.31	8.31	8.31	8.23	8.46	8.31	8.16	9.87	7.85		8.39	8.28	8.31	
FINAL - 2016 Japanese National Championships (Nagoya, JPN)			<i>Kota (2016) - race analysis of japanese top-ranked men 110m and women 100m hurdlers</i>																
date	26-Jun-16	time	2.64	3.74	4.81	5.89	6.97	8.02	9.11	10.18	11.25	12.36		13.78		1 / 6			
reaction time	0.146	interval	1.10	1.07	1.08	1.08	1.05	1.09	1.07	1.07	1.11	1.42				3.25	3.22	3.25	
wind	2.4 m/s	velocity	5.20	8.31	8.54	8.46	8.46	8.70	8.39	8.54	8.54	8.23	9.87	7.98		8.44	8.52	8.44	
FINAL - 2016 Kansai University Meeting (Osaka, JPN)			<i>(2016.05.30) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>																
date	13-May-16	time	2.64	3.72	4.80	5.85	6.92	7.98	9.04	10.11	11.20	12.30		13.72		5 / 1			
reaction time		interval	1.08	1.08	1.05	1.07	1.06	1.06	1.07	1.09	1.10	1.42				3.21	3.19	3.26	
wind	0.5 m/s	velocity	5.20	8.46	8.46	8.70	8.54	8.62	8.62	8.54	8.39	8.31	9.87	8.02		8.54	8.60	8.41	
FINAL - 2016 Mito Invitational (Mito, JPN)			<i>(2016.05.27) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>																
date	05-May-16	time	2.66	3.74	4.81	5.89	6.96	8.04	9.12	10.22	11.32	12.45		13.86		4 / 2			
reaction time		interval	1.08	1.07	1.08	1.07	1.08	1.08	1.08	1.10	1.10	1.13	1.41				3.23	3.23	3.33
wind	0.7 m/s	velocity	5.16	8.46	8.54	8.46	8.54	8.46	8.46	8.31	8.31	8.09	9.94	7.94		8.49	8.49	8.23	

		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Kameyama, Yuji (JPN) (1997)																	
FINAL - 2017 Kansai Regional University Championships (Osaka, JPN) <i>(2017) - tfdata-store.com/2017/05/13/post-441/</i>																	
date	11-May-17	time	2.74	3.86	4.98	6.10	7.21	8.30	9.40	10.52	11.64	12.81	14.33	6 / 5			
reaction time		interval		1.12	1.12	1.12	1.11	1.09	1.10	1.12	1.12	1.17	1.52		3.36	3.30	3.41
wind	1.6 m/s	velocity	5.01	8.16	8.16	8.16	8.23	8.39	8.31	8.16	8.16	7.81	9.22	7.68	8.16	8.31	8.04
Kanai, Nao (JPN) (1997)																	
FINAL - 2015 Japanese National Junior Championships (Nagoya, JPN) (0.99) <i>Takashima (2015) - race analysis of 110m & 100m hurdles in Japan- results 2015 competitions</i>																	
date	16-Oct-15	time	2.65	3.74	4.81	5.89	6.97	8.04	9.12	10.22	11.32	12.45	13.91	5 / 2			
reaction time		interval		1.09	1.07	1.08	1.08	1.07	1.08	1.10	1.10	1.13	1.46		3.24	3.23	3.33
wind	0.1 m/s	velocity	5.18	8.39	8.54	8.46	8.46	8.54	8.46	8.31	8.31	8.09	9.60	7.91	8.46	8.49	8.23
FINAL - 2015 Japanese National High School Championships (Wakayama, JPN) (99cm) <i>Takashima (2015) - race analysis of 110m & 100m hurdles in Japan- results 2015 competitions</i>																	
date	02-Aug-15	time	2.65	3.72	4.80	5.86	6.91	7.99	9.05	10.14	11.22	12.37	13.85	4 / 1			
reaction time		interval		1.07	1.08	1.06	1.05	1.08	1.06	1.09	1.08	1.15	1.48	PB	3.21	3.19	3.32
wind	1.4 m/s	velocity	5.18	8.54	8.46	8.62	8.70	8.46	8.62	8.39	8.46	7.95	9.47	7.94	8.54	8.60	8.26
FINAL - 2014 Japanese National High School Championships (Kofu, JPN) (99cm) <i>Yanagiya (2014) - research on athlete performance and technique- 2014 data book</i>																	
date	03-Aug-14	time	2.74	3.88	4.99	6.11	7.23	8.36	9.50	10.65	11.81	13.00	14.55	6 / 3			
reaction time		interval		1.14	1.11	1.12	1.12	1.13	1.14	1.15	1.16	1.19	1.55		3.37	3.39	3.50
wind	-2.4 m/s	velocity	5.01	8.02	8.23	8.16	8.16	8.09	8.02	7.95	7.88	7.68	9.05	7.56	8.14	8.09	7.83
Kanai, Tadashi (JPN)																	
Heat 3 - 2017 Mito Invitational (Mito, JPN) <i>(2017) - tfdata-store.com/2017/05/06/post-423/</i>																	
date	05-May-17	time	2.70	3.82	4.93	6.05	7.15	8.28	9.41	10.56	11.71	12.89	14.43	2 / 5			
reaction time		interval		1.12	1.11	1.12	1.10	1.13	1.13	1.15	1.15	1.18	1.54		3.35	3.36	3.48
wind	-2.5 m/s	velocity	5.08	8.16	8.23	8.16	8.31	8.09	8.09	7.95	7.95	7.75	9.10	7.62	8.19	8.16	7.88
Kanai, Taio (JPN) (1995)																	
FINAL - 2021 Japanese National Championships (Osaka, JPN) <i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>																	
date	27-Jun-21	time	2.52	3.55	4.56	5.59	6.61	7.63	8.66	9.72	10.76	11.82	13.22	9 / 2			
reaction time	0.141	interval	7 steps	1.03	1.01	1.03	1.02	1.02	1.03	1.06	1.04	1.06	1.40		3.07	3.07	3.16
wind	1.2 m/s	velocity	5.44	8.87	9.05	8.87	8.96	8.96	8.87	8.62	8.79	8.62	10.01	8.32	8.93	8.93	8.68
FINAL - 2021 Fuse Sprint (Tottori, JPN) <i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>																	
date	06-Jun-21	time	2.55	3.58	4.62	5.65	6.68	7.71	8.76	9.81	10.88	11.96	13.40	4 / 1			
reaction time	0.128	interval	7 steps	1.03	1.04	1.03	1.03	1.03	1.05	1.05	1.07	1.08	1.44		3.10	3.11	3.20
wind	1.8 m/s	velocity	5.38	8.87	8.79	8.87	8.87	8.70	8.70	8.54	8.46	9.74	8.21	8.85	8.82	8.57	
FINAL - 2021 Ready Steady Tokyo (Tokyo, JPN) <i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>																	
date	09-May-21	time	2.53	3.57	4.59	5.65	6.68	7.73	8.78	9.84	10.91	11.98	13.38	4 / 1			
reaction time	0.133	interval	7 steps	1.04	1.02	1.06	1.03	1.05	1.05	1.06	1.07	1.07	1.40		3.12	3.13	3.20
wind	-0.8 m/s	velocity	5.42	8.79	8.96	8.62	8.87	8.70	8.70	8.62	8.54	8.54	10.01	8.22	8.79	8.76	8.57
FINAL - 2021 Mikio Oda Memorial (Hiroshima, JPN) <i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>																	
date	29-Apr-21	time	2.51	3.54	4.55	5.56	6.58	7.60	8.62	9.67	10.70	11.75	13.16	4 / 1			
reaction time		interval	7 steps	1.03	1.01	1.01	1.02	1.02	1.02	1.05	1.03	1.05	1.41	NR PB	3.05	3.06	3.13
wind	1.7 m/s	velocity	5.47	8.87	9.05	9.05	8.96	8.96	8.96	8.70	8.87	8.70	9.94	8.36	8.99	8.96	8.76
FINAL - 2020 Japanese National Championships (Niigata, JPN) <i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>																	
date	03-Oct-20	time	2.56	3.60	4.63	5.66	6.68	7.73	8.77	9.82	10.89	11.95	13.36	6 / 1			
reaction time	0.137	interval	7 steps	1.04	1.03	1.03	1.02	1.05	1.04	1.05	1.07	1.06	1.41		3.10	3.11	3.18
wind	-0.1 m/s	velocity	5.36	8.79	8.87	8.87	8.96	8.70	8.79	8.70	8.54	8.62	9.94	8.23	8.85	8.82	8.62
Heat 2 - 2020 All Japan Corporate Championships (Kumagaya, JPN) <i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>																	
date	20-Sep-20	time	2.55	3.60	4.65	5.66	6.69	7.72	8.75	9.82	10.88	11.95	13.38	5 / 1			
reaction time	0.138	interval		1.05	1.05	1.01	1.03	1.03	1.03	1.07	1.06	1.07	1.43		3.11	3.09	3.20
wind	1.7 m/s	velocity	5.38	8.70	8.70	9.05	8.87	8.87	8.87	8.54	8.62	8.54	9.80	8.22	8.82	8.87	8.57
FINAL - 2020 Athlete Night Games (Fukui, JPN) <i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>																	
date	29-Aug-20	time	2.55	3.60	4.63	5.65	6.66	7.70	8.73	9.78	10.83	11.90	13.27	5 / 1			
reaction time		interval	7 steps	1.05	1.03	1.02	1.01	1.04	1.03	1.05	1.05	1.07	1.37	PB	3.10	3.08	3.17
wind	1.4 m/s	velocity	5.38	8.70	8.87	8.96	9.05	8.79	8.87	8.70	8.70	8.54	10.23	8.29	8.85	8.90	8.65
FINAL - 2020 Seiko Golden Grand Prix (Tokyo, JPN) <i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>																	
date	23-Aug-20	time	2.55	3.60	4.65	5.68	6.73	7.77	8.81	9.88	10.93	12.03	13.45	6 / 1			
reaction time	0.121	interval	7 steps	1.05	1.05	1.03	1.05	1.04	1.04	1.07	1.05	1.10	1.42		3.13	3.13	3.22
wind	-0.4 m/s	velocity	5.38	8.70	8.70	8.87	8.70	8.79	8.79	8.54	8.70	8.31	9.87	8.18	8.76	8.76	8.52
Heat 2 - 2019 IAAF World Championships (Doha, QAT) <i>Shibayama (2019) - race analysis of men's 110m hurdles in the 2019 season</i>																	
date	30-Sep-19	time	2.58	3.64	4.70	5.76	6.84	7.90	8.99	10.09	11.20	12.31	13.74	7 / 7			
reaction time	0.125	interval	7 steps	1.06	1.06	1.06	1.08	1.06	1.09	1.10	1.11	1.11	1.43		3.18	3.23	3.32
wind	0.5 m/s	velocity	5.32	8.62	8.62	8.62	8.46	8.62	8.39	8.31	8.23	8.23	9.80	8.01	8.62	8.49	8.26

FINAL - 2019 Japanese World Championships Trials (Fujiyoshida, JPN)

date	01-Sep-19	time	2.58	3.63	4.68	5.72	6.77	7.83	8.88	9.95	11.02	12.10	13.51	4 / 3			
reaction time		interval		1.05	1.05	1.04	1.05	1.06	1.05	1.07	1.07	1.08	1.41		3.14	3.16	3.22
wind	1.4 m/s	velocity	5.32	8.70	8.70	8.79	8.70	8.62	8.70	8.54	8.54	8.46	9.94	8.14	8.73	8.68	8.52

Shibayama (2019) - race analysis of men's 110m hurdles in the 2019 season

FINAL - 2019 Seiko Golden Grand Prix (Osaka, JPN)

date	19-May-19	time	2.54	3.61	4.67	5.71	6.75	7.79	8.82	9.90	10.98	12.06	13.47	5 / 3			
reaction time	0.102	interval	7 steps	1.07	1.06	1.04	1.04	1.04	1.03	1.08	1.08	1.08	1.41		3.17	3.11	3.24
wind	2.9 m/s	velocity	5.40	8.54	8.62	8.79	8.79	8.79	8.87	8.46	8.46	8.46	9.94	8.17	8.65	8.82	8.46

Shibayama (2019) - race analysis of men's 110m hurdles in the 2019 season

FINAL - 2019 Asian Athletics Championships (Doha, QAT)

date	24-Apr-19	time	2.58	3.64	4.70	5.73	6.80	7.87	8.94	10.02	11.11	12.21	13.64	9 / 5			
reaction time	0.138	interval	7 steps	1.06	1.06	1.03	1.07	1.07	1.07	1.08	1.09	1.10	1.43		3.15	3.21	3.27
wind	1.7 m/s	velocity	5.32	8.62	8.62	8.87	8.54	8.54	8.54	8.46	8.39	8.31	9.80	8.06	8.70	8.54	8.39

CAA Hurdle Development (2019)

A FINAL - 2018 National Sports Festival (Fukui, JPN)

date	08-Oct-18	time	2.56	3.63	4.66	5.70	6.73	7.78	8.83	9.88	10.95	12.03	13.46	6 / 1			
reaction time	0.121	interval		1.07	1.03	1.04	1.03	1.05	1.05	1.05	1.07	1.08	1.43		3.14	3.13	3.20
wind	1.2 m/s	velocity	5.36	8.54	8.87	8.79	8.87	8.70	8.70	8.70	8.54	8.46	9.80	8.17	8.73	8.76	8.57

Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season

FINAL - 2018 IAAF Continental Cup (Ostrava, CZE) (TV Analysis)

date	09-Sep-18	time	2.52	3.64	4.68	5.74	6.80	7.84	8.88	10.00	11.08	12.18	13.72	5 / 6			
reaction time	0.119	interval	7 steps	1.12	1.04	1.06	1.06	1.04	1.04	1.12	1.08	1.10	1.54		3.22	3.14	3.30
wind	0.9 m/s	velocity	5.44	8.16	8.79	8.62	8.62	8.79	8.79	8.16	8.46	8.31	9.10	8.02	8.52	8.73	8.31

Henson (2021) - Athlete First: 2018 year end hurdle report

FINAL - 2018 Asian Games (Jakarta, INA)

date	28-Aug-18	time	2.58	3.65	4.70	5.76	6.82	7.88	8.96	10.06	11.16	12.28	13.74	7 / 7			
reaction time	0.125	interval		1.07	1.05	1.06	1.06	1.06	1.08	1.10	1.10	1.12	1.46		3.18	3.20	3.32
wind	0.0 m/s	velocity	5.32	8.54	8.70	8.62	8.62	8.62	8.46	8.31	8.31	8.16	9.60	8.01	8.62	8.57	8.26

Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season

FINAL - 2018 Japanese National Championships (Yamaguchi, JPN)

date	24-Jun-18	time	2.56	3.60	4.62	5.66	6.68	7.71	8.77	9.83	10.89	11.96	13.36	4 / 1			
reaction time	0.144	interval	7 steps	1.04	1.02	1.04	1.02	1.03	1.06	1.06	1.06	1.07	1.40	NR PB	3.10	3.11	3.19
wind	0.7 m/s	velocity	5.36	8.79	8.96	8.79	8.96	8.87	8.62	8.62	8.62	8.54	10.01	8.23	8.85	8.82	8.60

Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season

FINAL - 2018 Fuse Sprint (Tottori, JPN)

date	03-Jun-18	time	2.58	3.63	4.67	5.73	6.75	7.80	8.85	9.92	10.99	12.10	13.52	/ 1			
reaction time		interval		1.05	1.04	1.06	1.02	1.05	1.05	1.07	1.07	1.11	1.42		3.15	3.12	3.25
wind	0.5 m/s	velocity	5.32	8.70	8.79	8.62	8.96	8.70	8.70	8.54	8.54	8.23	9.87	8.14	8.70	8.79	8.44

Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season

FINAL - 2018 Seiko Golden Grand Prix (Osaka, JPN)

date	20-May-18	time	2.67	3.74	4.77	5.81	6.87	7.91	8.96	10.02	11.10	12.18	13.53	8 / 2			
reaction time	0.159	interval	7 steps	1.07	1.03	1.04	1.06	1.04	1.05	1.06	1.08	1.08	1.35	=PB	3.14	3.15	3.22
wind	-0.4 m/s	velocity	5.14	8.54	8.87	8.79	8.62	8.79	8.70	8.62	8.46	8.46	10.39	8.13	8.73	8.70	8.52

Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season

FINAL - 2018 Mikio Oda Memorial (Hiroshima, JPN)

date	29-Apr-18	time	2.60	3.66	4.71	5.75	6.78	7.83	8.90	9.96	11.05	12.13	13.52	6 / 1			
reaction time		interval		1.06	1.05	1.04	1.03	1.05	1.07	1.06	1.09	1.08	1.39		3.15	3.15	3.23
wind	2.6 m/s	velocity	5.28	8.62	8.70	8.79	8.87	8.70	8.54	8.62	8.39	8.46	10.09	8.14	8.70	8.70	8.49

Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season

FINAL - 2017 All Star Night (Hiratsuka, JPN)

date	22-Jul-17	time	2.55	3.62	4.67	5.73	6.79	7.83	8.90	9.97	11.04	12.12	13.53	7 / 2			
reaction time	0.127	interval	7 steps	1.07	1.05	1.06	1.06	1.04	1.07	1.07	1.07	1.08	1.41		3.18	3.17	3.22
wind	1.8 m/s	velocity	5.38	8.54	8.70	8.62	8.62	8.79	8.54	8.54	8.54	8.46	9.94	8.13	8.62	8.65	8.52

(2017) - tfdata-store.com/2017/07/26/post-1072/

FINAL - 2017 Japanese National Championships (Osaka, JPN)

date	25-Jun-17	time	2.58	3.65	4.71	5.78	6.85	7.92	9.00	10.09	11.20	12.31	13.77	6 / 5			
reaction time	0.128	interval	7 steps	1.07	1.06	1.07	1.07	1.07	1.08	1.09	1.11	1.11	1.46		3.20	3.22	3.31
wind	-0.2 m/s	velocity	5.32	8.54	8.62	8.54	8.54	8.54	8.46	8.39	8.23	8.23	9.60	7.99	8.57	8.52	8.28

(2017) - tfdata-store.com/2017/07/13/post-1040/

Semi-Final 2 - 2017 Japanese National Championships (Osaka, JPN)

date	24-Jun-17	time	2.59	3.67	4.71	5.77	6.83	7.90	8.97	10.06	11.16	12.27	13.71	6 / 2			
reaction time	0.115	interval	7 steps	1.08	1.04	1.06	1.06	1.07	1.07	1.09	1.10	1.11	1.44		3.18	3.20	3.30
wind	0.3 m/s	velocity	5.30	8.46	8.79	8.62	8.62	8.54	8.54	8.39	8.31	8.23	9.74	8.02	8.62	8.57	8.31

(2017) - tfdata-store.com/2017/07/13/post-1040/

Heat 2 - 2017 Japanese National Championships (Osaka, JPN)

date	24-Jun-17	time	2.57	3.63	4.67	5.71	6.77	7.84	8.91	9.99	11.08	12.18	13.62	6 / 2			
reaction time	0.135	interval	7 steps	1.06	1.04	1.04	1.06	1.07	1.07	1.08	1.09	1.10	1.44	PB	3.14	3.20	3.27
wind	0.0 m/s	velocity	5.34	8.62	8.79	8.79	8.62	8.54	8.54	8.46	8.39	8.31	9.74	8.08	8.73	8.57	8.39

(2017) - tfdata-store.com/2017/07/13/post-1040/

Division 1 FINAL - 2017 Kanto Collegiate Championships (Yokohama, JPN)

date	26-May-17	time	2.58	3.63	4.68	5.74	6.80	7.87	8.93	10.01	11.09	12.21	13.63	5 / 1			
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(2017) - tfdata-store.com/2017/06/08/914/

reaction time	0.149	interval	7 steps	1.05	1.05	1.06	1.06	1.07	1.06	1.08	1.08	1.12	1.42	PB	3.16	3.19	3.28
wind	0.4 m/s	velocity	5.32	8.70	8.70	8.62	8.62	8.54	8.62	8.46	8.46	8.16	9.87	8.07	8.68	8.60	8.36

FINAL - 2017 Mikio Oda Memorial (Hiroshima, JPN)(2017) - [tfdata-store.com/2017/05/01/458/](https://www.tfdata-store.com/2017/05/01/458/)

date	29-Apr-17	time	2.60	3.68	4.77	5.84	6.90	7.96	9.03	10.11	11.18	12.28	13.73	7 / 4	3.24	3.19	3.25
reaction time		interval	7 steps	1.08	1.09	1.07	1.06	1.06	1.07	1.08	1.07	1.10	1.45		8.46	8.60	8.44
wind	1.5 m/s	velocity	5.28	8.46	8.39	8.54	8.62	8.62	8.54	8.46	8.54	8.31	9.67	8.01			

FINAL - 2017 Tokyo Six School Meeting (Tokyo, JPN)(2017) - [tfdata-store.com/2017/04/10/post-342/](https://www.tfdata-store.com/2017/04/10/post-342/)

date	08-Apr-17	time	2.60	3.67	4.75	5.80	6.86	7.93	8.99	10.09	11.16	12.27	13.71	6 / 1	3.20	3.19	3.28
reaction time		interval	7 steps	1.07	1.08	1.05	1.06	1.07	1.06	1.10	1.07	1.11	1.44	PB	8.57	8.60	8.36
wind	0.5 m/s	velocity	5.28	8.54	8.46	8.70	8.62	8.54	8.62	8.31	8.54	8.23	9.74	8.02			

Heat 2 - 2017 Tokyo Six School Meeting (Tokyo, JPN)(2017) - [tfdata-store.com/2017/04/10/post-342/](https://www.tfdata-store.com/2017/04/10/post-342/)

date	08-Apr-17	time	2.60	3.68	4.74	5.81	6.88	7.97	9.07	10.17	11.29	12.40	13.86	4 / 1	3.21	3.26	3.33
reaction time		interval	7 steps	1.08	1.06	1.07	1.07	1.09	1.10	1.10	1.12	1.11	1.46		8.54	8.41	8.23
wind	0.8 m/s	velocity	5.28	8.46	8.62	8.54	8.54	8.39	8.31	8.31	8.16	8.23	9.60	7.94			

FINAL - 2016 Japanese University Championships (Kumagaya, JPN)(2016.09.06) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en

date	04-Sep-16	time	2.64	3.75	4.85	5.94	7.03	8.17	9.30	10.44	11.57	12.73	14.25	6 / 4	3.30	3.36	3.43
reaction time		interval	7 steps	1.11	1.10	1.09	1.09	1.14	1.13	1.14	1.13	1.16	1.52		8.31	8.16	7.99
wind	-1.9 m/s	velocity	5.20	8.23	8.31	8.39	8.39	8.02	8.09	8.02	8.09	7.88	9.22	7.72			

Semi-Final 2 - 2016 Japanese University Championships (Kumagaya, JPN)(2016.09.05) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en

date	04-Sep-16	time	2.62	3.70	4.78	5.85	6.94	8.03	9.14	10.26	11.36	12.49	13.93	4 / 2	3.23	3.29	3.35
reaction time		interval	7 steps	1.08	1.08	1.07	1.09	1.09	1.11	1.12	1.10	1.13	1.44		8.49	8.33	8.19
wind	0.7 m/s	velocity	5.24	8.46	8.46	8.54	8.39	8.39	8.23	8.16	8.31	8.09	9.74	7.90			

FINAL - 2016 Japanese National Championships (Nagoya, JPN)Kota (2016) - [race analysis of japanese top-ranked men 110m and women 100m hurdlers](#)

date	26-Jun-16	time	2.58	3.66	4.73	5.78	6.84	7.90	8.96	10.03	11.10	12.19	13.61	3 / 3	3.20	3.18	3.23
reaction time		interval		1.08	1.07	1.05	1.06	1.06	1.06	1.07	1.07	1.09	1.42		8.57	8.62	8.49
wind	2.4 m/s	velocity	5.32	8.46	8.54	8.70	8.62	8.62	8.62	8.54	8.54	8.39	9.87	8.08			

Kani, Shota (JPN) (2000)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2023 Fuse Sprint (Tottori, JPN)**Shibayama (2024) - [race analysis of men's 110m hurdles in the 2023 season](#)

date	25-Jun-23	time	2.60	3.71	4.83	5.90	6.98	8.07	9.16	10.27	11.38	12.50	14.00	8 / 7	3.30	3.26	3.34
reaction time		interval		1.11	1.12	1.07	1.08	1.09	1.09	1.11	1.11	1.12	1.50		8.31	8.41	8.21
wind	1.1 m/s	velocity	5.28	8.23	8.16	8.54	8.46	8.39	8.39	8.23	8.23	8.16	9.35	7.86			

Karpov, Dmitriy (KAZ) (1981)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Decathlon - Heat 4 - 2009 IAAF World Championships (Berlin, GER)**Graubner (2009) - [biomechanical analyses at the 12th IAAF world championships](#)

date	20-Aug-09	time	2.73	3.85	4.94	6.03	7.17	8.31	9.45	10.61	11.73	12.91	14.46	4 / 1	3.30	3.42	3.46
reaction time		interval		1.12	1.09	1.09	1.14	1.14	1.14	1.16	1.12	1.18	1.55		8.31	8.02	7.92
wind	0.0 m/s	velocity	5.03	8.16	8.39	8.39	8.02	8.02	8.02	7.88	8.16	7.75	9.05	7.61			

Kasyanov, Oleksiy (UKR) (1985)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Decathlon - Heat 3 - 2009 IAAF World Championships (Berlin, GER)**Graubner (2009) - [biomechanical analyses at the 12th IAAF world championships](#)

date	20-Aug-09	time	2.73	3.85	4.95	6.07	7.18	8.31	9.45	10.59	11.77	12.96	14.44	7 / 4	3.34	3.38	3.51
reaction time		interval		1.12	1.10	1.12	1.11	1.13	1.14	1.14	1.18	1.19	1.48		8.21	8.11	7.81
wind	-0.1 m/s	velocity	5.03	8.16	8.31	8.16	8.23	8.09	8.02	8.02	7.75	7.68	9.47	7.62			

Kato, Takuma (JPN) (1998)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Heat 1 - 2017 Mito Invitational (Mito, JPN)**(2017) - [tfdata-store.com/2017/05/06/post-423/](https://www.tfdata-store.com/2017/05/06/post-423/)

date	05-May-17	time	2.71	3.83	4.96	6.06	7.19	8.31	9.43	10.56	11.70	12.89	14.44	6 / 3	3.35	3.37	3.46
reaction time		interval		1.12	1.13	1.10	1.13	1.12	1.12	1.13	1.14	1.19	1.55		8.19	8.14	7.92
wind	0.3 m/s	velocity	5.06	8.16	8.09	8.31	8.09	8.16	8.16	8.09	8.02	7.68	9.05	7.62			

FINAL - 2016 Japanese National Junior Championships (Mizuho, JPN) (99cm)(2016.10.21) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en

date	21-Oct-16	time	2.62	3.70	4.75	5.80	6.84	7.91	8.98	10.05	11.18	12.28	13.69	6 / 1	3.18	3.18	3.30
reaction time		interval		1.08	1.05	1.05	1.04	1.07	1.07	1.07	1.13	1.10	1.41		8.62	8.62	8.31
wind	-0.2 m/s	velocity	5.24	8.46	8.70	8.70	8.79	8.54	8.54	8.54	8.09	8.31	9.94	8.04			

FINAL - 2016 Japanese National High School Championships (Okayama, JPN) (99cm)Kota (2016) - [69th high school championships: JAF scientific committee- biomechanics data](#)

date	02-Aug-16	time	2.63	3.73	4.83	5.92	7.01	8.11	9.20	10.32	11.41	12.55	13.98	6 / 1	3.29	3.28	3.35
reaction time		interval		1.10	1.10	1.09	1.09	1.10	1.09	1.12	1.09	1.14	1.43	PB	8.33	8.36	8.19
wind	1.2 m/s	velocity	5.22	8.31	8.31	8.39	8.39	8.31	8.39	8.16	8.39	8.02	9.80	7.87			

FINAL - 2016 Hokusei Shinetsu High School Meeting (Okayama, JPN) (99cm)(2016.06.18) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en

date	18-Jun-16	time	2.68	3.76	4.88	5.98	7.10	8.24	9.40	10.56	11.73	12.89	14.39	7 / 1	3.30	3.42	3.49
reaction time		interval		1.08	1.12	1.10	1.12	1.14	1.16	1.16	1.17	1.16	1.50		8.31	8.02	7.86
wind	-2.5 m/s	velocity	5.12	8.46	8.16	8.31	8.16	8.02	7.88	7.88	7.81	7.88	9.35	7.64			

FINAL - 2016 Niigata Prefecture High School Meeting (Niigata, JPN)(2016.05.30) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en

date	29-May-16	time	2.68	3.78	4.88	5.97	7.08	8.20	9.31	10.43	11.56	12.70	14.16	/ 1				
reaction time		interval		1.10	1.10	1.09	1.11	1.12	1.11	1.12	1.13	1.14	1.46		3.29	3.34	3.39	
wind	-0.6 m/s	velocity	5.12	8.31	8.31	8.39	8.23	8.16	8.23	8.16	8.09	8.02	9.60	7.77	8.33	8.21	8.09	
FINAL - 2015 Japanese National High School Championships (Wakayama, JPN) (99cm) <i>Takashima (2015) - race analysis of 110m & 100m hurdles in Japan- results 2015 competitions</i>																		
date	02-Aug-15	time	2.69	3.83	4.96	6.08	7.22	8.35	9.48	10.64	11.80	12.97	14.50	3 / 6				
reaction time		interval		1.14	1.13	1.12	1.14	1.13	1.13	1.16	1.16	1.17	1.53		3.39	3.40	3.49	
wind	1.4 m/s	velocity	5.10	8.02	8.09	8.16	8.02	8.09	8.09	7.88	7.88	7.81	9.16	7.59	8.09	8.06	7.86	
Kato, Yoshihiko (JPN) (1994)																		
FINAL - 2017 Mito Invitational (Mito, JPN) <i>(2017) - tfdata-store.com/2017/05/06/post-423/</i>																		
date	05-May-17	time	2.72	3.88	5.04	6.17	7.28	8.39	9.49	10.60	11.70	12.83	14.31	8 / 6				
reaction time		interval		1.16	1.16	1.13	1.11	1.11	1.10	1.11	1.10	1.13	1.48		3.45	3.32	3.34	
wind	-2.3 m/s	velocity	5.04	7.88	7.88	8.09	8.23	8.23	8.31	8.23	8.31	8.09	9.47	7.69	7.95	8.26	8.21	
Heat 1 - 2017 Mito Invitational (Mito, JPN) <i>(2017) - tfdata-store.com/2017/05/06/post-423/</i>																		
date	05-May-17	time	2.72	3.82	4.93	6.03	7.12	8.23	9.35	10.46	11.60	12.74	14.22	9 / 2				
reaction time		interval		1.10	1.11	1.10	1.09	1.11	1.12	1.11	1.14	1.14	1.48		3.31	3.32	3.39	
wind	0.3 m/s	velocity	5.04	8.31	8.23	8.31	8.39	8.23	8.16	8.23	8.02	8.02	9.47	7.74	8.28	8.26	8.09	
Katsuta, Chiku (JPN)																		
Semi-Final 1 - 2016 Japanese National Youth Championships (Mizuho, JPN) (91cm) <i>(2016.11.08) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>																		
date	21-Oct-16	time	2.63	3.70	4.79	5.84	6.91	7.99	9.07	10.17	11.28	12.41	13.85	4 / 1				
reaction time		interval		1.07	1.09	1.05	1.07	1.08	1.08	1.10	1.11	1.13	1.44		3.21	3.23	3.34	
wind	1.0 m/s	velocity	5.22	8.54	8.39	8.70	8.54	8.46	8.46	8.31	8.23	8.09	9.74	7.94	8.54	8.49	8.21	
Heat 4 - 2016 Japanese National Youth Championships (Mizuho, JPN) (91cm) <i>(2016.11.08) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>																		
date	21-Oct-16	time	2.67	3.75	4.83	5.90	6.97	8.04	9.14	10.23	11.33	12.51	14.05	1 / 1				
reaction time		interval		1.08	1.08	1.07	1.07	1.07	1.10	1.09	1.10	1.18	1.54		3.23	3.24	3.37	
wind	1.5 m/s	velocity	5.14	8.46	8.46	8.54	8.54	8.54	8.31	8.39	8.31	7.75	9.10	7.83	8.49	8.46	8.14	
Katsuta, Kizuku (JPN) (1999)																		
FINAL - 2017 Japanese National High School Championships (Yamagata, JPN) (99cm) <i>Kota (2017) - 70th high school championships: JAF scientific committee- biomechanics data</i>																		
date	02-Aug-17	time	2.68	3.78	4.88	5.98	7.08	8.20	9.33	10.44	11.59	12.73	14.19	7 / 1				
reaction time	0.153	interval		1.10	1.10	1.10	1.10	1.12	1.13	1.11	1.15	1.14	1.46		3.30	3.35	3.40	
wind	-0.7 m/s	velocity	5.12	8.31	8.31	8.31	8.31	8.16	8.09	8.23	7.95	8.02	9.60	7.75	8.31	8.19	8.06	
FINAL - 2017 Fuse Sprint (Tottori, JPN) <i>(2017) - tfdata-store.com/2017/06/04/post-848/</i>																		
date	04-Jun-17	time	2.69	3.78	4.90	5.99	7.09	8.20	9.32	10.45	11.57	12.74	14.20	3 / 6				
reaction time		interval		1.09	1.12	1.09	1.10	1.11	1.12	1.13	1.12	1.17	1.46		3.30	3.33	3.42	
wind	3.2 m/s	velocity	5.10	8.39	8.16	8.39	8.31	8.23	8.16	8.09	8.16	7.81	9.60	7.75	8.31	8.23	8.02	
FINAL - 2016 Japanese National High School Championships (Okayama, JPN) (99cm) <i>Kota (2016) - 69th high school championships: JAF scientific committee- biomechanics data</i>																		
date	02-Aug-16	time	2.65	3.74	4.88	5.99	7.11	8.24	9.36	10.46	11.59	12.74	14.18	4 / 2				
reaction time	0.147	interval		1.09	1.14	1.11	1.12	1.13	1.12	1.10	1.13	1.15	1.44	PB	3.34	3.37	3.38	
wind	1.2 m/s	velocity	5.18	8.39	8.02	8.23	8.16	8.09	8.16	8.31	8.09	7.95	9.74	7.76	8.21	8.14	8.11	
Katta, Kizuku (JPN) (1999)																		
FINAL - 2017 Shimane High School Championships (Izumo, JPN) <i>Shimizu (2018) - shimane high school championships 2018 - biomechanics data analysis</i>																		
date	28-May-17	time	2.73	3.87	5.00	6.10	7.27	8.37	9.67	10.93	12.17	13.40	14.91	4 / 1				
reaction time		interval		1.14	1.13	1.10	1.17	1.10	1.30	1.26	1.24	1.23	1.51		3.37	3.57	3.73	
wind	0.3 m/s	velocity	5.03	8.02	8.09	8.31	7.81	8.31	7.03	7.25	7.37	7.43	9.28	7.38	8.14	7.68	7.35	
Kaul, Niklas (GER) (1998)																		
Decathlon - Heat 2 - 2024 Olympic Games (Paris, FRA) <i>Paris 2024 Olympic Games - Results Book (2024)</i>																		
date	03-Aug-24	time	2.63	3.79	4.91	6.02	7.13	8.24	9.36	10.49	11.62	12.78	14.53	5 / 6				
reaction time	0.158	interval	7 steps	1.16	1.12	1.11	1.11	1.11	1.12	1.13	1.13	1.16	1.75		3.39	3.34	3.42	
wind	0.2 m/s	velocity	5.22	7.88	8.16	8.23	8.23	8.23	8.16	8.09	8.09	7.88	8.01	7.57	8.09	8.21	8.02	
Kavka, Tomáš (CZE) (1989)																		
FINAL - 2014 Czech Republic National Championships (Ostrava, CZE) <i>Feher (2014) - Final report from the Czech Republic national championships</i>																		
date	02-Aug-14	time	2.77	3.93	5.03	6.21	7.35	8.53	9.69	10.85	12.08	13.27	14.95	7 / 6				
reaction time	0.122	interval		1.16	1.10	1.18	1.14	1.18	1.16	1.16	1.23	1.19	1.68		3.44	3.48	3.58	
wind	-1.2 m/s	velocity	4.95	7.88	8.31	7.75	8.02	7.75	7.88	7.88	7.43	7.68	8.35	7.36	7.97	7.88	7.66	
Heat 2 - 2014 Czech Republic National Championships (Ostrava, CZE) <i>Feher (2014) - Final report from the Czech Republic national championships</i>																		
date	02-Aug-14	time	2.84	4.00	5.15	6.25	7.40	8.55	9.70	10.85	12.05	13.28	14.83	6 / 3				
reaction time	0.150	interval		1.16	1.15	1.10	1.15	1.15	1.15	1.15	1.20	1.23	1.55		3.41	3.45	3.58	
wind	0.8 m/s	velocity	4.83	7.88	7.95	8.31	7.95	7.95	7.95	7.95	7.62	7.43	9.05	7.42	8.04	7.95	7.66	
FINAL - 2013 Czech Republic National Championships (Tábor, CZE) <i>Feher (2013) - Final report from the men's & women's Czech Republic national championships</i>																		
date	15-Jun-13	time	2.80	3.92	5.05	6.13	7.24	8.38	9.50	10.65	11.79	12.95	14.54	6 / 5				
reaction time	0.161	interval		1.12	1.13	1.08	1.11	1.14	1.12	1.15	1.14	1.16	1.59		3.33	3.37	3.45	

wind 0.4 m/s velocity 4.90 8.16 8.09 8.46 8.23 8.02 8.16 7.95 8.02 7.88 8.82 7.57 8.23 8.14 7.95

Heat 3 - 2013 Czech Republic National Championships (Tábor, CZE) *Feher (2013) - Final report from the men's & women's Czech Republic national championships*
 date 15-Jun-13 time 2.81 3.98 5.08 6.19 7.32 8.45 9.58 10.70 11.87 13.03 14.59 5 / 2
 reaction time 0.161 interval 1.17 1.10 1.11 1.13 1.13 1.12 1.17 1.16 1.56 3.38 3.39 3.45
 wind -0.3 m/s velocity 4.88 7.81 8.31 8.23 8.09 8.09 8.09 8.16 7.81 7.88 8.99 7.54 8.11 8.09 7.95

FINAL - 2012 Czech Republic National Indoor Championships (Praha, CZE) *Feher (2012) - Czech Republic indoor national championships - men's 60m hurdles*
 date 25-Feb-12 time 2.74 3.88 4.94 6.01 7.10 8.05 6 / 4
 reaction time 0.153 interval 1.14 1.06 1.07 1.09 0.95 3.27
 velocity 5.01 8.02 8.62 8.54 8.39 10.23 7.45 8.39

Heat 2 - 2012 Czech Republic National Indoor Championships (Praha, CZE) *Feher (2012) - Czech Republic indoor national championships - men's 60m hurdles*
 date 25-Feb-12 time 2.75 3.87 4.95 6.02 7.11 8.09 3 / 2
 reaction time 0.143 interval 1.12 1.08 1.07 1.09 0.98 3.27
 velocity 4.99 8.16 8.46 8.54 8.39 9.92 7.42 8.39

Kawahara, Ren (JPN) (2006) **H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10**
FINAL - 2021 Japanese U16 National Championships (Matsuyama, JPN) (99cm) *Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season*
 date 24-Oct-21 time 2.74 3.89 5.05 6.21 7.39 8.54 9.69 10.81 11.94 13.11 14.68 / 2
 reaction time interval 1.15 1.16 1.16 1.18 1.15 1.15 1.12 1.13 1.17 1.57 3.47 3.48 3.42
 wind 1.0 m/s velocity 5.01 7.95 7.88 7.88 7.75 7.95 7.95 8.16 8.09 7.81 8.93 7.49 7.90 7.88 8.02

Kawakami, Asuma (JPN) (1999) **H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10**
Semi-Final 3 - 2016 Japanese National Youth Championships (Mizuho, JPN) (91cm) *(2016.11.11) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en*
 date 21-Oct-16 time 2.67 3.76 4.87 5.96 7.04 8.14 9.24 10.35 11.49 12.63 14.09 5 / 2
 reaction time interval 1.09 1.11 1.09 1.08 1.10 1.10 1.11 1.14 1.14 1.46 3.29 3.28 3.39
 wind -0.2 m/s velocity 5.14 8.39 8.23 8.39 8.46 8.31 8.31 8.23 8.02 8.02 9.60 7.81 8.33 8.36 8.09

Heat 1 - 2016 Japanese National Youth Championships (Mizuho, JPN) (91cm) *(2016.11.07) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en*
 date 21-Oct-16 time 2.67 3.78 4.88 5.97 7.08 8.20 9.31 10.43 11.56 12.71 14.21 7 / 1
 reaction time interval 1.11 1.10 1.09 1.11 1.12 1.11 1.12 1.13 1.15 1.50 3.30 3.34 3.40
 wind 1.7 m/s velocity 5.14 8.23 8.31 8.39 8.23 8.16 8.23 8.16 8.09 7.95 9.35 7.74 8.31 8.21 8.06

Kawamura, Naoya (JPN) (1996) **H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10**
FINAL - 2018 Kinami Michitaka Memorial (Osaka, JPN) *Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season*
 date 06-May-18 time 2.73 3.84 4.94 6.05 7.13 8.23 9.32 10.43 11.53 12.67 14.14 2 / 8
 reaction time interval 1.11 1.10 1.11 1.08 1.10 1.09 1.11 1.10 1.14 1.47 3.32 3.27 3.35
 wind 1.6 m/s velocity 5.03 8.23 8.31 8.23 8.46 8.31 8.39 8.23 8.31 8.02 9.54 7.78 8.26 8.39 8.19

Heat 2 - 2017 Mito Invitational (Mito, JPN) *(2017) - fldata-store.com/2017/05/06/post-423/*
 date 05-May-17 time 2.76 3.91 5.06 6.20 7.34 8.46 9.58 10.74 11.89 13.07 14.62 8 / 6
 reaction time interval 1.15 1.15 1.14 1.14 1.12 1.12 1.16 1.15 1.18 1.55 3.44 3.38 3.49
 wind 0.6 m/s velocity 4.97 7.95 7.95 8.02 8.02 8.16 8.16 7.88 7.95 7.75 9.05 7.52 7.97 8.11 7.86

Semi-Final 1 - 2016 Japanese University Championships (Kumagaya, JPN) *(2016.09.05) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en*
 date 04-Sep-16 time 2.78 3.89 4.98 6.07 7.17 8.28 9.38 10.50 11.62 12.77 14.23 3 / 6
 reaction time interval 1.11 1.09 1.09 1.10 1.11 1.10 1.12 1.12 1.15 1.46 3.29 3.31 3.39
 wind 0.6 m/s velocity 4.94 8.23 8.39 8.39 8.31 8.23 8.31 8.16 8.16 7.95 9.60 7.73 8.33 8.28 8.09

Kawano, Hayato (JPN) (2003) **H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10**
FINAL - 2021 Japanese High School National Championships (Fukui, JPN) *Shibayama (2021) - national high school and U20 national championships*
 date 01-Aug-21 time 2.64 3.75 4.85 5.97 7.07 8.18 9.33 10.50 11.62 12.79 14.36 7 / 7
 reaction time interval 1.11 1.10 1.12 1.10 1.11 1.15 1.17 1.12 1.17 1.57 PB 3.33 3.36 3.46
 wind 1.4 m/s velocity 5.20 8.23 8.31 8.16 8.31 8.23 7.95 7.81 8.16 7.81 8.93 7.66 8.23 8.16 7.92

Kawasaki, Kousuke (JPN) (2007) **H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10**
FINAL - 2024 Japanese National High School Championships (Fukuoka, JPN) *Takashima (2024) - national high school sports festival - biomechanics data*
 date 01-Aug-24 time 2.74 3.84 4.95 6.04 7.14 8.24 9.34 10.46 11.58 12.72 14.19 9 / 6
 reaction time interval 1.10 1.11 1.09 1.10 1.10 1.10 1.12 1.12 1.14 1.47 PB 3.30 3.30 3.38
 wind -0.7 m/s velocity 5.01 8.31 8.23 8.39 8.31 8.31 8.31 8.16 8.16 8.02 9.54 7.75 8.31 8.31 8.11

Kawashima, Ryota (JPN) (1999) **H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10**
FINAL - 2021 Fuse Sprint (Tottori, JPN) *Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season*
 date 06-Jun-21 time 2.59 3.68 4.75 5.79 6.85 7.92 8.98 10.06 11.14 12.27 13.77 3 / 5
 reaction time interval 1.09 1.07 1.04 1.06 1.07 1.06 1.08 1.08 1.13 1.50 PB 3.20 3.19 3.29
 wind 1.8 m/s velocity 5.30 8.39 8.54 8.79 8.62 8.54 8.62 8.46 8.46 8.09 9.35 7.99 8.57 8.60 8.33

FINAL - 2016 Japanese National High School Championships (Okayama, JPN) (99cm) *Kota (2016) - 69th high school championships: JAF scientific committee- biomechanics data*
 date 02-Aug-16 time 2.69 3.82 4.94 6.05 7.16 8.29 9.41 10.52 11.67 12.83 14.33 9 / 6
 reaction time interval 1.13 1.12 1.11 1.11 1.13 1.12 1.11 1.15 1.16 1.50 PB 3.36 3.36 3.42
 wind 1.2 m/s velocity 5.10 8.09 8.16 8.23 8.23 8.09 8.16 8.23 7.95 7.88 9.35 7.68 8.16 8.16 8.02

		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Kazanov, Igor (URS) (1963)																		
FINAL - 1991 European Cup (Frankfurt, GER)																		
date	30-Jun-91	time	2.54	3.64	4.69	5.75	6.79	7.86	8.93	9.99	11.09	12.18	13.64	1 / 4				
reaction time		interval		1.10	1.05	1.06	1.04	1.07	1.07	1.06	1.10	1.09	1.46		3.21	3.18	3.25	
wind	-0.9 m/s	velocity	5.40	8.31	8.70	8.62	8.79	8.54	8.54	8.62	8.31	8.39	9.60	8.06	8.54	8.62	8.44	
Kelley, Kai (USA) (1986)																		
Heat 4 - 2007 USATF National Championships (Indianapolis, IN)																		
date	23-Jun-07	time	2.64	3.77	4.84	5.92	7.01	8.10	9.19	10.28	11.39	12.52	14.00	1 / 4				
reaction time		interval		1.13	1.07	1.08	1.09	1.09	1.09	1.09	1.11	1.13	1.48		3.28	3.27	3.33	
wind	-2.8 m/s	velocity	5.20	8.09	8.54	8.46	8.39	8.39	8.39	8.39	8.23	8.09	9.47	7.86	8.36	8.39	8.23	
Kenziera, Dave (USA) (1994)																		
FINAL - 2018 NCAA Championships (Eugene, OR) (TV Analysis)																		
date	08-Jun-18	time	2.54	3.63	4.67	5.70	6.71	7.74	8.78	9.82	10.87	11.92	13.43	6 / 2				
reaction time		interval		7 steps	1.09	1.04	1.03	1.01	1.03	1.04	1.04	1.05	1.51		3.16	3.08	3.14	
wind	-1.1 m/s	velocity	5.40	8.39	8.79	8.87	9.05	8.87	8.79	8.79	8.70	8.70	9.28	8.19	8.68	8.90	8.73	
Kichima, Kaito (JPN) (1998)																		
FINAL - 2016 Japanese National High School Championships (Okayama, JPN) (99cm)																		
date	02-Aug-16	time	2.68	3.78	4.87	5.95	7.05	8.15	9.27	10.38	11.53	12.70	14.20	7 / 3				
reaction time	0.161	interval		1.10	1.09	1.08	1.10	1.10	1.12	1.11	1.15	1.17	1.50		PB	3.27	3.32	3.43
wind	1.2 m/s	velocity	5.12	8.31	8.39	8.46	8.31	8.31	8.16	8.23	7.95	7.81	9.35	7.75	8.39	8.26	7.99	
Kijanica, Michael (CZE) (1998)																		
FINAL - 2015 Czech Republic National U18 Indoor Championships (Praha, CZE) (91cm)																		
date	14-Feb-15	time	2.68	3.81	4.90	6.00	7.09							8.08	5 / 1			
reaction time	0.175	interval		1.13	1.09	1.10	1.09						0.99		3.32			
		velocity	5.12	8.09	8.39	8.31	8.39						9.82	7.43	8.26			
Heat 2 - 2014 Czech Republic National U18 Championships (Trinec, CZE) (91cm)																		
date	28-Jun-14	time	2.87	4.03	5.20	6.38	7.55	8.74	9.93	11.15	12.35	13.62	15.36	7 / 3				
reaction time	0.249	interval		1.16	1.17	1.18	1.17	1.19	1.19	1.22	1.20	1.27	1.74		3.51	3.55	3.69	
wind	-4.1 m/s	velocity	4.78	7.88	7.81	7.75	7.81	7.68	7.68	7.49	7.62	7.20	8.06	7.16	7.81	7.72	7.43	
Kikuchi, Rintaro (JPN) (2001)																		
FINAL - 2019 National Sports Festival (Hitachinaka, JPN) (99cm)																		
date	06-Oct-19	time	2.57	3.62	4.70	5.76	6.83	7.85	8.92	9.94	11.02	12.10	13.54	2 / 4				
reaction time	0.132	interval		1.05	1.08	1.06	1.07	1.02	1.07	1.02	1.08	1.08	1.44		3.19	3.16	3.18	
wind	2.7 m/s	velocity	5.34	8.70	8.46	8.62	8.54	8.96	8.54	8.96	8.46	8.46	9.74	8.12	8.60	8.68	8.62	
Kiljan, Krzysztof (POL) (1999)																		
FINAL - 2024 Kamila Skolimowska Memorial (Silesia, POL)																		
date	25-Aug-24	time	2.43	3.50	4.57	5.60	6.65	7.69	8.77	9.86	10.97	12.08	13.73	9 / 9				
reaction time	0.162	interval		7 steps	1.07	1.07	1.03	1.05	1.04	1.08	1.09	1.11	1.11	1.65		3.17	3.17	3.31
wind	1.1 m/s	velocity	5.65	8.54	8.54	8.87	8.70	8.79	8.46	8.39	8.23	8.23	8.50	8.01	8.65	8.65	8.28	
Repechage 1 - 2024 Olympic Games (Paris, FRA)																		
date	06-Aug-24	time	2.41	3.50	4.56	5.60	6.65	7.71	8.76	9.84	10.95	12.07	13.73	6 / 6				
reaction time	0.148	interval		7 steps	1.09	1.06	1.04	1.05	1.06	1.05	1.08	1.11	1.12	1.66		3.19	3.16	3.31
wind	0.2 m/s	velocity	5.69	8.39	8.62	8.79	8.70	8.62	8.70	8.46	8.23	8.16	8.45	8.01	8.60	8.68	8.28	
Heat 3 - 2024 Olympic Games (Paris, FRA)																		
date	04-Aug-24	time	2.41	3.49	4.55	5.60	6.64	7.69	8.75	9.82	10.90	12.01	13.67	9 / 8				
reaction time	0.153	interval		7 steps	1.08	1.06	1.05	1.04	1.05	1.06	1.07	1.08	1.11	1.66		3.19	3.15	3.26
wind	1.1 m/s	velocity	5.69	8.46	8.62	8.70	8.79	8.70	8.62	8.54	8.46	8.23	8.45	8.05	8.60	8.70	8.41	
FINAL - 2021 Copernicus Cup (Toruń, POL) (TV Analysis)																		
date	17-Feb-21	time	2.58	3.67	4.71	5.77	6.84							7.80	2 / 6			
reaction time	0.155	interval		7 steps	1.09	1.04	1.06	1.07					0.96		3.19			
		velocity	5.32	8.39	8.79	8.62	8.54						10.13	7.69	8.60			
Kim Byung-Jun (KOR) (1991)																		
FINAL - 2018 Asian Games (Jakarta, INA)																		
date	28-Aug-18	time	2.62	3.69	4.72	5.75	6.79	7.82	8.86	9.93	11.00	12.09	13.57	2 / 5				
reaction time	0.188	interval		1.07	1.03	1.03	1.04	1.03	1.04	1.07	1.07	1.09	1.48		3.13	3.11	3.23	
wind	0.0 m/s	velocity	5.24	8.54	8.87	8.87	8.79	8.87	8.79	8.54	8.54	8.39	9.47	8.11	8.76	8.82	8.49	
FINAL - 2018 Seiko Golden Grand Prix (Osaka, JPN)																		
date	20-May-18	time	2.64	3.73	4.80	5.85	6.91	7.97	9.04	10.15	11.23	12.34	13.85	4 / 6				
reaction time	0.162	interval		1.09	1.07	1.05	1.06	1.06	1.07	1.11	1.08	1.11	1.51		3.21	3.19	3.30	
wind	-0.4 m/s	velocity	5.20	8.39	8.54	8.70	8.62	8.62	8.54	8.23	8.46	8.23	9.28	7.94	8.54	8.60	8.31	

FINAL - 2017 Korean National Championships (Kimchun, KOR)*Hong (2018) - performance of men's 110m hurdles using rhythmic units*

date	02-Jun-17	time	2.63	3.76	4.83	5.90	6.90	8.03	9.06	10.13	11.20	12.27	13.70	/ 1			
reaction time		interval		1.13	1.07	1.07	1.00	1.13	1.03	1.07	1.07	1.07	1.43		3.27	3.16	3.21
wind	2.6 m/s	velocity	5.22	8.09	8.54	8.54	9.14	8.09	8.87	8.54	8.54	8.54	9.80	8.03	8.39	8.68	8.54

Open FINAL - 2017 Michitaka Memorial (Osaka, JPN)*(2017) - tfdata-store.com/2017/05/08/post-413/*

date	07-May-17	time	2.67	3.74	4.79	5.82	6.87	7.91	8.96	10.03	11.12	12.21	13.68	2 / 1				
reaction time		interval		7 steps	1.07	1.05	1.03	1.05	1.04	1.05	1.07	1.09	1.09	1.47		3.15	3.14	3.25
wind	-1.5 m/s	velocity	5.14	8.54	8.70	8.87	8.70	8.79	8.70	8.54	8.39	8.39	9.54	8.04	8.70	8.73	8.44	

FINAL - 2017 Michitaka Memorial (Osaka, JPN)*(2017) - tfdata-store.com/2017/05/08/post-413/*

date	07-May-17	time	2.60	3.68	4.74	5.81	6.88	7.93	8.99	10.04	11.11	12.20	13.68	8 / 2				
reaction time		interval		7 steps	1.08	1.06	1.07	1.07	1.05	1.06	1.05	1.07	1.09	1.48		3.21	3.18	3.21
wind	-0.8 m/s	velocity	5.28	8.46	8.62	8.54	8.54	8.70	8.62	8.70	8.54	8.39	9.47	8.04	8.54	8.62	8.54	

FINAL - 2017 Mikio Oda Memorial (Hiroshima, JPN)*(2017) - tfdata-store.com/2017/05/01/458/*

date	29-Apr-17	time	2.63	3.69	4.75	5.80	6.85	7.90	8.96	10.01	11.08	12.15	13.64	4 / 2				
reaction time		interval		7 steps	1.06	1.06	1.05	1.05	1.05	1.06	1.05	1.07	1.07	1.49		3.17	3.16	3.19
wind	1.5 m/s	velocity	5.22	8.62	8.62	8.70	8.70	8.70	8.62	8.70	8.54	8.54	9.41	8.06	8.65	8.68	8.60	

Kim Gyeong-Tae (KOR) (1997)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2017 Korean National Championships (Kimchun, KOR)***Hong (2018) - performance of men's 110m hurdles using rhythmic units*

date	02-Jun-17	time	2.65	3.78	4.88	6.01	7.14	8.21	9.31	10.41	11.54	12.67	14.20	/ 3			
reaction time		interval		1.13	1.10	1.13	1.13	1.07	1.10	1.10	1.13	1.13	1.53		3.36	3.30	3.36
wind	2.6 m/s	velocity	5.18	8.09	8.31	8.09	8.09	8.54	8.31	8.31	8.09	8.09	9.16	7.75	8.16	8.31	8.16

Kimball, Patrick (USA) (1998)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Heat 2 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)***CAA Hurdle Development (2020)*

date	14-Feb-20	time	2.68	3.80	4.92	5.99	7.09						8.09	7 / 6			
reaction time	0.156	interval		1.12	1.12	1.07	1.10						1.00		3.31		
		velocity	5.12	8.16	8.16	8.54	8.31						9.72	7.42	8.28		

King, David (GBR) (1994)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2023 Weltklasse (Zürich, SUI)***Omega Timing (2023) - diamond league race analysis*

date	31-Aug-23	time	2.44	3.51	4.55	5.57	6.61	7.66	8.72	9.79	10.87	11.98	13.60	8 / 4				
reaction time	0.122	interval		7 steps	1.07	1.04	1.02	1.04	1.05	1.06	1.07	1.08	1.11	1.62		3.13	3.15	3.26
wind	-0.1 m/s	velocity	5.62	8.54	8.79	8.96	8.79	8.70	8.62	8.54	8.46	8.23	8.65	8.09	8.76	8.70	8.41	

Semi-Final 2 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)*Henson (2022) - Athlete First: 2022 year end hurdle report*

date	17-Jul-22	time	2.56	3.63	4.66	5.66	6.73	7.76	8.83	9.88	10.93	12.03	13.51	2 / 7				
reaction time	0.120	interval		7 steps	1.07	1.03	1.00	1.07	1.03	1.07	1.05	1.05	1.10	1.48		3.10	3.17	3.20
wind	0.3 m/s	velocity	5.36	8.54	8.87	9.14	8.54	8.87	8.54	8.70	8.70	8.31	9.47	8.14	8.85	8.65	8.57	

Heat 5 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)*Henson (2022) - Athlete First: 2022 year end hurdle report*

date	16-Jul-22	time	2.58	3.66	4.73	5.73	6.76	7.83	8.90	9.93	11.00	12.10	13.57	5 / 4				
reaction time	0.117	interval		7 steps	1.08	1.07	1.00	1.03	1.07	1.07	1.03	1.07	1.10	1.47		3.15	3.17	3.20
wind	0.4 m/s	velocity	5.32	8.46	8.54	9.14	8.87	8.54	8.54	8.87	8.54	8.31	9.54	8.11	8.70	8.65	8.57	

FINAL - 2022 Müller Birmingham Diamond League (Birmingham, GBR) (TV Analysis)*Henson (2022) - Athlete First: 2022 year end hurdle report*

date	21-May-22	time	2.53	3.60	4.70	5.72	6.74	7.80	8.87	9.93	11.00	12.08	13.64	2 / 7				
reaction time	0.137	interval		7 steps	1.07	1.10	1.02	1.02	1.06	1.07	1.06	1.07	1.08	1.56		3.19	3.15	3.21
wind	0.7 m/s	velocity	5.42	8.54	8.31	8.96	8.96	8.62	8.54	8.62	8.54	8.46	8.99	8.06	8.60	8.70	8.54	

FINAL - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)*Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record*

date	20-Mar-22	time	2.48	3.54	4.58	5.60	6.60						7.62	1 / 6			
reaction time	0.142	interval		7 steps	1.06	1.04	1.02	1.00					1.02		3.12		
		velocity	5.53	8.62	8.79	8.96	9.14						9.53	7.87	8.79		

Semi-Final 3 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)*Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record*

date	20-Mar-22	time	2.53	3.56	4.60	5.62	6.63						7.57	3 / 3			
reaction time	0.121	interval		7 steps	1.03	1.04	1.02	1.01					0.94	=PB	3.09		
		velocity	5.42	8.87	8.79	8.96	9.05						10.34	7.93	8.87		

Heat 1 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)*Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record*

date	20-Mar-22	time	2.53	3.60	4.63	5.65	6.68						7.65	3 / 1			
reaction time	0.118	interval		7 steps	1.07	1.03	1.02	1.03					0.97		3.12		
		velocity	5.42	8.54	8.87	8.96	8.87						10.02	7.84	8.79		

FINAL - 2022 Müller Indoor Grand Prix (Birmingham, GBR) (TV Analysis)*Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record*

date	19-Feb-22	time	2.46	3.53	4.55	5.57	6.60						7.63	7 / 5			
reaction time	0.132	interval		7 steps	1.07	1.02	1.02	1.03					1.03	=PB	3.11		
		velocity	5.58	8.54	8.96	8.96	8.87						9.44	7.86	8.82		

FINAL - 2021 Boris Hanžeković Memorial (Zagreb, CRO) (TV Analysis)*Henson (2021) - Athlete First: 2021 year end hurdle report*

date	14-Sep-21	time	2.50	3.60	4.63	5.66	6.66	7.70	8.73	9.76	10.86	12.03	13.56	3 / 5				
reaction time	0.140	interval	7 steps	1.10	1.03	1.03	1.00	1.04	1.03	1.03	1.10	1.17	1.53		3.16	3.07	3.30	
wind	0.7 m/s	velocity	5.49	8.31	8.87	8.87	9.14	8.79	8.87	8.87	8.31	7.81	9.16	8.11	8.68	8.93	8.31	

FINAL - 2020 Doha Diamond League (Doha, QAT) (TV Analysis)*Henson (2020) - Athlete First: 2020 year end hurdle report*

date	25-Sep-20	time	2.48	3.56	4.60	5.64	6.68	7.70	8.76	9.82	10.90	11.98	13.54	1 / 3				
reaction time	0.109	interval	7 steps	1.08	1.04	1.04	1.04	1.02	1.06	1.06	1.08	1.08	1.56		3.16	3.12	3.22	
wind	0.3 m/s	velocity	5.53	8.46	8.79	8.79	8.79	8.96	8.62	8.62	8.46	8.46	8.99	8.12	8.68	8.79	8.52	

FINAL - 2020 Paavo Nurmi Games (Turku, FIN) (TV Analysis)*Henson (2020) - Athlete First: 2020 year end hurdle report*

date	11-Aug-20	time	2.60	3.67	4.70	5.75	6.77	7.84	8.88	9.91	11.01	12.08	13.57	5 / 3				
reaction time	0.148	interval	7 steps	1.07	1.03	1.05	1.02	1.07	1.04	1.03	1.10	1.07	1.49		3.15	3.13	3.20	
wind	1.1 m/s	velocity	5.28	8.54	8.87	8.70	8.96	8.54	8.79	8.87	8.31	8.54	9.41	8.11	8.70	8.76	8.57	

FINAL - 2019 Müller Grand Prix (Birmingham, GBR) (TV Analysis)*Henson (2020) - Athlete First: 2019 year end hurdle report*

date	18-Aug-19	time	2.62	3.73	4.80	5.83	6.86	7.89	8.91	9.96	11.05	12.15	13.69	3 / 7				
reaction time	0.136	interval	7 steps	1.11	1.07	1.03	1.03	1.03	1.02	1.05	1.09	1.10	1.54		3.21	3.08	3.24	
wind	-0.2 m/s	velocity	5.24	8.23	8.54	8.87	8.87	8.87	8.96	8.70	8.39	8.31	9.10	8.04	8.54	8.90	8.46	

FINAL - 2019 Müller Anniversary Games (London, GBR) (TV Analysis)*Henson (2020) - Athlete First: 2019 year end hurdle report*

date	21-Jul-19	time	2.45	3.51	4.56	5.61	6.65	7.72	8.77	9.85	10.92	12.05	13.66	1 / 8				
reaction time	0.135	interval	7 steps	1.06	1.05	1.05	1.04	1.07	1.05	1.08	1.07	1.13	1.61		3.16	3.16	3.28	
wind	0.4 m/s	velocity	5.60	8.62	8.70	8.70	8.79	8.54	8.70	8.46	8.54	8.09	8.71	8.05	8.68	8.68	8.36	

FINAL - 2019 Müller Indoor Grand Prix (Birmingham, GBR) (TV Analysis)*Henson (2020) - Athlete First: 2019 year end hurdle report*

date	16-Feb-19	time	2.54	3.58	4.65	5.68	6.72						7.68	3 / 6				
reaction time	0.130	interval	7 steps	1.04	1.07	1.03	1.04						0.96		3.14			
		velocity	5.40	8.79	8.54	8.87	8.79						10.13		7.81			8.73

FINAL - 2018 Müller Grand Prix (Birmingham, GBR) (TV Analysis)*Henson (2020) - Athlete First: 2018 year end hurdle report*

date	18-Aug-18	time	2.52	3.58	4.62	5.64	6.66	7.70	8.74	9.78	10.84	11.92	13.53	9 / 8				
reaction time	0.124	interval	7 steps	1.06	1.04	1.02	1.02	1.04	1.04	1.04	1.06	1.08	1.61		3.12	3.10	3.18	
wind	1.3 m/s	velocity	5.44	8.62	8.79	8.96	8.96	8.79	8.79	8.79	8.62	8.46	8.71	8.13	8.79	8.85	8.62	

FINAL - 2017 Müller Grand Prix (Birmingham, GBR) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date	20-Aug-17	time	2.58	3.64	4.70	5.76	6.82	7.88	8.92	10.00	11.04	12.12	13.65	1 / 7				
reaction time	0.138	interval	7 steps	1.06	1.06	1.06	1.06	1.06	1.04	1.08	1.04	1.08	1.53		3.18	3.16	3.20	
wind	-0.6 m/s	velocity	5.32	8.62	8.62	8.62	8.62	8.62	8.79	8.46	8.79	8.46	9.16	8.06	8.62	8.68	8.57	

Kingdom, Roger (USA) (1962)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 1996 USA Olympic Trials (Atlanta, GA)***McNichols (2000) - Hurdle technique study through video analysis*

date	23-Jun-96	time	2.45	3.50	4.53	5.52	6.55	7.54	8.55	9.62	10.65	11.77	13.34	1 / 5				
reaction time		interval		1.05	1.03	0.99	1.03	0.99	1.01	1.07	1.03	1.12	1.57		3.07	3.03	3.22	
wind	0.9 m/s	velocity	5.60	8.70	8.87	9.23	8.87	9.23	9.05	8.54	8.87	8.16	8.93	8.25	8.93	9.05	8.52	

FINAL - 1989 IAAF World Cup (Barcelona, ESP)*Gill (1990) - atletismo (I) carreras y marcha*

date	10-Sep-89	time	2.55	3.60	4.61	5.61	6.58	7.56	8.54	9.54	10.54	11.57	12.87	9 / 1				
reaction time		interval		1.05	1.01	1.00	0.97	0.98	0.98	1.00	1.00	1.03	1.30		3.06	2.93	3.03	
wind	2.6 m/s	velocity	5.38	8.70	9.05	9.14	9.42	9.33	9.33	9.14	9.14	8.87	10.78	8.55	8.96	9.36	9.05	

FINAL - 1988 Olympic Games (Seoul, KOR)*Brüggemann (1990) - scientific research project at the games of the XXXIV Olympiad, Seoul 1988*

date	26-Sep-88	time	2.55	3.60	4.61	5.61	6.61	7.59	8.59	9.59	10.62	11.64	12.98	4 / 1				
reaction time	0.142	interval		1.05	1.01	1.00	1.00	0.98	1.00	1.00	1.03	1.02	1.34	OR	3.06	2.98	3.05	
wind	1.5 m/s	velocity	5.38	8.70	9.05	9.14	9.14	9.33	9.14	9.14	8.87	8.96	10.46	8.47	8.96	9.20	8.99	

Semi-Final 2 - 1988 Olympic Games (Seoul, KOR)*Brüggemann (1990) - scientific research project at the games of the XXXIV Olympiad, Seoul 1988*

date	26-Sep-88	time	2.60	3.66	4.68	5.67	6.66	7.68	8.71	9.76	10.83	11.91	13.37	3 / 1				
reaction time	0.192	interval		1.06	1.02	0.99	0.99	1.02	1.03	1.05	1.07	1.08	1.46		3.07	3.04	3.20	
wind	-0.7 m/s	velocity	5.28	8.62	8.96	9.23	9.23	8.96	8.87	8.70	8.54	8.46	9.60	8.23	8.93	9.02	8.57	

Kiriyama, Norihiro (JPN) (1992)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Heat 2 - 2017 Japanese National Championships (Osaka, JPN)***(2017) - tfdata-store.com/2017/07/13/post-1040/*

date	24-Jun-17	time	2.69	3.78	4.86	5.93	7.04	8.16	9.26	10.38	11.53	12.68	14.20	5 / 7				
reaction time	0.176	interval		1.09	1.08	1.07	1.11	1.12	1.10	1.12	1.15	1.15	1.52		3.24	3.33	3.42	
wind	0.0 m/s	velocity	5.10	8.39	8.46	8.54	8.23	8.16	8.31	8.16	7.95	7.95	9.22	7.75	8.46	8.23	8.02	

Kishi, Kazuki (JPN) (1993)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Heat 2 - 2017 Japanese National Championships (Osaka, JPN)***(2017) - tfdata-store.com/2017/07/13/post-1040/*

date	24-Jun-17	time	2.65	3.75	4.85	5.95	7.06	8.14	9.27	10.39	11.53	12.67	14.15	9 / 6				
reaction time	0.158	interval		1.10	1.10	1.10	1.11	1.08	1.13	1.12	1.14	1.14	1.48		3.30	3.32	3.40	
wind	0.0 m/s	velocity	5.18	8.31	8.31	8.31	8.23	8.46	8.09	8.16	8.02	8.02	9.47	7.77	8.31	8.26	8.06	

		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Kisiala, Jan (CZE) (1998)																		
FINAL - 2014 Czech Republic National U18 Championships (Trinec, CZE) (91cm)																		
date		28-Jun-14	time	2.88	4.04	5.18	6.32	7.45	8.57	9.77	10.96	12.17	13.39	14.93	2 / 3			
reaction time		0.177	interval	1.16	1.14	1.14	1.13	1.12	1.20	1.19	1.21	1.22	1.54		3.44	3.45	3.62	
wind		-3.7 m/s	velocity	4.76	7.88	8.02	8.02	8.09	8.16	7.62	7.68	7.55	7.49	9.10	7.37	7.97	7.95	7.57
Heat 3 - 2014 Czech Republic National U18 Championships (Trinec, CZE) (91cm)																		
date		28-Jun-14	time	2.88	4.05	5.20	6.35	7.50	8.65	9.81	10.98	12.18	13.39	14.99	5 / 2			
reaction time		0.168	interval	1.17	1.15	1.15	1.15	1.15	1.16	1.17	1.20	1.21	1.60		3.47	3.46	3.58	
wind		-1.6 m/s	velocity	4.76	7.81	7.95	7.95	7.95	7.88	7.81	7.62	7.55	8.76	7.34	7.90	7.92	7.66	
Kislykh, Andrey (RUS) (1976)																		
FINAL - 1997 European Cup (Munich, GER)																		
date		22-Jun-97	time	2.65	3.70	4.71	5.73	6.74	7.78	8.84	9.90	10.97	12.05	13.53	1 / 3			
reaction time			interval	1.05	1.01	1.02	1.01	1.04	1.06	1.06	1.07	1.08	1.48		3.08	3.11	3.21	
wind		0.2 m/s	velocity	5.18	8.70	9.05	8.96	9.05	8.79	8.62	8.62	8.54	8.46	9.47	8.13	8.90	8.82	8.54
Kiss, Dániel (HUN) (1982)																		
FINAL - 2010 European Team Championships, 1st League (Budapest, HUN)																		
date		20-Jun-10	time	2.49	3.52	4.54	5.53	6.54	7.54	8.58	9.58	10.67	11.75	13.32	5 / 1			
reaction time		0.160	interval	1.03	1.02	0.99	1.01	1.00	1.04	1.00	1.09	1.08	1.57	NR	3.04	3.05	3.17	
wind		1.1 m/s	velocity	5.51	8.87	8.96	9.23	9.05	9.14	8.79	9.14	8.39	8.46	8.93	8.26	9.02	8.99	8.65
FINAL - 2010 IAAF World Indoor Championships (Doha, QAT)																		
date		14-Mar-10	time	2.73	3.75	4.82	5.89	6.93						7.81	2 / 8			
reaction time		0.182	interval	1.02	1.07	1.07	1.04						0.88		3.16			
			velocity	5.03	8.96	8.54	8.54	8.79					11.05	7.68	8.68			
FINAL - 2010 GE Galan (Stockholm, SWE)																		
date		10-Feb-10	time	2.50	3.53	4.56	5.58	6.60						7.66	1 / 2			
reaction time			interval	1.03	1.03	1.02	1.02						1.06		3.08			
			velocity	5.49	8.87	8.87	8.96	8.96					9.17	7.83	8.90			
Semi-Final 3 - 2009 IAAF World Championships (Berlin, GER)																		
date		20-Aug-09	time	2.67	3.72	4.76	5.76	6.80	7.83	8.86	9.90	10.96	12.04	13.45	3 / 3			
reaction time		0.156	interval	1.05	1.04	1.00	1.04	1.03	1.03	1.04	1.06	1.08	1.41		3.09	3.10	3.18	
wind		0.1 m/s	velocity	5.14	8.70	8.79	9.14	8.79	8.87	8.87	8.79	8.62	8.46	9.94	8.18	8.87	8.85	8.62
Heat 6 - 2009 IAAF World Championships (Berlin, GER)																		
date		19-Aug-09	time	2.70	3.77	4.78	5.79	6.79	7.79	8.81	9.83	10.87	11.97	13.34	7 / 1			
reaction time		0.158	interval	1.07	1.01	1.01	1.00	1.00	1.02	1.02	1.04	1.10	1.37	NR	3.09	3.02	3.16	
wind		0.1 m/s	velocity	5.08	8.54	9.05	9.05	9.14	9.14	8.96	8.96	8.79	8.31	10.23	8.25	8.87	9.08	8.68
Kitz, Silvio (GDR) (1966)																		
FINAL - 1986 East German National Championships (Jena, GDR)																		
date		27-Jun-86	time	2.62	3.74	4.84	5.95	7.06	8.17	9.29	10.40	11.51	12.66	14.12	1 / 3			
reaction time			interval	1.12	1.10	1.11	1.11	1.11	1.12	1.11	1.11	1.11	1.46		3.33	3.34	3.37	
wind		1.7 m/s	velocity	5.24	8.16	8.31	8.23	8.23	8.16	8.23	8.23	7.95	9.60	7.79	8.23	8.21	8.14	
Kobayashi, Fumihito (JPN) (1994)																		
Heat 3 - 2017 Japanese National Championships (Osaka, JPN)																		
date		24-Jun-17	time	2.76	3.88	5.05	6.26	7.45	8.65	9.90	11.14	12.38	13.63	15.27	9 / 8			
reaction time		0.146	interval	1.12	1.17	1.21	1.19	1.20	1.25	1.24	1.24	1.25	1.64		3.50	3.64	3.73	
wind		0.5 m/s	velocity	4.97	8.16	7.81	7.55	7.68	7.62	7.31	7.37	7.37	7.31	8.55	7.20	7.83	7.53	7.35
Koga, Jieremi (JPN) (2007)																		
FINAL - 2024 Japanese National High School Championships (Fukuoka, JPN)																		
date		01-Aug-24	time	2.57	3.64	4.68	5.75	6.77	7.83	8.90	9.96	11.04	12.14	13.59	7 / 1			
reaction time		0.152	interval	1.07	1.04	1.07	1.02	1.06	1.07	1.06	1.08	1.10	1.45	PB	3.18	3.15	3.24	
wind		-0.7 m/s	velocity	5.34	8.54	8.79	8.54	8.96	8.62	8.54	8.62	8.46	8.31	9.67	8.09	8.62	8.70	8.46
Kohutek, Artur (POL) (1971)																		
FINAL - 2002 European Championships (Munich, GER)																		
date		10-Aug-02	time	2.62	3.67	4.69	5.71	6.71	7.73	8.77	9.79	10.85	11.91	13.32	1 / 3			
reaction time		0.157	interval	1.05	1.02	1.02	1.00	1.02	1.04	1.02	1.06	1.06	1.41		3.09	3.06	3.14	
wind		0.4 m/s	velocity	5.24	8.70	8.96	8.96	9.14	8.96	8.79	8.96	8.62	8.62	9.94	8.26	8.87	8.96	8.73
Semi-Final 1 - 2002 European Championships (Munich, GER)																		
date		10-Aug-02	time	2.65	3.70	4.73	5.74	6.75	7.77	8.82	9.85	10.93	12.01	13.44	1 / 2			
reaction time		0.135	interval	1.05	1.03	1.01	1.01	1.02	1.05	1.03	1.08	1.08	1.43		3.09	3.08	3.19	
wind		-0.5 m/s	velocity	5.18	8.70	8.87	9.05	9.05	8.96	8.70	8.87	8.46	8.46	9.80	8.18	8.87	8.90	8.60
Heat 2 - 2002 European Championships (Munich, GER)																		

date	09-Aug-02	time	2.68	3.74	4.78	5.78	6.80	7.83	8.85	9.92	10.98	12.05	13.49	/ 1				
reaction time	0.152	interval		1.06	1.04	1.00	1.02	1.03	1.02	1.07	1.06	1.07	1.44		3.10	3.07	3.20	
wind	0.5 m/s	velocity	5.12	8.62	8.79	9.14	8.96	8.87	8.96	8.54	8.62	8.54	9.74	8.15	8.85	8.93	8.57	
FINAL - 1998 European Championships (Budapest, HUN)														<i>Sanchez (1998) - Budapest '98: análisis de la carreras con villas</i>				
date	22-Aug-98	time	2.60	3.62	4.65	5.67	6.67	7.70	8.72	9.73	10.75	11.83	13.29	7 / 5				
reaction time		interval		1.02	1.03	1.02	1.00	1.03	1.02	1.01	1.02	1.08	1.46		3.07	3.05	3.11	
wind	1.5 m/s	velocity	5.28	8.96	8.87	8.96	9.14	8.87	8.96	9.05	8.96	8.46	9.60	8.28	8.93	8.99	8.82	
Koike, Rio (JPN) (2003)														<i>Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season</i>				
FINAL - 2022 Japanese U20 National Championships (Osaka, JPN) (99cm)																		
date	12-Jun-22	time	2.58	3.69	4.74	5.79	6.80	7.83	8.87	9.93	11.00	12.10	13.57	7 / 3				
reaction time	0.155	interval	7 steps	1.11	1.05	1.05	1.01	1.03	1.04	1.06	1.07	1.10	1.47	PB	3.21	3.08	3.23	
wind	1.1 m/s	velocity	5.32	8.23	8.70	8.70	9.05	8.87	8.79	8.62	8.54	8.31	9.54	8.11	8.54	8.90	8.49	
FINAL - 2021 Japanese High School National Championships (Fukui, JPN)														<i>Shibayama (2021) - national high school and U20 national championships</i>				
date	01-Aug-21	time	2.65	3.78	4.88	5.93	7.00	8.08	9.15	10.24	11.35	12.45	13.93	5 / 2				
reaction time	0.147	interval	7 steps	1.13	1.10	1.05	1.07	1.08	1.07	1.09	1.11	1.10	1.48	=PB	3.28	3.22	3.30	
wind	1.4 m/s	velocity	5.18	8.09	8.31	8.70	8.54	8.46	8.54	8.39	8.23	8.31	9.47	7.90	8.36	8.52	8.31	
Kojima, Keiichiro (JPN)														<i>Takashima (2023) - national high school sports festival - biomechanics data</i>				
FINAL - 2023 Japanese National High School Championships (Sapporo, JPN)																		
date	06-Aug-23	time	2.75	3.86	4.95	6.05	7.13	8.24	9.33	10.44	11.57	12.70	14.15	5 / 2				
reaction time	0.228	interval		1.11	1.09	1.10	1.08	1.11	1.09	1.11	1.13	1.13	1.45		3.30	3.28	3.37	
wind	0.8 m/s	velocity	4.99	8.23	8.39	8.31	8.46	8.23	8.39	8.23	8.09	8.09	9.67	7.77	8.31	8.36	8.14	
Kokubu, Toru (JPN) (1984)														<i>Kobayashi (2019) - research on athlete performance and technique- 2019 data book</i>				
B FINAL - 2019 Mikio Oda Memorial (Hiroshima, JPN)																		
date	28-Apr-19	time	2.69	3.79	4.88	5.96	7.05	8.15	9.25	10.38	11.52	12.67	14.17	6 / 2				
reaction time		interval	7 steps	1.10	1.09	1.08	1.09	1.10	1.10	1.13	1.14	1.15	1.50		3.27	3.29	3.42	
wind	1.4 m/s	velocity	5.10	8.31	8.39	8.46	8.39	8.31	8.31	8.09	8.02	7.95	9.35	7.76	8.39	8.33	8.02	
Kondo, Mizuki (JPN) (2003)														<i>Kijima (2019) - research on athlete performance and technique- 2019 data book</i>				
U18 FINAL - 2019 Japanese National U18/U20 Championships (Hiroshima, JPN) (99cm)																		
date	18-Oct-19	time	2.64	3.70	4.76	5.80	6.83	7.88	8.92	9.97	11.03	12.13	13.60	3 / 2				
reaction time	0.152	interval		1.06	1.06	1.04	1.03	1.05	1.04	1.05	1.06	1.10	1.47		3.16	3.12	3.21	
wind	-0.4 m/s	velocity	5.20	8.62	8.62	8.79	8.87	8.70	8.79	8.70	8.62	8.31	9.54	8.09	8.68	8.79	8.54	
FINAL - 2019 National Sports Festival (Hitachinaka, JPN) (99cm)														<i>Enomoto (2019) - research on athlete performance and technique- 2019 data book</i>				
date	06-Oct-19	time	2.63	3.68	4.72	5.73	6.76	7.78	8.82	9.87	10.92	11.98	13.45	6 / 2				
reaction time	0.142	interval		1.05	1.04	1.01	1.03	1.02	1.04	1.05	1.05	1.06	1.47		3.10	3.09	3.16	
wind	2.7 m/s	velocity	5.22	8.70	8.79	9.05	8.87	8.96	8.79	8.70	8.70	8.62	9.54	8.18	8.85	8.87	8.68	
FINAL - 2019 Japanese National High School Championships (Okinawa, JPN) (99cm)														<i>Kota (2019) - 72nd high school champs: JAF scientific committee - biomechanics data</i>				
date	08-Aug-19	time	2.69	3.80	4.92	6.00	7.12	8.23	9.33	10.46	11.57	12.72	14.21	5 / 2				
reaction time		interval		1.11	1.12	1.08	1.12	1.11	1.10	1.13	1.11	1.15	1.49	PB	3.31	3.33	3.39	
wind	-3.0 m/s	velocity	5.10	8.23	8.16	8.46	8.16	8.23	8.31	8.09	8.23	7.95	9.41	7.74	8.28	8.23	8.09	
Konečný, Michael (CZE) (1995)														<i>Feher (2014) - Final report from the U18 & U20 Czech Republic national championships</i>				
Heat 3 - 2014 Czech Republic National U20 Championships (Trinec, CZE) (99cm)																		
date	28-Jun-14	time	2.82	4.02	5.20	6.43	7.64	8.88	10.23	11.59	12.90	14.22	15.97	8 / 5				
reaction time	0.144	interval		1.20	1.18	1.23	1.21	1.24	1.35	1.36	1.31	1.32	1.75		3.61	3.80	3.99	
wind	-2.5 m/s	velocity	4.87	7.62	7.75	7.43	7.55	7.37	6.77	6.72	6.98	6.92	8.01	6.89	7.60	7.22	6.87	
Konno, Ryoma (JPN) (2004)														<i>Kishima (2022) - national high school championships biomechanics data collection</i>				
FINAL - 2022 Japanese National High School Championships (Naruto, JPN)																		
date	07-Aug-22	time	2.69	3.82	4.96	6.08	7.20	8.32	9.47	10.66	11.82	13.06	14.57	4 / 1				
reaction time	0.147	interval		1.13	1.14	1.12	1.12	1.12	1.15	1.19	1.16	1.24	1.51		3.39	3.39	3.59	
wind	-3.8 m/s	velocity	5.10	8.09	8.02	8.16	8.16	8.16	7.95	7.68	7.88	7.37	9.28	7.55	8.09	8.09	7.64	
Kopanayko, Serhiy (UKR) (1988)														<i>Blomkvist (2011) - www.sub13.se</i>				
Race 1 - 2011 European Team Championships (Stockholm, SWE)																		
date	19-Jun-11	time	2.68	3.76	4.88	5.96	7.04	8.11	9.26	10.40	11.62	12.84	14.57	4 / 6				
reaction time	0.166	interval		1.08	1.12	1.08	1.08	1.07	1.15	1.14	1.22	1.22	1.73		3.28	3.30	3.58	
wind	-0.8 m/s	velocity	5.12	8.46	8.16	8.46	8.46	8.54	7.95	8.02	7.49	7.49	8.10	7.55	8.36	8.31	7.66	
Korbacher, Andre (USA) (2005)														<i>Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record</i>				
FINAL - 2024 New Balance Indoor Grand Prix (Boston, MA) (TV Analysis)																		
date	04-Feb-24	time	2.54	3.58	4.62	5.68	6.72						7.67	8 / 7				
reaction time	0.148	interval		1.04	1.04	1.06	1.04						7.67	PB	3.14			
		velocity	5.40	8.79	8.79	8.62	8.79						1.83	7.82	8.73			
Korkealaakso, Antti (FIN) (1984)																		

		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Krejčí, Michal (CZE) (1981)																	
FINAL - 2014 Czech Republic National Championships (Ostrava, CZE)												<i>Feher (2014) - Final report from the Czech Republic national championships</i>					
date	02-Aug-14	time	2.74	3.93	5.11	6.29	7.48	8.72	9.94	11.17	12.42	13.72	15.45	1 / 8			
reaction time	0.147	interval		1.19	1.18	1.18	1.19	1.24	1.22	1.23	1.25	1.30	1.73		3.55	3.65	3.78
wind	-1.2 m/s	velocity	5.01	7.68	7.75	7.75	7.68	7.37	7.49	7.43	7.31	7.03	8.10	7.12	7.72	7.51	7.25
Heat 1 - 2014 Czech Republic National Championships (Ostrava, CZE)												<i>Feher (2014) - Final report from the Czech Republic national championships</i>					
date	02-Aug-14	time	2.75	3.97	5.16	6.35	7.54	8.72	9.90	11.14	12.38	13.64	15.27	2 / 4			
reaction time	0.106	interval		1.22	1.19	1.19	1.19	1.18	1.18	1.24	1.24	1.26	1.63		3.60	3.55	3.74
wind	-1.6 m/s	velocity	4.99	7.49	7.68	7.68	7.68	7.75	7.75	7.37	7.37	7.25	8.60	7.20	7.62	7.72	7.33
FINAL - 2013 Czech Republic National Championships (Tábor, CZE)												<i>Feher (2013) - Final report from the men's & women's Czech Republic national championships</i>					
date	15-Jun-13	time	2.75	3.88	5.00	6.13	7.24	8.38	9.50	10.65	11.84	13.03	14.62	8 / 7			
reaction time	0.149	interval		1.13	1.12	1.13	1.11	1.14	1.12	1.15	1.19	1.19	1.59		3.38	3.37	3.53
wind	0.4 m/s	velocity	4.99	8.09	8.16	8.09	8.23	8.02	8.16	7.95	7.68	7.68	8.82	7.52	8.11	8.14	7.77
Heat 1 - 2013 Czech Republic National Championships (Tábor, CZE)												<i>Feher (2013) - Final report from the men's & women's Czech Republic national championships</i>					
date	15-Jun-13	time	2.71	3.86	4.99	6.13	7.27	8.40	9.54	10.70	11.88	13.08	14.66	5 / 2			
reaction time	0.126	interval		1.15	1.13	1.14	1.14	1.13	1.14	1.16	1.18	1.20	1.58		3.42	3.41	3.54
wind	-0.6 m/s	velocity	5.06	7.95	8.09	8.02	8.02	8.09	8.02	7.88	7.75	7.62	8.87	7.50	8.02	8.04	7.75
Heat 2 - 2012 Czech Republic National Indoor Championships (Praha, CZE)												<i>Feher (2012) - Czech Republic indoor national championships - men's 60m hurdles</i>					
date	25-Feb-12	time	2.76	3.90	5.04	6.16	7.28						8.27	5 / 3			
reaction time	0.108	interval		1.14	1.14	1.12	1.12					0.99			3.40		
wind		velocity	4.97	8.02	8.02	8.16	8.16					9.82	7.26		8.06		
Krivák, Dominik (CZE) (1999)																	
FINAL - 2015 Czech Republic National U18 Indoor Championships (Praha, CZE) (91cm)												<i>Feher (2015) - Final report U18 & U20 Czech Republic indoor national champs</i>					
date	14-Feb-15	time	2.65	3.77	4.90	6.03	7.16						8.14	8 / 4			
reaction time	0.109	interval		1.12	1.13	1.13	1.13					0.98			3.38		
wind		velocity	5.18	8.16	8.09	8.09	8.09					9.92	7.37		8.11		
Kronberg, Robert (SWE) (1976)																	
FINAL - 2008 Windsprint (Sundsvall, SWE)												<i>(2008) - www.ssg.se/en/Windsprint/Split-times/</i>					
date	06-Jul-08	time		3.76			6.85			10.06			13.69	5 / 2			
reaction time		interval				3.09			3.21			3.63					
wind	0.5 m/s	velocity		6.08		8.87			8.54			8.90	8.04				
FINAL - 2007 Windsprint (Sundsvall, SWE)												<i>(2007) - www.ssg.se/en/Windsprint/Split-times/</i>					
date	24-Jul-07	time		3.68			6.82			10.01			13.65	1 / 1			
reaction time		interval				3.14			3.19			3.64					
wind	1.3 m/s	velocity		6.21		8.73			8.60			8.87	8.06				
FINAL - 2002 European Championships (Munich, GER)												<i>Graubner (2009) - http://www.fgs.uni-halle.de</i>					
date	10-Aug-02	time	2.63	3.67	4.71	5.76	6.77	7.85	8.89	9.95	11.06	12.15	13.63	1 / 7			
reaction time	0.134	interval		1.04	1.04	1.05	1.01	1.08	1.04	1.06	1.11	1.09	1.48		3.13	3.13	3.26
wind	0.4 m/s	velocity	5.22	8.79	8.79	8.70	9.05	8.46	8.79	8.62	8.23	8.39	9.47	8.07	8.76	8.76	8.41
Semi-Final 2 - 2002 European Championships (Munich, GER)												<i>Graubner (2009) - http://www.fgs.uni-halle.de</i>					
date	10-Aug-02	time	2.58	3.64	4.66	5.72	6.74	7.80	8.86	9.92	10.99	12.06	13.53	1 / 4			
reaction time	0.103	interval		1.06	1.02	1.06	1.02	1.06	1.06	1.06	1.07	1.07	1.47		3.14	3.14	3.20
wind	0.8 m/s	velocity	5.32	8.62	8.96	8.62	8.96	8.62	8.62	8.62	8.54	8.54	9.54	8.13	8.73	8.73	8.57
Kubaszewski, Mariusz (POL) (1982)																	
FINAL - 2007 European Cup (Munich, GER)												<i>Graubner (2007) - http://www.fgs.uni-halle.de</i>					
date	24-Jun-07	time	2.64	3.73	4.79	5.83	6.91	7.95	9.03	10.08	11.17	12.29	13.74	1 / 7			
reaction time	0.127	interval		1.09	1.06	1.04	1.08	1.04	1.08	1.05	1.09	1.12	1.45		3.19	3.20	3.26
wind	0.4 m/s	velocity	5.20	8.39	8.62	8.79	8.46	8.79	8.46	8.70	8.39	8.16	9.67	8.01	8.60	8.57	8.41
Kubeš, Jirí (CZE) (1995)																	
FINAL - 2014 Czech Republic National U20 Championships (Trinec, CZE) (99cm)												<i>Feher (2014) - Final report from the U18 & U20 Czech Republic national championships</i>					
date	28-Jun-14	time	2.79	3.93	5.10	6.25	7.40	8.56	9.75	10.93	12.14	13.40	15.29	1 / 7			
reaction time	0.186	interval		1.14	1.17	1.15	1.15	1.16	1.19	1.18	1.21	1.26	1.89		3.46	3.50	3.65
wind	-2.2 m/s	velocity	4.92	8.02	7.81	7.95	7.95	7.88	7.68	7.75	7.55	7.25	7.42	7.19	7.92	7.83	7.51
Heat 3 - 2014 Czech Republic National U20 Championships (Trinec, CZE) (99cm)												<i>Feher (2014) - Final report from the U18 & U20 Czech Republic national championships</i>					
date	28-Jun-14	time	2.80	3.95	5.11	6.25	7.43	8.62	9.80	11.00	12.20	13.43	15.06	5 / 3			
reaction time	0.203	interval		1.15	1.16	1.14	1.18	1.19	1.18	1.20	1.20	1.23	1.63		3.45	3.55	3.63
wind	-2.5 m/s	velocity	4.90	7.95	7.88	8.02	7.75	7.68	7.75	7.62	7.62	7.43	8.60	7.30	7.95	7.72	7.55
Kubota, Kohei (JPN) (1989)																	
FINAL - 2017 Nambu Memorial (Sapporo, JPN)												<i>(2017) - tfdata-store.com/2017/07/12/post-1025/</i>					

date	09-Jul-17	time	2.65	3.77	4.90	6.01	7.14	8.26	9.38	10.51	11.65	12.82	14.34	8 / 6				
reaction time		interval		1.12	1.13	1.11	1.13	1.12	1.12	1.13	1.14	1.17	1.52		3.36	3.37	3.44	
wind	2.7 m/s	velocity	5.18	8.16	8.09	8.23	8.09	8.16	8.16	8.09	8.02	7.81	9.22	7.67	8.16	8.14	7.97	
Kubota, Kosuke (JPN) (2001)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
FINAL A - 2016 Japanese Junior Olympics (Yokohama, JPN) (99cm)												(2016.10.30) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en						
date	30-Oct-16	time	2.72	3.84	4.96	6.10	7.24	8.37	9.52	10.67	11.82	12.99	14.60	7 / 1				
reaction time		interval		1.12	1.12	1.14	1.14	1.13	1.15	1.15	1.15	1.17	1.61		3.38	3.42	3.47	
wind	0.1 m/s	velocity	5.04	8.16	8.16	8.02	8.02	8.09	7.95	7.95	7.95	7.81	8.71	7.53	8.11	8.02	7.90	
Kubota, Taichi (JPN) (2000)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
FINAL - 2022 Michitaka Kinami Memorial (Osaka, JPN)												Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season						
date	01-May-22	time	2.69	3.79	4.86	5.94	7.02	8.08	9.17	10.25	11.35	12.48	13.95	2 / 7				
reaction time	0.165	interval		1.10	1.07	1.08	1.08	1.06	1.09	1.08	1.10	1.13	1.47	PB	3.25	3.23	3.31	
wind	0.8 m/s	velocity	5.10	8.31	8.54	8.46	8.46	8.62	8.39	8.46	8.31	8.09	9.54	7.89	8.44	8.49	8.28	
FINAL - 2018 Japanese National High School Championships (Nagoya, JPN) (99cm)												Yokota (2018) - 71st high school championships: JAF scientific committee - biomechanics data collection						
date	06-Aug-18	time	2.70	3.80	4.90	6.00	7.10	8.21	9.29	10.41	11.52	12.64	14.12	3 / 3				
reaction time		interval		1.10	1.10	1.10	1.10	1.11	1.08	1.12	1.11	1.12	1.48	PB	3.30	3.29	3.35	
wind	1.6 m/s	velocity	5.08	8.31	8.31	8.31	8.31	8.23	8.46	8.16	8.23	8.16	9.47	7.79	8.31	8.33	8.19	
Semi-Final 2 - 2016 Japanese National Youth Championships (Mizuho, JPN) (91cm)												(2016.11.08) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en						
date	21-Oct-16	time	2.78	3.91	5.01	6.12	7.21	8.31	9.41	10.49	11.61	12.72	14.19	5 / 3				
reaction time		interval		1.13	1.10	1.11	1.09	1.10	1.10	1.08	1.12	1.11	1.47		3.34	3.29	3.31	
wind	1.6 m/s	velocity	4.94	8.09	8.31	8.23	8.39	8.31	8.31	8.46	8.16	8.23	9.54	7.75	8.21	8.33	8.28	
Heat 5 - 2016 Japanese National Youth Championships (Mizuho, JPN) (91cm)												(2016.11.08) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en						
date	21-Oct-16	time	2.74	3.85	4.97	6.08	7.20	8.31	9.45	10.59	11.73	12.86	14.38	3 / 1				
reaction time		interval		1.11	1.12	1.11	1.12	1.11	1.14	1.14	1.14	1.13	1.52		3.34	3.37	3.41	
wind	1.3 m/s	velocity	5.01	8.23	8.16	8.23	8.16	8.23	8.02	8.02	8.02	8.09	9.22	7.65	8.21	8.14	8.04	
Kudo, Masayoshi (JPN)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
Heat 6 - 2016 Japanese National Youth Championships (Mizuho, JPN) (91cm)												(2016.11.08) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en						
date	21-Oct-16	time	2.70	3.80	4.89	6.00	7.09	8.28	9.41	10.57	11.70	12.91	14.44	2 / 3				
reaction time		interval		1.10	1.09	1.11	1.09	1.19	1.13	1.16	1.13	1.21	1.53		3.30	3.41	3.50	
wind	1.2 m/s	velocity	5.08	8.31	8.39	8.23	8.39	7.68	8.09	7.88	8.09	7.55	9.16	7.62	8.31	8.04	7.83	
Kulebyakin, Vyacheslav (URS) (1950)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
FINAL - 1975 International "Pravda" Sportfest (Sotschi, URS)												Artyshenko (1977) - zwischen den hürden geht es um die sekunde, teil 1						
date	30-May-75	time	2.23	3.33	4.49	5.58	6.63	7.70	8.79	9.92	10.98	12.07	13.80	/ 2				
reaction time		interval		1.10	1.16	1.09	1.05	1.07	1.09	1.13	1.06	1.09	1.73		3.35	3.21	3.28	
wind	-0.2 m/s	velocity	6.15	8.31	7.88	8.39	8.70	8.54	8.39	8.09	8.62	8.39	8.10	7.97	8.19	8.54	8.36	
Heat ??? - 1975 International "Pravda" Sportfest (Sotschi, URS)												Artyshenko (1977) - zwischen den hürden geht es um die sekunde, teil 1						
date	30-May-75	time	2.40	3.33	4.49	5.58	6.63	7.70	8.79	9.92	10.98	12.07	13.59	???				
reaction time		interval		1.14	1.12	1.12	1.10	1.08	1.12	1.14	1.16	1.22	1.52		3.18	3.21	3.28	
wind	???	velocity	5.72	8.02	8.16	8.16	8.31	8.46	8.16	8.02	7.88	7.49	9.22	8.09	8.62	8.54	8.36	
Kumada, Ryo (JPN) (1994)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
Heat 3 - 2017 Mito Invitational (Mito, JPN)												(2017) - tfdata-store.com/2017/05/06/post-423/						
date	05-May-17	time	2.77	3.93	5.05	6.16	7.30	8.42	9.55	10.67	11.83	12.99	14.42	9 / 4				
reaction time		interval	7 steps	1.16	1.12	1.11	1.14	1.12	1.13	1.12	1.16	1.16	1.43		3.39	3.39	3.44	
wind	-2.5 m/s	velocity	4.95	7.88	8.16	8.23	8.02	8.16	8.09	8.16	7.88	7.88	9.80	7.63	8.09	8.09	7.97	
Kumagai, Gen (JPN)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
FINAL - 2017 Osaka University Athletics Championships (Osaka, JPN)												(2017) - tfdata-store.com/2017/04/07/post-249/						
date	06-Apr-17	time	2.71	3.89	5.06	6.27	7.46	8.69	9.91	11.08	12.33	13.58	15.11	3 / 7				
reaction time		interval		1.18	1.17	1.21	1.19	1.23	1.22	1.17	1.25	1.25	1.53		3.56	3.64	3.67	
wind	-1.8 m/s	velocity	5.06	7.75	7.81	7.55	7.68	7.43	7.49	7.81	7.31	7.31	9.16	7.28	7.70	7.53	7.47	
Kumagai, Kai (JPN)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
U20 FINAL - 2018 National Sports Festival (Fukui, JPN) (99cm)												Joshi (2018) - research on athlete performance and technique- 2018 data book						
date	07-Oct-18	time	2.62	3.73	4.80	5.86	6.93	8.02	9.10	10.19	11.29	12.40	13.84	7 / 7				
reaction time	0.147	interval		1.11	1.07	1.06	1.07	1.09	1.08	1.09	1.10	1.11	1.44		3.24	3.24	3.30	
wind	1.5 m/s	velocity	5.24	8.23	8.54	8.62	8.54	8.39	8.46	8.39	8.31	8.23	9.74	7.95	8.46	8.46	8.31	
Kundert, Andreas (SUI) (1984)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
Heat 1 - 2008 Swiss National Championships (Fribourg, SUI)												Weber (2008) - wettkampfauswertung 110m hürden						
date	03-Aug-08	time	2.67	3.74	4.78	5.83	6.86	7.92	8.97	10.03	11.09	12.15	13.53	/ 1				
reaction time		interval		1.07	1.04	1.05	1.03	1.06	1.05	1.06	1.06	1.06	1.38		3.16	3.14	3.18	
wind	1.0 m/s	velocity	5.14	8.54	8.79	8.70	8.87	8.62	8.70	8.62	8.62	8.62	10.16	8.13	8.68	8.73	8.62	
Kuriki, Anthony Tyrell (JPN) (1996)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		

FINAL - 2020 All Japan Corporate Championships (Kumagaya, JPN)*Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season*

date	20-Sep-20	time	2.68	3.77	4.85	5.92	6.97	8.05	9.11	10.20	11.30	12.43	13.92	9 / 4			
reaction time	0.130	interval		1.09	1.08	1.07	1.05	1.08	1.06	1.09	1.10	1.13	1.49		3.24	3.19	3.32
wind	0.1 m/s	velocity	5.12	8.39	8.46	8.54	8.70	8.46	8.62	8.39	8.31	8.09	9.41	7.90	8.46	8.60	8.26

FINAL - 2020 Athlete Night Games (Fukui, JPN)*Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season*

date	29-Aug-20	time	2.65	3.72	4.77	5.83	6.85	7.90	8.95	10.04	11.10	12.19	13.64	2 / 8			
reaction time		interval	7 steps	1.07	1.05	1.06	1.02	1.05	1.05	1.09	1.06	1.09	1.45		3.18	3.12	3.24
wind	1.4 m/s	velocity	5.18	8.54	8.70	8.62	8.96	8.70	8.70	8.39	8.62	8.39	9.67	8.06	8.62	8.79	8.46

FINAL - 2020 Seiko Golden Grand Prix (Tokyo, JPN)*Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season*

date	23-Aug-20	time	2.63	3.72	4.79	5.85	6.91	7.97	9.05	10.13	11.21	12.31	13.79	3 / 4			
reaction time	0.108	interval	7 steps	1.09	1.07	1.06	1.06	1.06	1.08	1.08	1.08	1.10	1.48		3.22	3.20	3.26
wind	-0.4 m/s	velocity	5.22	8.39	8.54	8.62	8.62	8.62	8.46	8.46	8.46	8.31	9.47	7.98	8.52	8.57	8.41

FINAL - 2019 Japanese World Championships Trials (Fujiyoshida, JPN)*Shibayama (2019) - race analysis of men's 110m hurdles in the 2019 season*

date	01-Sep-19	time	2.60	3.69	4.73	5.77	6.82	7.86	8.91	9.97	11.03	12.10	13.59	8 / 5			
reaction time		interval	7 steps	1.09	1.04	1.04	1.05	1.04	1.05	1.06	1.06	1.07	1.49	PB	3.17	3.14	3.19
wind	1.4 m/s	velocity	5.28	8.39	8.79	8.79	8.70	8.79	8.70	8.62	8.62	8.54	9.41	8.09	8.65	8.73	8.60

FINAL - 2019 Japanese National Championships (Fukuoka, JPN)*Yamanaka (2019) - research on athlete performance and technique- 2019 data book*

date	30-Jun-19	time	2.64	3.74	4.79	5.87	6.94	8.01	9.10	10.20	11.30	12.42	13.92	3 / 5			
reaction time	0.136	interval	7 steps	1.10	1.05	1.08	1.07	1.07	1.09	1.10	1.10	1.12	1.50		3.23	3.23	3.32
wind	-0.6 m/s	velocity	5.20	8.31	8.70	8.46	8.54	8.54	8.39	8.31	8.31	8.16	9.35	7.90	8.49	8.49	8.26

FINAL - 2019 Asian Grand Prix 2 (Chongqing, CHN)*CAA Hurdle Development (2019)*

date	07-Jun-19	time	2.60	3.70	4.74	5.79	6.82	7.86	8.92	9.99	11.07	12.17	13.62	4 / 3			
reaction time	0.130	interval	7 steps	1.10	1.04	1.05	1.03	1.04	1.06	1.07	1.08	1.10	1.45		3.19	3.13	3.25
wind	1.2 m/s	velocity	5.28	8.31	8.79	8.70	8.87	8.79	8.62	8.54	8.46	8.31	9.67	8.08	8.60	8.76	8.44

A FINAL - 2018 National Sports Festival (Fukui, JPN)*Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season*

date	08-Oct-18	time	2.64	3.70	4.78	5.87	6.92	8.00	9.06	10.15	11.23	12.30	13.77	8 / 5			
reaction time	0.129	interval		1.06	1.08	1.09	1.05	1.08	1.06	1.09	1.08	1.07	1.47		3.23	3.19	3.24
wind	1.2 m/s	velocity	5.20	8.62	8.46	8.39	8.70	8.46	8.62	8.39	8.46	8.54	9.54	7.99	8.49	8.60	8.46

FINAL - 2018 Seiko Golden Grand Prix (Osaka, JPN)*Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season*

date	20-May-18	time	2.64	3.71	4.78	5.83	6.89	7.95	9.01	10.09	11.17	12.25	13.64	3 / 5			
reaction time	0.134	interval	7 steps	1.07	1.07	1.05	1.06	1.06	1.06	1.08	1.08	1.08	1.39		3.19	3.18	3.24
wind	-0.4 m/s	velocity	5.20	8.54	8.54	8.70	8.62	8.62	8.62	8.46	8.46	8.46	10.09	8.06	8.60	8.62	8.46

FINAL - 2018 Mikio Oda Memorial (Hiroshima, JPN)*Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season*

date	29-Apr-18	time	2.66	3.73	4.77	5.82	6.86	7.92	8.98	10.04	11.12	12.22	13.64	4 / 4			
reaction time		interval		1.07	1.04	1.05	1.04	1.06	1.06	1.06	1.08	1.10	1.42		3.16	3.16	3.24
wind	2.6 m/s	velocity	5.16	8.54	8.79	8.70	8.79	8.62	8.62	8.62	8.46	8.31	9.87	8.06	8.68	8.68	8.46

FINAL - 2017 All Star Night (Hiratsuka, JPN)*(2017) - tfdata-store.com/2017/07/26/post-1072/*

date	22-Jul-17	time	2.62	3.72	4.77	5.82	6.87	7.92	8.98	10.06	11.12	12.19	13.60	3 / 3			
reaction time	0.128	interval	7 steps	1.10	1.05	1.05	1.05	1.05	1.06	1.08	1.06	1.07	1.41		3.20	3.16	3.21
wind	1.8 m/s	velocity	5.24	8.31	8.70	8.70	8.70	8.70	8.62	8.46	8.62	8.54	9.94	8.09	8.57	8.68	8.54

FINAL - 2017 Japanese National Championships (Osaka, JPN)*(2017) - tfdata-store.com/2017/07/13/post-1040/*

date	25-Jun-17	time	2.67	3.74	4.81	5.86	6.93	8.00	9.07	10.16	11.25	12.36	13.80	2 / 6			
reaction time	0.126	interval	7 steps	1.07	1.07	1.05	1.07	1.07	1.07	1.09	1.09	1.11	1.44		3.19	3.21	3.29
wind	-0.2 m/s	velocity	5.14	8.54	8.54	8.70	8.54	8.54	8.54	8.39	8.39	8.23	9.74	7.97	8.60	8.54	8.33

Semi-Final 1 - 2017 Japanese National Championships (Osaka, JPN)*(2017) - tfdata-store.com/2017/07/13/post-1040/*

date	24-Jun-17	time	2.64	3.71	4.79	5.85	6.90	7.94	9.00	10.07	11.16	12.27	13.69	8 / 4			
reaction time	0.145	interval	7 steps	1.07	1.08	1.06	1.05	1.04	1.06	1.07	1.09	1.11	1.42		3.21	3.15	3.27
wind	0.6 m/s	velocity	5.20	8.54	8.46	8.62	8.70	8.79	8.62	8.54	8.39	8.23	9.87	8.04	8.54	8.70	8.39

Heat 1 - 2017 Japanese National Championships (Osaka, JPN)*(2017) - tfdata-store.com/2017/07/13/post-1040/*

date	24-Jun-17	time	2.66	3.73	4.79	5.85	6.90	7.95	9.01	10.08	11.16	12.26	13.68	5 / 3			
reaction time	0.140	interval	7 steps	1.07	1.06	1.06	1.05	1.05	1.06	1.07	1.08	1.10	1.42		3.19	3.16	3.25
wind	1.3 m/s	velocity	5.16	8.54	8.62	8.62	8.70	8.70	8.62	8.54	8.46	8.31	9.87	8.04	8.60	8.68	8.44

FINAL - 2017 Mikio Oda Memorial (Hiroshima, JPN)*(2017) - tfdata-store.com/2017/05/01/458/*

date	29-Apr-17	time	2.66	3.75	4.83	5.90	6.98	8.06	9.16	10.25	11.36	12.48	13.95	8 / 7			
reaction time		interval	7 steps	1.09	1.08	1.07	1.08	1.08	1.10	1.09	1.11	1.12	1.47		3.24	3.26	3.32
wind	1.5 m/s	velocity	5.16	8.39	8.46	8.54	8.46	8.46	8.31	8.39	8.23	8.16	9.54	7.89	8.46	8.41	8.26

FINAL - 2016 Kanto Student Championships (Sagamihara, JPN)*(2016.09.17) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en*

date	17-Sep-16	time	2.67	3.76	4.84	5.91	6.98	8.06	9.12	10.19	11.30	12.39	13.82	4 / 1			
reaction time		interval	7 steps	1.09	1.08	1.07	1.07	1.08	1.06	1.07	1.11	1.09	1.43		3.24	3.21	3.27

wind	3.2 m/s	velocity	5.14	8.39	8.46	8.54	8.54	8.46	8.62	8.54	8.23	8.39	9.80	7.96		8.46	8.54	8.39
FINAL - 2016 Japanese University Championships (Kumagaya, JPN)			<i>(2016.09.06) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>															
date	04-Sep-16	time	2.69	3.80	4.89	5.98	7.08	8.17	9.27	10.39	11.52	12.68		14.11	4 / 3			
reaction time	0.142	interval	7 steps	1.11	1.09	1.09	1.10	1.09	1.10	1.12	1.13	1.16	1.43			3.29	3.29	3.41
wind	-1.9 m/s	velocity	5.10	8.23	8.39	8.39	8.31	8.39	8.31	8.16	8.09	7.88	9.80	7.80		8.33	8.33	8.04
Semi-Final 2 - 2016 Japanese University Championships (Kumagaya, JPN)			<i>(2016.09.05) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>															
date	04-Sep-16	time	2.65	3.75	4.83	5.91	6.99	8.09	9.19	10.27	11.37	12.48		13.91	5 / 1			
reaction time	0.135	interval	7 steps	1.10	1.08	1.08	1.08	1.10	1.10	1.08	1.10	1.11	1.43			3.26	3.28	3.29
wind	0.7 m/s	velocity	5.18	8.31	8.46	8.46	8.46	8.31	8.31	8.46	8.31	8.23	9.80	7.91		8.41	8.36	8.33
FINAL - 2015 Japanese National Junior Championships (Nagoya, JPN) (99cm)			<i>Takashima (2015) - race analysis of 110m & 100m hurdles in Japan- results 2015 competitions</i>															
date	16-Oct-15	time	2.67	3.79	4.89	5.98	7.05	8.14	9.25	10.35	11.46	12.58		14.07	4 / 3			
reaction time		interval		1.12	1.10	1.09	1.07	1.09	1.11	1.10	1.11	1.12	1.49	PB		3.31	3.27	3.33
wind	0.1 m/s	velocity	5.14	8.16	8.31	8.39	8.54	8.39	8.23	8.31	8.23	8.16	9.41	7.82		8.28	8.39	8.23
Kurokawa, Kazuki (JPN) (2001)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
U20 FINAL - 2019 Japanese National U18/U20 Championships (Hiroshima, JPN) (99cm)			<i>Kijima (2019) - research on athlete performance and technique- 2019 data book</i>															
date	18-Oct-19	time	2.59	3.68	4.74	5.79	6.85	7.90	8.99	10.08	11.17	12.25		13.73	6 / 2			
reaction time	0.131	interval	7 steps	1.09	1.06	1.05	1.06	1.05	1.09	1.09	1.09	1.08	1.48			3.20	3.20	3.26
wind	-0.6 m/s	velocity	5.30	8.39	8.62	8.70	8.62	8.70	8.39	8.39	8.39	8.46	9.47	8.01		8.57	8.57	8.41
FINAL - 2019 National Sports Festival (Hitachinaka, JPN) (99cm)			<i>Enomoto (2019) - research on athlete performance and technique- 2019 data book</i>															
date	06-Oct-19	time	2.61	3.69	4.75	5.78	6.80	7.83	8.88	9.92	10.97	12.02		13.49	9 / 3			
reaction time	0.157	interval		1.08	1.06	1.03	1.02	1.03	1.05	1.04	1.05	1.05	1.47			3.17	3.10	3.14
wind	2.7 m/s	velocity	5.26	8.46	8.62	8.87	8.96	8.87	8.70	8.79	8.70	8.70	9.54	8.15		8.65	8.85	8.73
FINAL - 2019 Japanese National High School Championships (Okinawa, JPN) (99cm)			<i>Kota (2019) - 72nd high school champs: JAF scientific committee - biomechanics data</i>															
date	08-Aug-19	time	2.72	3.90	5.03	6.19	7.35	8.52	9.68	10.84	12.01	13.22		14.76	4 / 5			
reaction time		interval		1.18	1.13	1.16	1.16	1.17	1.16	1.16	1.17	1.21	1.54	PB		3.47	3.49	3.54
wind	-3.0 m/s	velocity	5.04	7.75	8.09	7.88	7.88	7.81	7.88	7.88	7.81	7.55	9.10	7.45		7.90	7.86	7.75
Kuusiniemi, Santeri (FIN) (1998)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2024 European Athletics Championships (Roma, ITA) (TV Analysis)			<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>															
date	08-Jun-24	time	2.65	3.76	4.78	5.83	6.86	7.96	9.00	10.07	11.20	12.33		13.84	1 / 7			
reaction time	0.157	interval		1.11	1.02	1.05	1.03	1.10	1.04	1.07	1.13	1.13	1.51			3.18	3.17	3.33
wind	0.6 m/s	velocity	5.18	8.23	8.96	8.70	8.87	8.31	8.79	8.54	8.09	8.09	9.28	7.95		8.62	8.65	8.23
Kwaou-Mathey, Just (FRA) (1999)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2024 World Athletics Indoor Championships (Glasgow, GBR) (TV Analysis)			<i>Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record</i>															
date	02-Mar-24	time	2.56	3.57	4.59	5.58	6.59							7.47	7 / 3			
reaction time	0.149	interval	7 steps	1.01	1.02	0.99	1.01						7.47			3.02		
		velocity	5.36	9.05	8.96	9.23	9.05						1.88	8.03		9.08		
FINAL - 2024 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)			<i>Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record</i>															
date	10-Feb-24	time	2.44	3.48	4.47	5.46	6.46							7.43	4 / 2			
reaction time	0.181	interval	7 steps	1.04	0.99	0.99	1.00						7.43			3.02		
		velocity	5.62	8.79	9.23	9.23	9.14						1.89	8.08		9.08		
FINAL - 2023 Prefontaine Classic (Eugene, OR)			<i>Omega Timing (2023) - diamond league race analysis</i>															
date	17-Sep-23	time	2.45	3.53	4.56	5.57	6.59	7.60	8.63	9.69	10.75	11.85		13.46	1 / 9			
reaction time	0.159	interval	7 steps	1.08	1.03	1.01	1.02	1.01	1.03	1.06	1.06	1.10	1.61			3.12	3.06	3.22
wind	0.9 m/s	velocity	5.60	8.46	8.87	9.05	8.96	9.05	8.87	8.62	8.62	8.31	8.71	8.17		8.79	8.96	8.52
Semi-Final 1 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)			<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>															
date	21-Aug-23	time	2.52	3.56	4.60	5.62	6.62	7.65	8.65	9.69	10.73	11.84		13.31	2 / 3			
reaction time	0.165	interval	7 steps	1.04	1.04	1.02	1.00	1.03	1.00	1.04	1.04	1.11	1.47			3.10	3.03	3.19
wind	-0.2 m/s	velocity	5.44	8.79	8.79	8.96	9.14	8.87	9.14	8.79	8.79	8.23	9.54	8.26		8.85	9.05	8.60
Heat 5 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)			<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>															
date	20-Aug-23	time	2.55	3.57	4.60	5.60	6.66	7.71	8.75	9.78	10.90	11.94		13.42	3 / 5			
reaction time	0.160	interval	7 steps	1.02	1.03	1.00	1.06	1.05	1.04	1.03	1.12	1.04	1.48			3.05	3.15	3.19
wind	-0.9 m/s	velocity	5.38	8.96	8.87	9.14	8.62	8.70	8.79	8.87	8.16	8.79	9.47	8.20		8.99	8.70	8.60
FINAL - 2023 French National Championships (Albi, FRA) (TV Analysis)			<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>															
date	29-Jul-23	time	2.54	3.56	4.56	5.56	6.58	7.60	8.60	9.64	10.70	11.74		13.19	3 / 3			
reaction time	0.206	interval	7 steps	1.02	1.00	1.00	1.02	1.02	1.00	1.04	1.06	1.04	1.45			3.02	3.04	3.14
wind	2.3 m/s	velocity	5.40	8.96	9.14	9.14	8.96	8.96	9.14	8.79	8.62	8.79	9.67	8.34		9.08	9.02	8.73
FINAL - 2023 Kamila Skolimowska Memorial (Silesia, POL)			<i>Omega Timing (2023) - diamond league race analysis</i>															
date	16-Jul-23	time	2.39	3.46	4.50	5.53	6.55	7.57	8.59	9.62	10.65	11.71		13.26	7 / 2			
reaction time	0.157	interval	7 steps	1.07	1.04	1.03	1.02	1.02	1.02	1.03	1.03	1.06	1.55			3.14	3.06	3.12

wind	0.3 m/s	velocity	5.74	8.54	8.79	8.87	8.96	8.96	8.96	8.87	8.87	8.62	9.05	8.30	8.73	8.96	8.79	
Heat 1 - 2023 Kamila Skolimowska Memorial (Silesia, POL)														<i>Omega Timing (2023) - diamond league race analysis</i>				
date	16-Jul-23	time	2.47	3.56	4.59	5.60	6.61	7.62	8.63	9.65	10.68	11.72		13.27	6 / 2			
reaction time	0.169	interval	7 steps	1.09	1.03	1.01	1.01	1.01	1.01	1.02	1.03	1.04	1.55		3.13	3.03	3.09	
wind	0.3 m/s	velocity	5.55	8.39	8.87	9.05	9.05	9.05	9.05	8.96	8.87	8.79	9.05	8.29	8.76	9.05	8.87	
FINAL - 2023 Athletissima (Lausanne, SUI)														<i>Omega Timing (2023) - diamond league race analysis</i>				
date	30-Jun-23	time	2.43	3.50	4.53	5.53	6.55	7.56	8.60	9.65	10.70	11.79		13.37	3 / 3			
reaction time	0.134	interval	7 steps	1.07	1.03	1.00	1.02	1.01	1.04	1.05	1.05	1.09	1.58		3.10	3.07	3.19	
wind	-1.0 m/s	velocity	5.65	8.54	8.87	9.14	8.96	9.05	8.79	8.70	8.70	8.39	8.87	8.23	8.85	8.93	8.60	
FINAL - 2023 Meeting de Paris (Paris, FRA)														<i>Omega Timing (2023) - diamond league race analysis</i>				
date	09-Jun-23	time	2.40	3.45	4.45	5.43	6.43	7.43	8.44	9.46	10.50	11.55		13.09	7 / 2			
reaction time	0.171	interval	7 steps	1.05	1.00	0.98	1.00	1.00	1.01	1.02	1.04	1.05	1.54	PB	3.03	3.01	3.11	
wind	-0.5 m/s	velocity	5.72	8.70	9.14	9.33	9.14	9.14	9.05	8.96	8.79	8.70	9.10	8.40	9.05	9.11	8.82	
Heat 2 - 2023 Meeting de Paris (Paris, FRA)														<i>Omega Timing (2023) - diamond league race analysis</i>				
date	09-Jun-23	time	2.40	3.46	4.47	5.47	6.47	7.48	8.51	9.55	10.61	11.67		13.25	5 / 3			
reaction time	0.171	interval	7 steps	1.06	1.01	1.00	1.00	1.01	1.03	1.04	1.06	1.06	1.58	PB	3.07	3.04	3.16	
wind	-0.6 m/s	velocity	5.72	8.62	9.05	9.14	9.14	9.05	8.87	8.79	8.62	8.62	8.87	8.30	8.93	9.02	8.68	
FINAL - 2023 Golden Gala Pietro Mennea (Firenze, ITA) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>				
date	02-Jun-23	time	2.54	3.57	4.60	5.63	6.63	7.66	8.68	9.74	10.78	11.84		13.35	1 / 5			
reaction time	0.161	interval	7 steps	1.03	1.03	1.00	1.03	1.02	1.06	1.04	1.06	1.51		3.09	3.05	3.16		
wind	-0.2 m/s	velocity	5.40	8.87	8.87	8.87	9.14	8.87	8.96	8.62	8.79	8.62	9.28	8.24	8.87	8.99	8.68	
FINAL - 2022 Weltklasse (Zürich, SUI) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
date	08-Sep-22	time	2.58	3.64	4.70	5.74	6.80	7.84	8.88	9.98	11.01	12.13		13.73	2 / 8			
reaction time	0.150	interval	7 steps	1.06	1.06	1.04	1.06	1.04	1.04	1.10	1.03	1.12	1.60		3.16	3.14	3.25	
wind	-1.0 m/s	velocity	5.32	8.62	8.62	8.79	8.62	8.79	8.79	8.31	8.87	8.16	8.76	8.01	8.68	8.73	8.44	
FINAL - 2022 European Athletics Championships (Munich, GER) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
date	17-Aug-22	time	2.56	3.58	4.58	5.58	6.58	7.58	8.64	9.70	10.76	11.86		13.33	3 / 3			
reaction time	0.178	interval	7 steps	1.02	1.00	1.00	1.00	1.00	1.06	1.06	1.06	1.10	1.47		3.02	3.06	3.22	
wind	-0.2 m/s	velocity	5.36	8.96	9.14	9.14	9.14	9.14	8.62	8.62	8.62	8.31	9.54	8.25	9.08	8.96	8.52	
FINAL - 2022 Herculis Meeting International d'Athlétisme (Monaco, MON) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
date	10-Aug-22	time	2.53	3.63	4.73	5.73	6.76	7.83	8.90	10.00	11.06	12.16		13.78	1 / 8			
reaction time	0.144	interval	7 steps	1.10	1.10	1.00	1.03	1.07	1.07	1.10	1.06	1.10	1.62		3.20	3.17	3.26	
wind	0.6 m/s	velocity	5.42	8.31	8.31	9.14	8.87	8.54	8.54	8.31	8.62	8.31	8.65	7.98	8.57	8.65	8.41	
Semi-Final 3 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
date	17-Jul-22	time	2.60	3.63	4.65	5.65	6.67	7.67	8.67	9.70	10.76	11.83		13.25	4 / 5			
reaction time	0.148	interval	7 steps	1.03	1.02	1.00	1.02	1.00	1.00	1.03	1.06	1.07	1.42		3.05	3.02	3.16	
wind	2.5 m/s	velocity	5.28	8.87	8.96	9.14	8.96	9.14	9.14	8.87	8.62	8.54	9.87	8.30	8.99	9.08	8.68	
Heat 4 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
date	16-Jul-22	time	2.56	3.64	4.66	5.66	6.66	7.70	8.70	9.73	10.76	11.86		13.32	2 / 3			
reaction time	0.150	interval	7 steps	1.08	1.02	1.00	1.00	1.04	1.00	1.03	1.03	1.10	1.46		3.10	3.04	3.16	
wind	0.2 m/s	velocity	5.36	8.46	8.96	9.14	9.14	8.79	9.14	8.87	8.87	8.31	9.60	8.26	8.85	9.02	8.68	
FINAL - 2022 Meeting de Paris (Paris, FRA) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
date	18-Jun-22	time	2.56	3.60	4.62	5.62	6.62	7.66	8.66	9.70	10.74	11.80		13.27	2 / 3			
reaction time	0.169	interval	7 steps	1.04	1.02	1.00	1.00	1.04	1.00	1.04	1.04	1.06	1.47	PB	3.06	3.04	3.14	
wind	-0.2 m/s	velocity	5.36	8.79	8.96	9.14	9.14	8.79	9.14	8.79	8.79	8.62	9.54	8.29	8.96	9.02	8.73	
FINAL - 2021 Meeting de Paris (Paris, FRA) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>				
date	28-Aug-21	time	2.60	3.64	4.68	5.72	6.74	7.76	8.78	9.84	10.92	12.00		13.50	1 / 7			
reaction time	0.161	interval	7 steps	1.04	1.04	1.04	1.02	1.02	1.02	1.06	1.08	1.08	1.50		3.12	3.06	3.22	
wind	0.7 m/s	velocity	5.28	8.79	8.79	8.79	8.96	8.96	8.96	8.62	8.46	8.46	9.35	8.15	8.79	8.96	8.52	
FINAL - 2021 Meeting Elite en Salle de L'Eure (Val-de-Reuil, FRA) (TV Analysis)														<i>Henson (2021) - men's 60m hurdles world record season - Grant Holloway</i>				
date	14-Feb-21	time	2.60	3.68	4.72	5.74	6.82							7.83	1 / 5			
reaction time	0.168	interval	7 steps	1.08	1.04	1.02	1.08						1.01		3.14			
		velocity	5.28	8.46	8.79	8.96	8.46						9.62	7.66	8.73			
Heat 2 - 2021 Meeting Elite en Salle de L'Eure (Val-de-Reuil, FRA) (TV Analysis)														<i>Henson (2021) - men's 60m hurdles world record season - Grant Holloway</i>				
date	14-Feb-21	time	2.68	3.76	4.80	5.86	6.90							7.83	2 / 3			
reaction time	0.158	interval	7 steps	1.08	1.04	1.06	1.04						0.93		3.18			
		velocity	5.12	8.46	8.79	8.62	8.79						10.45	7.66	8.62			
FINAL - 2020 French National Championships (Albi, FRA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2020 year end hurdle report</i>				

date	13-Sep-20	time	2.63	3.71	4.69	5.77	6.75	7.87	8.90	9.95	11.00	12.08		13.61	3 / 3			
reaction time	0.199	interval	7 steps	1.08	0.98	1.08	0.98	1.12	1.03	1.05	1.05	1.08	1.53	PB		3.14	3.13	3.18
wind	0.0 m/s	velocity	5.22	8.46	9.33	8.46	9.33	8.16	8.87	8.70	8.70	8.46	9.16	8.08		8.73	8.76	8.62

FINAL - 2020 Meeting Pro Athlé Tour de Marseille (Marseille, FRA) (TV Analysis)*Henson (2020) - Athlete First: 2020 year end hurdle report*

date	03-Sep-20	time	2.70	3.80	4.91	5.89	7.00	8.04	9.05	10.20	11.31	12.39		13.99	2 / 6			
reaction time		interval	7 steps	1.10	1.11	0.98	1.11	1.04	1.01	1.15	1.11	1.08	1.60			3.19	3.16	3.34
wind	-0.3 m/s	velocity	5.08	8.31	8.23	9.33	8.23	8.79	9.05	7.95	8.23	8.46	8.76	7.86		8.60	8.68	8.21

Lai Junjie (CHN) (2003)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
Heat 4 - 2021 Chinese National Championships (Chongqing, CHN)	<i>CAA Hurdle Development (2021)</i>																	
date	25-Jun-21	time	2.75	3.90	5.04	6.16	7.29	8.42	9.56	10.74	11.94	13.16		14.78	9 / 6			
reaction time	0.181	interval	1.15	1.14	1.12	1.13	1.13	1.14	1.18	1.20	1.22	1.62			3.41	3.40	3.60	
wind	-0.2 m/s	velocity	4.99	7.95	8.02	8.16	8.09	8.09	8.02	7.75	7.62	7.49	8.65	7.44		8.04	8.06	7.62

FINAL - 2021 National Grand Prix (Chengdu, CHN)*CAA Hurdle Development (2021)*

date	02-Apr-21	time	2.78	3.95	5.06	6.18	7.27	8.38	9.48	10.60	11.75	12.90		14.43	3 / 3			
reaction time	0.176	interval	1.17	1.11	1.12	1.09	1.11	1.10	1.12	1.15	1.15	1.53				3.40	3.30	3.42
wind	-0.1 m/s	velocity	4.94	7.81	8.23	8.16	8.39	8.23	8.31	8.16	7.95	7.95	9.16	7.62		8.06	8.31	8.02

Heat 2 - 2021 National Grand Prix (Chengdu, CHN)*CAA Hurdle Development (2021)*

date	02-Apr-21	time	2.72	3.88	5.02	6.10	7.20	8.30	9.42	10.56	11.68	12.84		14.38	3 / 2			
reaction time	0.189	interval	1.16	1.14	1.08	1.10	1.10	1.12	1.14	1.12	1.16	1.54				3.38	3.32	3.42
wind	0.3 m/s	velocity	5.04	7.88	8.02	8.46	8.31	8.31	8.16	8.02	8.16	7.88	9.10	7.94		8.11	8.26	8.02

B FINAL - 2021 National Indoor Grand Prix (Chengdu, CHN)*CAA Hurdle Development (2021)*

date	13-Mar-21	time	2.80	3.98	5.14	6.28	7.44							8.48	5 / 4			
reaction time	0.197	interval	1.18	1.16	1.14	1.16											3.48	
		velocity	4.90	7.75	7.88	8.02	7.88							9.35	7.08		7.88	

Lakka, Elmo (FIN) (1993)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
Repechage 1 - 2024 Olympic Games (Paris, FRA)	<i>Paris 2024 Olympc Games - Results Book (2024)</i>																	
date	06-Aug-24	time	2.44	3.53	4.58	5.61	6.65	7.70	8.76	9.84	10.94	12.07		13.75	3 / 7			
reaction time	0.140	interval	7 steps	1.09	1.05	1.03	1.04	1.05	1.06	1.08	1.10	1.13	1.68			3.17	3.15	3.31
wind	0.2 m/s	velocity	5.62	8.39	8.70	8.87	8.79	8.70	8.62	8.46	8.31	8.09	8.35	8.00		8.65	8.70	8.28

Heat 5 - 2024 Olympic Games (Paris, FRA)*Paris 2024 Olympc Games - Results Book (2024)*

date	04-Aug-24	time	2.42	3.51	4.56	5.59	6.62	7.67	8.73	9.80	10.89	12.05		13.84	4 / 7			
reaction time	0.125	interval	7 steps	1.09	1.05	1.03	1.03	1.05	1.06	1.07	1.09	1.16	1.79			3.17	3.14	3.32
wind	0.7 m/s	velocity	5.67	8.39	8.70	8.87	8.87	8.70	8.62	8.54	8.39	7.88	7.83	7.95		8.65	8.73	8.26

Heat 2 - 2022 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)*Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record*

date	17-Feb-22	time	2.53	3.62	4.72	5.80	6.85							7.98	8 / 7			
reaction time	0.152	interval	7 steps	1.09	1.10	1.08	1.05							1.13			3.27	
		velocity	5.42	8.39	8.31	8.46	8.70							8.60	7.52		8.39	

FINAL - 2021 Villa de Madrid (Madrid, ESP) (TV Analysis)*Henson (2021) - men's 60m hurdles world record season - Grant Holloway*

date	24-Feb-21	time	2.45	3.50	4.58	5.65	6.69							7.77	7 / 8			
reaction time		interval	7 steps	1.05	1.08	1.07	1.04						1.08				3.20	
		velocity	5.60	8.70	8.46	8.54	8.79						9.00	7.72			8.57	

Heat 1 - 2021 Villa de Madrid (Madrid, ESP) (TV Analysis)*Henson (2021) - men's 60m hurdles world record season - Grant Holloway*

date	24-Feb-21	time	2.50	3.56	4.60	5.67	6.70							7.75	6 / 3			
reaction time	0.142	interval	7 steps	1.06	1.04	1.07	1.03						1.05				3.17	
		velocity	5.49	8.62	8.79	8.54	8.87						9.26	7.74			8.65	

FINAL - 2020 Paavo Nurmi Games (Turku, FIN) (TV Analysis)*Henson (2020) - Athlete First: 2020 year end hurdle report*

date	11-Aug-20	time	2.62	3.70	4.77	5.84	6.87	7.91	9.01	10.08	11.18	12.28		13.79	4 / 5				
reaction time	0.186	interval		1.08	1.07	1.07	1.03	1.04	1.10	1.07	1.10	1.10	1.51				3.22	3.17	3.27
wind	1.1 m/s	velocity	5.24	8.46	8.54	8.54	8.87	8.79	8.31	8.54	8.31	8.31	9.28	7.98			8.52	8.65	8.39

Larrinaga, Abdel-Kader (POL) (1994)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
Semi-Final 3 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)	<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>																	
date	20-Mar-22	time	2.56	3.63	4.66	5.70	6.76							7.70	2 / 8			
reaction time	0.137	interval	7 steps	1.07	1.03	1.04	1.06						0.94				3.14	
		velocity	5.36	8.54	8.87	8.79	8.62						10.34	7.79			8.73	

Lavanne, Cédric (FRA) (1980)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10			
Heat 3 - 2002 European Championships (Munich, GER)	<i>Graubner (2009) - http://www.fgs.uni-halle.de</i>																		
date	09-Aug-02	time	2.65	3.73	4.76	5.81	6.84	7.87	8.91	9.98	11.03	12.13		13.58	1 / 2				
reaction time	0.142	interval		1.08	1.03	1.05	1.03	1.03	1.04	1.07	1.05	1.10	1.45				3.16	3.10	3.22
wind	2.0 m/s	velocity	5.18	8.46	8.87	8.70	8.87	8.87	8.79	8.54	8.70	8.31	9.67	8.10			8.68	8.85	8.52

		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Laviolette, Jeanice (FRA) (2000)																		
FINAL - 2021 Meeting Elite en Salle de L'Eure (Val-de-Reuil, FRA) (TV Analysis)															<i>Henson (2021) - men's 60m hurdles world record season - Grant Holloway</i>			
date	14-Feb-21	time	2.60	3.68	4.74	5.84	6.90							8.01	2 / 6			
reaction time	0.158	interval		1.08	1.06	1.10	1.06						1.11			3.24		
		velocity	5.28	8.46	8.62	8.31	8.62						8.76	7.49		8.46		
FINAL - 2020 French National Championships (Albi, FRA) (TV Analysis)															<i>Henson (2020) - Athlete First: 2020 year end hurdle report</i>			
date	13-Sep-20	time	2.56	3.64	4.69	5.74	6.71	7.76	8.81	9.83	10.87	11.95		13.52	5 / 2			
reaction time	0.222	interval	7 steps	1.08	1.05	1.05	0.97	1.05	1.05	1.02	1.04	1.08	1.57	PB		3.18	3.07	3.14
wind	0.0 m/s	velocity	5.36	8.46	8.70	8.70	9.42	8.70	8.70	8.96	8.79	8.46	8.93	8.14		8.62	8.93	8.73
Leaston, Justin (USA) (2001)																		
FINAL - 2022 NCAA Championships (Eugene, OR) (TV Analysis)															<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>			
date	10-Jun-22	time	2.52	3.58	4.63	5.66	6.70	7.74	8.77	9.83	10.89	11.98		13.50	3 / 7			
reaction time		interval		1.06	1.05	1.03	1.04	1.04	1.03	1.06	1.06	1.09	1.52			3.14	3.11	3.21
wind	0.0 m/s	velocity	5.44	8.62	8.70	8.87	8.79	8.79	8.87	8.62	8.62	8.39	9.22	8.15		8.73	8.82	8.54
Lecoeur, Romain (FRA) (1997)																		
Heat 1 - 2024 Meeting de Paris (Paris, FRA)															<i>Omega Timing (2024) - diamond league race analysis</i>			
date	07-Jul-24	time	2.51	3.60	4.62	5.63	6.66	7.69	8.72	9.75	10.80	11.86		13.47	1 / 8			
reaction time	0.177	interval	7 steps	1.09	1.02	1.01	1.03	1.03	1.03	1.03	1.05	1.06	1.61			3.12	3.09	3.14
wind	0.1 m/s	velocity	5.47	8.39	8.96	9.05	8.87	8.87	8.87	8.70	8.62	8.71	8.17			8.79	8.87	8.73
FINAL - 2023 French National Championships (Albi, FRA) (TV Analysis)															<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>			
date	29-Jul-23	time	2.56	3.60	4.64	5.68	6.70	7.74	8.78	9.82	10.90	12.00		13.51	1 / 6			
reaction time	0.203	interval	7 steps	1.04	1.04	1.04	1.02	1.04	1.04	1.04	1.08	1.10	1.51			3.12	3.10	3.22
wind	2.3 m/s	velocity	5.36	8.79	8.79	8.79	8.96	8.79	8.79	8.79	8.46	8.31	9.28	8.14		8.79	8.85	8.52
Heat 1 - 2021 Meeting Elite en Salle de L'Eure (Val-de-Reuil, FRA) (TV Analysis)															<i>Henson (2021) - men's 60m hurdles world record season - Grant Holloway</i>			
date	14-Feb-21	time	2.60	3.74	4.82	5.92	6.98							8.01	2 / 3			
reaction time	0.116	interval	7 steps	1.14	1.08	1.10	1.06						1.03			3.32		
		velocity	5.28	8.02	8.46	8.31	8.62						9.44	7.49		8.26		
Lee Jung-Joon (KOR) (1984)																		
FINAL - 2017 Korean National Championships (Kimchun, KOR)															<i>Hong (2018) - performance of men's 110m hurdles using rhythmic units</i>			
date	02-Jun-17	time	2.62	3.72	4.82	5.92	6.95	8.05	9.12	10.19	11.29	12.39		13.86	/ 2			
reaction time		interval		1.10	1.10	1.10	1.03	1.10	1.07	1.07	1.10	1.10	1.47			3.30	3.20	3.27
wind	2.6 m/s	velocity	5.24	8.31	8.31	8.31	8.87	8.31	8.54	8.54	8.31	8.31	9.54	7.94		8.31	8.57	8.39
FINAL - 2008 Seiko Super Grand Prix (Kawasaki, JPN)															<i>Akirabun (2009) - race analysis of 2008 men's and women's 100m and 110m & 100m hurdles</i>			
date	23-Sep-08	time	2.48	3.57	4.65	5.71	6.78	7.83	8.87	9.95	11.03	12.10		13.71	/ 1			
reaction time		interval		1.09	1.08	1.06	1.07	1.05	1.04	1.08	1.08	1.07	1.61			3.23	3.16	3.23
wind	-0.7 m/s	velocity	5.53	8.39	8.46	8.62	8.54	8.70	8.79	8.46	8.46	8.54	8.71	8.02		8.49	8.68	8.49
Heat 1 - 2008 Nambu Chuhei Memorial (Harodate, JPN)															<i>Akirabun (2009) - race analysis of 2008 men's and women's 100m and 110m & 100m hurdles</i>			
date	06-Jul-08	time	2.52	3.61	4.67	5.73	6.78	7.84	8.92	10.01	11.09	12.21		13.89	/ 1			
reaction time		interval		1.09	1.06	1.06	1.05	1.06	1.08	1.09	1.08	1.12	1.68			3.21	3.19	3.29
wind	0.2 m/s	velocity	5.44	8.39	8.62	8.62	8.70	8.62	8.46	8.39	8.46	8.16	8.35	7.92		8.54	8.60	8.33
Lei Yiwen (CHN) (1993)																		
A-FINAL - 2019 Chinese Indoor National Grand Prix 3 (Xi'an, CHN)															<i>CAA Hurdle Development (2019)</i>			
date	28-Feb-19	time	2.64	3.74	4.86	5.96	7.08							8.06	2 / 3			
reaction time		interval		1.10	1.12	1.10	1.12						0.98			3.32		
		velocity	5.20	8.31	8.16	8.31	8.16						9.92	7.44		8.26		
Lemonious, Phillip (JAM) (1998)																		
FINAL - 2023 NCAA Championships (Austin, TX) (TV Analysis)															<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>			
date	09-Jun-23	time	2.50	3.54	4.57	5.57	6.60	7.61	8.65	9.69	10.72	11.76		13.24	5 / 1			
reaction time		interval	7 steps	1.04	1.03	1.00	1.03	1.01	1.04	1.04	1.03	1.04	1.48			3.07	3.08	3.11
wind	1.8 m/s	velocity	5.49	8.79	8.87	9.14	8.87	9.05	8.79	8.79	8.87	8.79	9.47	8.31		8.93	8.90	8.82
FINAL - 2021 NCAA Championships (Eugene, OR) (TV Analysis)															<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>			
date	11-Jun-21	time	2.57	3.60	4.70	5.70	6.73	7.73	8.77	9.80	10.83	11.90		13.39	5 / 3			
reaction time	0.150	interval	7 steps	1.03	1.10	1.00	1.03	1.00	1.04	1.03	1.03	1.07	1.49	PB		3.13	3.07	3.13
wind	-0.6 m/s	velocity	5.34	8.87	8.31	9.14	8.87	9.14	8.79	8.87	8.87	8.54	9.41	8.22		8.76	8.93	8.76
Levin, Anton (SWE) (1992)																		
FINAL 2 - 2017 Windsprint (Sundsvall, SWE)															<i>(2017) - www.windsprint/Splittider/</i>			
date	30-Jul-17	time	2.68	3.78	4.87	5.95	7.03	8.14	9.23	10.34	11.47	12.61		14.09	/ 1			
reaction time		interval		1.10	1.09	1.08	1.08	1.11	1.09	1.11	1.13	1.14	1.48			3.27	3.28	3.38
wind	1.0 m/s	velocity	5.12	8.31	8.39	8.46	8.46	8.23	8.39	8.23	8.09	8.02	9.47	7.81		8.39	8.36	8.11
FINAL - 2017 Windsprint (Sundsvall, SWE)															<i>(2017) - www.windsprint/Splittider/</i>			

date	30-Jul-17	time	2.66	3.78	4.87	5.93	7.02	8.10	9.20	10.33	11.43	12.56	14.06	/ 1			
reaction time		interval		1.12	1.09	1.06	1.09	1.08	1.10	1.13	1.10	1.13	1.50		3.27	3.27	3.36
wind	1.0 m/s	velocity	5.16	8.16	8.39	8.62	8.39	8.46	8.31	8.09	8.31	8.09	9.35	7.82	8.39	8.39	8.16

Levy, Ronald (JAM) (1992)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2022 Müller Indoor Grand Prix (Birmingham, GBR) (TV Analysis)												<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>					
date	19-Feb-22	time	2.52	3.60	4.68	5.75	6.81					7.87	1 / 8				
reaction time	0.146	interval	7 steps	1.08	1.08	1.07	1.06				1.06			3.23			
wind		velocity	5.44	8.46	8.46	8.54	8.62				9.17	7.62		8.49			
FINAL - 2021 Boris Hanzeković Memorial (Zagreb, CRO) (TV Analysis)												<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>					
date	14-Sep-21	time	2.48	3.52	4.52	5.52	6.50	7.50	8.50	9.53	10.56	11.63	13.11	4 / 2			
reaction time	0.156	interval	7 steps	1.04	1.00	1.00	0.98	1.00	1.00	1.03	1.03	1.07	1.48		3.04	2.98	
wind	0.7 m/s	velocity	5.53	8.79	9.14	9.14	9.33	9.14	9.14	8.87	8.87	8.54	9.47	8.39	9.02	9.20	
FINAL - 2021 Weltklasse (Zürich, SUI) (TV Analysis)												<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>					
date	09-Sep-21	time	2.46	3.50	4.54	5.54	6.56	7.58	8.58	9.58	10.62	11.66	13.06	7 / 2			
reaction time	0.128	interval	7 steps	1.04	1.04	1.00	1.02	1.02	1.00	1.00	1.04	1.04	1.40		3.08	3.04	
wind	0.6 m/s	velocity	5.58	8.79	8.79	9.14	8.96	8.96	9.14	9.14	8.79	8.79	10.01	8.42	8.90	9.02	
FINAL - 2021 Meeting de Paris (Paris, FRA) (TV Analysis)												<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>					
date	28-Aug-21	time	2.48	3.54	4.58	5.60	6.60	7.62	8.64	9.68	10.72	11.78	13.24	4 / 4			
reaction time	0.144	interval	7 steps	1.06	1.04	1.02	1.00	1.02	1.02	1.04	1.04	1.06	1.46		3.12	3.04	
wind	0.7 m/s	velocity	5.53	8.62	8.79	8.96	9.14	8.96	8.96	8.79	8.79	8.62	9.60	8.31	8.79	9.02	
FINAL - 2021 Athletissima (Lausanne, SUI) (TV Analysis)												<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>					
date	26-Aug-21	time	2.48	3.56	4.60	5.64	6.68	7.70	8.72	9.76	10.80	11.86	13.40	4 / 5			
reaction time	0.113	interval	7 steps	1.08	1.04	1.04	1.04	1.02	1.02	1.04	1.04	1.06	1.54		3.16	3.08	
wind	2.5 m/s	velocity	5.53	8.46	8.79	8.79	8.79	8.96	8.96	8.79	8.79	8.62	9.10	8.21	8.68	8.90	
FINAL - 2020 Olympic Games (Tokyo, JPN) (TV Analysis)												<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>					
date	06-Aug-21	time	2.46	3.50	4.54	5.56	6.58	7.60	8.60	9.62	10.66	11.72	13.10	5 / 3			
reaction time	0.146	interval	7 steps	1.04	1.04	1.02	1.02	1.02	1.00	1.02	1.04	1.06	1.38		3.10	3.04	
wind	-0.5 m/s	velocity	5.58	8.79	8.79	8.96	8.96	8.96	9.14	8.96	8.79	8.62	10.16	8.40	8.85	9.02	
FINAL - 2021 Müller British Grand Prix (Gateshead, GBR) (TV Analysis)												<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>					
date	13-Jul-21	time	2.54	3.60	4.64	5.66	6.66	7.68	8.70	9.70	10.76	11.82	13.22	4 / 1			
reaction time	0.150	interval	7 steps	1.06	1.04	1.02	1.00	1.02	1.02	1.00	1.06	1.06	1.40		3.12	3.04	
wind	0.8 m/s	velocity	5.40	8.62	8.79	8.96	9.14	8.96	8.96	9.14	8.62	8.62	10.01	8.32	8.79	9.02	
FINAL - 2021 István Gyulai Memorial (Székesfehérvár, HUN) (TV Analysis)												<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>					
date	06-Jul-21	time	2.43	3.46	4.52	5.57	6.59	7.61	8.65	9.68	10.70	11.74	13.25	3 / 4			
reaction time	0.140	interval	7 steps	1.03	1.06	1.05	1.02	1.02	1.04	1.03	1.02	1.04	1.51		3.14	3.08	
wind	-0.1 m/s	velocity	5.65	8.87	8.62	8.70	8.96	8.96	8.79	8.87	8.96	8.79	9.28	8.30	8.73	8.90	
Heat 1 - 2021 Jamaican National Championships (Kingston, JAM) (TV Analysis)												<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>					
date	26-Jun-21	time	2.53	3.53	4.56	5.56	6.53	7.53	8.53	9.53	10.56	11.60	13.08	5 / 2			
reaction time		interval	7 steps	1.00	1.03	1.00	0.97	1.00	1.00	1.00	1.03	1.04	1.48		3.03	2.97	
wind	1.3 m/s	velocity	5.42	9.14	8.87	9.14	9.42	9.14	9.14	9.14	8.87	8.79	9.47	8.41	9.05	9.23	
Semi-Final 1 - 2019 IAAF World Championships (Doha, QAT)												<i>CAA Hurdle Development (2019)</i>					
date	02-Oct-19	time	2.62	3.70	4.74	5.78	6.80	7.82	8.86	9.90	10.96	12.04	13.60	7 / 7			
reaction time	0.163	interval	7 steps	1.08	1.04	1.04	1.02	1.02	1.04	1.04	1.06	1.08	1.56	DQ	3.16	3.08	
wind	1.1 m/s	velocity	5.24	8.46	8.79	8.79	8.96	8.96	8.79	8.79	8.62	8.46	8.99	8.09	8.68	8.90	
FINAL - 2019 AG Memorial van Damme (Brussels, BEL) (TV Analysis)												<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>					
date	06-Sep-19	time	2.50	3.54	4.60	5.64	6.66	7.66	8.68	9.72	10.78	11.82	13.31	3 / 2			
reaction time	0.134	interval	7 steps	1.04	1.06	1.04	1.02	1.00	1.02	1.04	1.06	1.04	1.49		3.14	3.04	
wind	0.0 m/s	velocity	5.49	8.79	8.62	8.79	8.96	9.14	8.96	8.79	8.62	8.79	9.41	8.26	8.73	9.02	
FINAL - 2019 Meeting de Paris (Paris, FRA) (TV Analysis)												<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>					
date	24-Aug-19	time	2.52	3.56	4.60	5.62	6.64	7.66	8.70	9.70	10.74	11.78	13.22	8 / 4			
reaction time	0.151	interval	7 steps	1.04	1.04	1.02	1.02	1.02	1.04	1.00	1.04	1.04	1.44		3.10	3.08	
wind	0.8 m/s	velocity	5.44	8.79	8.79	8.96	8.96	8.96	8.79	9.14	8.79	8.79	9.74	8.32	8.85	8.90	
FINAL - 2019 Müller Anniversary Games (London, GBR) (TV Analysis)												<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>					
date	21-Jul-19	time	2.43	3.51	4.56	5.61	6.63	7.70	8.73	9.82	10.92	11.99	13.60	2 / 7			
reaction time	0.165	interval	7 steps	1.08	1.05	1.05	1.02	1.07	1.03	1.09	1.10	1.07	1.61		3.18	3.12	
wind	0.4 m/s	velocity	5.65	8.46	8.70	8.70	8.96	8.54	8.87	8.39	8.31	8.54	8.71	8.09	8.62	8.79	
FINAL - 2019 Athletissima (Lausanne, SUI) (TV Analysis)												<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>					
date	05-Jul-19	time	2.46	3.50	4.52	5.50	6.50	7.50	8.50	9.52	10.68	11.72	13.25	6 / 3			
reaction time	0.138	interval	7 steps	1.04	1.02	0.98	1.00	1.00	1.00	1.02	1.16	1.04	1.53		3.04	3.00	

wind	1.0 m/s	velocity	5.58	8.79	8.96	9.33	9.14	9.14	9.14	8.96	7.88	8.79	9.16	8.30	9.02	9.14	8.52	
FINAL - 2019 Prefontaine Classic (Stanford, CA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>				
date	30-Jun-19	time	2.60	3.63	4.66	5.73	6.73	7.73	8.75	9.78	10.83	11.86		13.30	6 / 4			
reaction time	0.224	interval	7 steps	1.03	1.03	1.07	1.00	1.00	1.02	1.03	1.05	1.03	1.44		3.13	3.02	3.11	
wind	0.3 m/s	velocity	5.28	8.87	8.87	8.54	9.14	9.14	8.96	8.87	8.70	8.87	9.74	8.27	8.76	9.08	8.82	
FINAL - 2018 IAAF Continental Cup (Ostrava, CZE) (TV Analysis)														<i>Henson (2021) - Athlete First: 2018 year end hurdle report</i>				
date	09-Sep-18	time	2.46	3.50	4.52	5.54	6.54	7.56	8.58	9.60	10.62	11.68		13.12	3 / 2			
reaction time	0.115	interval	7 steps	1.04	1.02	1.02	1.00	1.02	1.02	1.02	1.02	1.06	1.44		3.08	3.04	3.10	
wind	0.9 m/s	velocity	5.58	8.79	8.96	8.96	9.14	8.96	8.96	8.96	8.96	8.62	9.74	8.38	8.90	9.02	8.85	
FINAL - 2018 AG Memorial van Damme (Brussels, BEL) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>				
date	31-Aug-18	time	2.50	3.56	4.60	5.62	6.62	7.64	8.68	9.74	10.86	11.96		13.47	4 / 7			
reaction time	0.148	interval	7 steps	1.06	1.04	1.02	1.00	1.02	1.04	1.06	1.12	1.10	1.51		3.12	3.06	3.28	
wind	-0.1 m/s	velocity	5.49	8.62	8.79	8.96	9.14	8.96	8.79	8.62	8.16	8.31	9.28	8.17	8.79	8.96	8.36	
FINAL - 2018 Müller Grand Prix (Birmingham, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>				
date	18-Aug-18	time	2.42	3.54	4.56	5.58	6.58	7.58	8.62	9.62	10.66	11.72		13.22	3 / 2			
reaction time	0.132	interval	7 steps	1.12	1.02	1.02	1.00	1.00	1.04	1.00	1.04	1.06	1.50		3.16	3.04	3.10	
wind	1.3 m/s	velocity	5.67	8.16	8.96	8.96	9.14	9.14	8.79	9.14	8.79	8.62	9.35	8.32	8.68	9.02	8.85	
FINAL - 2018 Müller Anniversary Games (London, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>				
date	22-Jul-18	time	2.48	3.52	4.56	5.54	6.56	7.56	8.56	9.58	10.62	11.70		13.13	5 / 1			
reaction time	0.134	interval	7 steps	1.04	1.04	0.98	1.02	1.00	1.00	1.02	1.04	1.08	1.43		3.06	3.02	3.14	
wind	0.2 m/s	velocity	5.53	8.79	8.79	9.33	8.96	9.14	9.14	8.96	8.79	8.46	9.80	8.38	8.96	9.08	8.73	
FINAL - 2018 Meeting de Paris (Paris, FRA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>				
date	30-Jun-18	time	2.46	3.50	4.54	5.58	6.58	7.58	8.60	9.62	10.70	11.76		13.18	3 / 1			
reaction time	0.123	interval	7 steps	1.04	1.04	1.04	1.00	1.00	1.02	1.02	1.08	1.06	1.42		3.12	3.02	3.16	
wind	1.5 m/s	velocity	5.58	8.79	8.79	8.79	9.14	9.14	8.96	8.96	8.46	8.62	9.87	8.35	8.79	9.08	8.68	
FINAL - 2018 Prefontaine Classic (Eugene, OR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>				
date	26-May-18	time	2.56	3.60	4.62	5.64	6.66	7.70	8.74	9.76	10.80	11.82		13.26	2 / 5			
reaction time	0.171	interval	7 steps	1.04	1.02	1.02	1.02	1.04	1.04	1.02	1.04	1.02	1.44		3.08	3.10	3.08	
wind	3.0 m/s	velocity	5.36	8.79	8.96	8.96	8.96	8.79	8.79	8.96	8.79	8.96	9.74	8.30	8.90	8.85	8.90	
FINAL - 2018 Shanghai Diamond League (Shanghai, CHN) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>				
date	12-May-18	time	2.52	3.56	4.60	5.62	6.66	7.70	8.74	9.78	10.82	11.88		13.33	4 / 4			
reaction time	0.122	interval	7 steps	1.04	1.04	1.02	1.04	1.04	1.04	1.04	1.04	1.06	1.45		3.10	3.12	3.14	
wind	0.2 m/s	velocity	5.44	8.79	8.79	8.96	8.79	8.79	8.79	8.79	8.79	8.62	9.67	8.25	8.85	8.79	8.73	
FINAL - 2018 Müller Indoor Grand Prix (Glasgow, GBR)														<i>(2018.05.01) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>				
date	25-Feb-18	time	2.54	3.59	4.61	5.63	6.63							7.49	/ 1			
reaction time	0.148	interval		1.05	1.02	1.02	1.00							0.86		3.09		
		velocity	5.40	8.70	8.96	8.96	9.14							11.30		8.01		8.87
FINAL - 2017 Memorial van Damme (Brussels, BEL) (TV Analysis)														<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>				
date	01-Sep-17	time	2.54	3.58	4.62	5.62	6.64	7.68	8.72	9.78	10.86	11.92		13.41	8 / 5			
reaction time	0.108	interval	7 steps	1.04	1.04	1.00	1.02	1.04	1.04	1.06	1.08	1.06	1.49		3.08	3.10	3.20	
wind	0.5 m/s	velocity	5.40	8.79	8.79	9.14	8.96	8.79	8.79	8.62	8.46	8.62	9.41	8.20	8.90	8.85	8.57	
FINAL - 2017 Meeting de Paris (Paris, FRA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>				
date	01-Jul-17	time	2.44	3.46	4.50	5.50	6.48	7.50	8.54	9.54	10.58	11.66		13.05	8 / 1			
reaction time	0.133	interval	7 steps	1.02	1.04	1.00	0.98	1.02	1.04	1.00	1.04	1.08	1.39	PB		3.06	3.04	3.12
wind	-0.1 m/s	velocity	5.62	8.96	8.79	9.14	9.33	8.96	8.79	9.14	8.79	8.46	10.09	8.43	8.96	9.02	8.79	
FINAL - 2017 Jamaican National Championships (Kingston, JAM) (TV Analysis)														<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>				
date	24-Jun-17	time	2.43	3.46	4.48	5.50	6.50	7.50	8.52	9.53	10.56	11.62		13.13	5 / 2			
reaction time		interval	7 steps	1.03	1.02	1.02	1.00	1.00	1.02	1.01	1.03	1.06	1.51		3.07	3.02	3.10	
wind	0.7 m/s	velocity	5.65	8.87	8.96	8.96	9.14	9.14	8.96	9.05	8.87	8.62	9.28	8.38	8.93	9.08	8.85	
FINAL - 2017 Prefontaine Classic (Eugene, OR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>				
date	27-May-17	time	2.44	3.48	4.50	5.52	6.52	7.54	8.54	9.58	10.60	11.64		13.10	1 / 2			
reaction time	0.151	interval	7 steps	1.04	1.02	1.02	1.00	1.02	1.00	1.04	1.02	1.04	1.46	PB		3.08	3.02	3.10
wind	0.9 m/s	velocity	5.62	8.79	8.96	8.96	9.14	8.96	9.14	8.79	8.96	8.79	9.60	8.40	8.90	9.08	8.85	
Lewis-Banks, Matthew (USA) (1999) H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10														<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>				
Heat 3 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)														<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>				
date	24-Jun-24	time	2.63	3.72	4.79	5.86	6.92	8.05	9.20	10.30	11.56	12.73		14.31	1 / 9			
reaction time		interval		1.09	1.07	1.07	1.06	1.13	1.15	1.10	1.26	1.17	1.58		3.23	3.34	3.53	
wind	1.8 m/s	velocity	5.22	8.39	8.54	8.54	8.62	8.09	7.95	8.31	7.25	7.81	8.87	7.69	8.49	8.21	7.77	

Li Fuqiang (CHN) (2000)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
U20 Heat 3 - 2019 Chinese National Youth Games (Taiyuan, CHN) (99cm) <i>CAA Hurdle Development (2019)</i>																		
date	14-Aug-19	time	2.65	3.77	4.90	6.01	7.15	8.26	9.39	10.55	11.68	12.83		14.35	8 / 6			
reaction time	0.162	interval		1.12	1.13	1.11	1.14	1.11	1.13	1.16	1.13	1.15	1.52			3.36	3.38	3.44
wind	0.6 m/s	velocity	5.18	8.16	8.09	8.23	8.02	8.23	8.09	7.88	8.09	7.95	9.22	7.67		8.16	8.11	7.97
Li Guancheng (CHN) (2002)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
A FINAL - 2021 National Indoor Grand Prix (Chengdu, CHN) <i>CAA Hurdle Development (2021)</i>																		
date	13-Mar-21	time	2.70	3.92	5.08	6.22	7.35							8.34	2 / 3			
reaction time	0.201	interval		1.22	1.16	1.14	1.13					0.99	PB			3.52		
wind		velocity	5.08	7.49	7.88	8.02	8.09					9.82	7.19			7.79		
Li Haifeng (CHN) (1989)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2017 Chinese National Games (Tianjin, CHN) <i>Henson (2017) - coaching observations</i>																		
date	03-Sep-17	time	2.70	3.80	4.91	5.99	7.05	8.15	9.24	10.34	11.48	12.61		14.05	8 / 8			
reaction time		interval		1.10	1.11	1.08	1.06	1.10	1.09	1.10	1.14	1.13	1.44			3.29	3.25	3.37
wind	0.3 m/s	velocity	5.08	8.31	8.23	8.46	8.62	8.31	8.39	8.31	8.02	8.09	9.74	7.83		8.33	8.44	8.14
Li Huaihai (CHN) (1999)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Heat 4 - 2021 Chinese National Championships (Chongqing, CHN) <i>CAA Hurdle Development (2021)</i>																		
date	25-Jun-21	time	2.68	3.77	4.85	5.94	7.02	8.11	9.21	10.31	11.41	12.56		14.06	8 / 2			
reaction time	0.169	interval	7 steps	1.09	1.08	1.09	1.08	1.09	1.10	1.10	1.10	1.15	1.50			3.26	3.27	3.35
wind	-0.2 m/s	velocity	5.12	8.39	8.46	8.39	8.46	8.39	8.31	8.31	8.31	7.95	9.35	7.82		8.41	8.39	8.19
FINAL - 2020 Chinese Olympic Trials (Shaoxing, CHN) <i>CAA Hurdle Development (2021)</i>																		
date	12-Jun-21	time	2.65	3.75	4.84	5.93	7.02	8.11	9.19	10.29	11.39	12.51		14.00	7 / 4			
reaction time	0.139	interval	7 steps	1.10	1.09	1.09	1.09	1.09	1.08	1.10	1.10	1.12	1.49	PB		3.28	3.26	3.32
wind	0.9 m/s	velocity	5.18	8.31	8.39	8.39	8.39	8.39	8.46	8.31	8.31	8.16	9.41	7.86		8.36	8.41	8.26
Heat 1 - 2020 Chinese Olympic Trials (Shaoxing, CHN) <i>CAA Hurdle Development (2021)</i>																		
date	12-Jun-21	time	2.55	3.64	4.72	5.79	6.87	7.96	9.04	10.20	11.34	12.50		14.09	8 / 3			
reaction time	0.154	interval	7 steps	1.09	1.08	1.07	1.08	1.09	1.08	1.16	1.14	1.16	1.59			3.24	3.25	3.46
wind	-0.4 m/s	velocity	5.38	8.39	8.46	8.54	8.46	8.39	8.46	7.88	8.02	7.88	8.82	7.81		8.46	8.44	7.92
Heat 2 - 2021 East China District Meeting (Zhaoqing, CHN) <i>CAA Hurdle Development (2021)</i>																		
date	24-Apr-21	time	2.66	3.76	4.86	5.94	7.03	8.13	9.25	10.36	11.51	12.66		14.20	4 / 2			
reaction time	0.162	interval	7 steps	1.10	1.10	1.08	1.09	1.10	1.12	1.11	1.15	1.15	1.54			3.28	3.31	3.41
wind	-1.2 m/s	velocity	5.16	8.31	8.31	8.46	8.39	8.31	8.16	8.23	7.95	7.95	9.10	7.75		8.36	8.28	8.04
FINAL - 2020 Chinese National Championships (Shaoxing, CHN) <i>CAA Hurdle Development (2020)</i>																		
date	16-Sep-20	time	2.66	3.77	4.86	5.94	7.00	8.07	9.15	10.26	11.40	12.55		14.07	3 / 6			
reaction time	0.171	interval		1.11	1.09	1.08	1.06	1.07	1.08	1.11	1.14	1.15	1.52			3.28	3.21	3.40
wind	0.4 m/s	velocity	5.16	8.23	8.39	8.46	8.62	8.54	8.46	8.23	8.02	7.95	9.22	7.82		8.36	8.54	8.06
Heat 1 - 2020 Chinese National Championships (Shaoxing, CHN) <i>CAA Hurdle Development (2020)</i>																		
date	16-Sep-20	time	2.69	3.77	4.93	6.03	7.13	8.23	9.32	10.45	11.57	12.72		14.25	3 / 6			
reaction time	0.185	interval		1.08	1.16	1.10	1.10	1.10	1.09	1.13	1.12	1.15	1.53			3.34	3.29	3.40
wind	0.3 m/s	velocity	5.10	8.46	7.88	8.31	8.31	8.31	8.39	8.09	8.16	7.95	9.16	7.72		8.21	8.33	8.06
B-FINAL - 2019 Chinese Indoor National Grand Prix 2 (Nanjing, CHN)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
<i>CAA Hurdle Development (2019)</i>																		
date	24-Feb-19	time	2.67	3.80	4.89	6.03	7.15							8.15	2 / 3			
reaction time		interval		1.13	1.09	1.14	1.12					1.00	PB			3.36		
wind		velocity	5.14	8.09	8.39	8.02	8.16					9.72	7.36			8.16		
Li Jiming (CHN) (1996)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2019 Chinese National Grand Prix Final (Daqing, CHN) <i>CAA Hurdle Development (2019)</i>																		
date	24-Aug-19	time	2.71	3.80	4.89	5.94	6.99	8.06	9.15	10.24	11.35	12.46		13.97	6 / 3			
reaction time	0.213	interval		1.09	1.09	1.05	1.05	1.07	1.09	1.09	1.11	1.11	1.51			3.23	3.21	3.31
wind	-0.1 m/s	velocity	5.06	8.39	8.39	8.70	8.70	8.54	8.39	8.39	8.23	8.23	9.28	7.87		8.49	8.54	8.28
Heat 1 - 2019 Chinese National Grand Prix Final (Daqing, CHN) <i>CAA Hurdle Development (2019)</i>																		
date	23-Aug-19	time	2.70	3.80	4.89	5.97	7.06	8.16	9.26	10.36	11.48	12.64		14.23	8 / 3			
reaction time	0.192	interval		1.10	1.09	1.08	1.09	1.10	1.10	1.10	1.12	1.16	1.59			3.27	3.29	3.38
wind	-0.2 m/s	velocity	5.08	8.31	8.39	8.46	8.39	8.31	8.31	8.31	8.16	7.88	8.82	7.73		8.39	8.33	8.11
FINAL - 2019 Chinese World Championship Trials (Shenyang, CHN) <i>CAA Hurdle Development (2019)</i>																		
date	02-Aug-19	time	2.64	3.73	4.80	5.91	7.00	8.09	9.18	10.29	11.40	12.58		14.14	1 / 6			
reaction time	0.176	interval		1.09	1.07	1.11	1.09	1.09	1.09	1.11	1.11	1.18	1.56			3.27	3.27	3.40
wind	0.0 m/s	velocity	5.20	8.39	8.54	8.23	8.39	8.39	8.39	8.23	8.23	7.75	8.99	7.78		8.39	8.39	8.06
Heat 2 - 2019 Chinese World Championship Trials (Shenyang, CHN) <i>CAA Hurdle Development (2019)</i>																		
date	02-Aug-19	time	2.71	3.85	4.96	6.06	7.17	8.31	9.46	10.63	11.81	13.01		14.69	3 / 4			
reaction time	0.191	interval		1.14	1.11	1.10	1.11	1.14	1.15	1.17	1.18	1.20	1.68			3.35	3.40	3.55

wind	-0.2 m/s	velocity	5.06	8.02	8.23	8.31	8.23	8.02	7.95	7.81	7.75	7.62	8.35	7.49	121 of 283	M110H athlete	8.19	8.06	7.72
FINAL - 2019 Chinese National Championships (Shenyang, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	08-Jul-19	time	2.65	3.74	4.80	5.87	6.95	8.02	9.12	10.21	11.31	12.46		13.96	1 / 6				
reaction time	0.180	interval		1.09	1.06	1.07	1.08	1.07	1.10	1.09	1.10	1.15	1.50			3.22	3.25	3.34	
wind	0.1 m/s	velocity	5.18	8.39	8.62	8.54	8.46	8.54	8.31	8.39	8.31	7.95	9.35	7.88		8.52	8.44	8.21	
Heat 2 - 2019 Chinese National Championships (Shenyang, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	08-Jul-19	time	2.65	3.75	4.80	5.87	6.94	8.01	9.09	10.21	11.34	12.48		14.03	5 / 3				
reaction time	0.182	interval		1.10	1.05	1.07	1.07	1.07	1.08	1.12	1.13	1.14	1.55			3.22	3.22	3.39	
wind	0.4 m/s	velocity	5.18	8.31	8.70	8.54	8.54	8.54	8.46	8.16	8.09	8.02	9.05	7.84		8.52	8.52	8.09	
FINAL - 2019 Chinese National Grand Prix 4 (Luoyang, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	30-May-19	time	2.70	3.78	4.86	5.92	7.00	8.06	9.17	10.26	11.36	12.47		14.00	5 / 2				
reaction time	0.183	interval		1.08	1.08	1.06	1.08	1.06	1.11	1.09	1.10	1.11	1.53			3.22	3.25	3.30	
wind	0.0 m/s	velocity	5.08	8.46	8.46	8.62	8.46	8.62	8.23	8.39	8.31	8.23	9.16	7.86		8.52	8.44	8.31	
FINAL - 2019 Chinese National Grand Prix 3 (Jinhau, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	23-May-19	time	2.66	3.74	4.80	5.88	6.92	8.02	9.08	10.16	11.28	12.40		13.89	6 / 3				
reaction time	0.181	interval		1.08	1.06	1.08	1.04	1.10	1.06	1.08	1.12	1.12	1.49			3.22	3.20	3.32	
wind	2.5 m/s	velocity	5.16	8.46	8.62	8.46	8.79	8.31	8.62	8.46	8.16	8.16	9.41	7.92		8.52	8.57	8.26	
Heat 2 - 2019 Chinese National Grand Prix 2 (Huangshi, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	13-Apr-19	time	2.70	3.80	4.90	6.00	7.10	8.22	9.34	10.47	11.64	12.83		14.48	1 / 5				
reaction time	0.179	interval		1.10	1.10	1.10	1.10	1.12	1.12	1.13	1.17	1.19	1.65			3.30	3.34	3.49	
wind	0.1 m/s	velocity	5.08	8.31	8.31	8.31	8.31	8.16	8.16	8.09	7.81	7.68	8.50	7.60		8.31	8.21	7.86	
Heat 4 - 2019 Chinese National Grand Prix 1 (Zhaoqing, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	08-Apr-19	time	2.73	3.85	4.96	6.06	7.14	8.26	9.37	10.52	11.68	12.87		14.46	6 / 2				
reaction time	0.190	interval		1.12	1.11	1.10	1.08	1.12	1.11	1.15	1.16	1.19	1.59			3.33	3.31	3.50	
wind	-0.8 m/s	velocity	5.03	8.16	8.23	8.31	8.46	8.16	8.23	7.95	7.88	7.68	8.82	7.61		8.23	8.28	7.83	
B-FINAL - 2019 Chinese Indoor National Grand Prix Final (Hangzhou, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	20-Mar-19	time	2.68	3.80	4.88	5.97	7.04							7.96	3 / 1				
reaction time		interval		1.12	1.08	1.09	1.07						0.92			3.29			
		velocity	5.12	8.16	8.46	8.39	8.54						10.57	7.54		8.33			
A-FINAL - 2019 Chinese Indoor National Grand Prix 1 (Nanjing, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	20-Feb-19	time	2.65	3.79	4.83	5.94	7.02							7.95	4 / 2				
reaction time		interval		1.14	1.04	1.11	1.08						0.93			3.29			
		velocity	5.18	8.02	8.79	8.23	8.46						10.45	7.55		8.33			
FINAL - 2018 Chinese National Championships (Taiyuan, CHN)															<i>Henson (2018) - coaching observations</i>				
date	16-Sep-18	time	2.70	3.80	4.87	5.94	7.05	8.12	9.23	10.39	11.53	12.68		14.26	1 / 6				
reaction time		interval		1.10	1.07	1.07	1.11	1.07	1.11	1.16	1.14	1.15	1.58			3.24	3.29	3.45	
wind	-0.3 m/s	velocity	5.08	8.31	8.54	8.54	8.23	8.54	8.23	7.88	8.02	7.95	8.87	7.71		8.46	8.33	7.95	
Heat 1 - 2018 Chinese National Championships (Taiyuan, CHN)															<i>Henson (2018) - coaching observations</i>				
date	15-Sep-18	time	2.67	3.77	4.84	5.91	6.97	8.06	9.14	10.23	11.36	12.51		14.07	4 / 4				
reaction time		interval		1.10	1.07	1.07	1.06	1.09	1.08	1.09	1.13	1.15	1.56			3.24	3.23	3.37	
wind	-0.2 m/s	velocity	5.14	8.31	8.54	8.54	8.62	8.39	8.46	8.39	8.09	7.95	8.99	7.82		8.46	8.49	8.14	
FINAL - 2018 National Grand Prix Final (Guiyang, CHN) (Altitude)															<i>Zhang (2019) - comparative analysis characteristics Chinese elite men's 110m hurdles in different age groups</i>				
date	17-Jun-18	time	2.70	3.81	4.89	5.97	7.03	8.10	9.18	10.28	11.40	12.58		14.12	1 / 6				
reaction time		interval		1.11	1.08	1.08	1.06	1.07	1.08	1.10	1.12	1.18	1.54			3.27	3.21	3.40	
wind	-0.3 m/s	velocity	5.08	8.23	8.46	8.46	8.62	8.54	8.46	8.31	8.16	7.75	9.10	7.79		8.39	8.54	8.06	
Li Ning (CHN) (2000)																			
Decathlon - Heat 1 - 2021 Chinese National Championships (Chongqing, CHN)															<i>CAA Hurdle Development (2021)</i>				
date	27-Jun-21	time	2.83	4.04	5.25	6.45	7.67	8.92	10.19	11.46	12.78	14.10		15.84	2 / 5				
reaction time	0.133	interval	7 steps	1.21	1.21	1.20	1.22	1.25	1.27	1.27	1.32	1.32	1.74			3.62	3.74	3.91	
wind	0.5 m/s	velocity	4.85	7.55	7.55	7.62	7.49	7.31	7.20	7.20	6.92	6.92	8.06	6.94		7.57	7.33	7.01	
Li Shuo (CHN) (1994)																			
Decathlon - Heat 3 - 2019 Chinese National Championships (Shenyang, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	11-Jul-19	time	2.87	4.07	5.25	6.42	7.59	8.76	9.94	11.13	12.34	13.56		15.19	3 / 3				
reaction time	0.179	interval		1.20	1.18	1.17	1.17	1.17	1.18	1.19	1.21	1.22	1.63			3.55	3.52	3.62	
wind	0.0 m/s	velocity	4.78	7.62	7.75	7.81	7.81	7.81	7.75	7.68	7.55	7.49	8.60	7.24		7.72	7.79	7.57	
Li Tong (CHN) (1967)																			
Heat 1 - 1992 Fresno Relays (Fresno, CA)															<i>Wang (2009) - research of training characteristic during different stages in the development of 110m hurdles</i>				
date	04-Apr-92	time	2.54	3.64	4.67	5.71	6.76	7.83	8.90	9.99	11.09	12.21		13.59	1 / 1				
reaction time		interval		1.10	1.03	1.04	1.05	1.07	1.07	1.09	1.10	1.12	1.38			3.17	3.19	3.31	

wind 0.0 m/s velocity 5.40 8.31 8.87 8.79 8.70 8.54 8.54 8.39 8.31 8.16 10.16 8.09 8.65 8.60 8.28

														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Li Xiaodong (CHN) (1995)																													
														Decathlon - Heat 1 - 2021 Chinese National Championships (Chongqing, CHN)			CAA Hurdle Development (2021)												
date	27-Jun-21	time	2.73	3.90	5.02	6.14	7.27	8.39	9.52	10.68	11.84	13.01		14.55	7 / 1														
reaction time	0.154	interval	1.17	1.12	1.12	1.13	1.12	1.13	1.16	1.16	1.17	1.54				3.41	3.38	3.49											
wind	0.5 m/s	velocity	5.03	7.81	8.16	8.16	8.09	8.16	8.09	7.88	7.88	7.81	9.10	7.56		8.04	8.11	7.86											
Decathlon - Heat 2 - 2019 Chinese National Grand Prix Final (Daqing, CHN)																													
date	23-Aug-19	time	2.79	3.94	5.09	6.26	7.41	8.58	9.78	10.94	12.11	13.30		14.86	4 / 1														
reaction time	0.165	interval	1.15	1.15	1.17	1.15	1.17	1.20	1.16	1.17	1.19	1.56				3.47	3.52	3.52											
wind	?? m/s	velocity	4.92	7.95	7.95	7.81	7.95	7.81	7.62	7.88	7.81	7.68	8.99	7.40		7.90	7.79	7.79											
Decathlon - Heat 3 - 2019 Chinese National Championships (Shenyang, CHN)																													
date	11-Jul-19	time	2.74	3.90	5.05	6.19	7.34	8.50	9.66	10.87	12.06	13.26		14.79	2 / 2														
reaction time	0.153	interval	1.16	1.15	1.14	1.15	1.16	1.16	1.21	1.19	1.20	1.53				3.45	3.47	3.60											
wind	0.0 m/s	velocity	5.01	7.88	7.95	8.02	7.95	7.88	7.88	7.55	7.68	7.62	9.16	7.44		7.95	7.90	7.62											
Lichtenegger, Elmar (AUT) (1974)																													
														Heat 5 - 2002 European Championships (Munich, GER)			Graubner (2009) - http://www.fgs.uni-halle.de												
date	09-Aug-02	time	2.57	3.62	4.65	5.67	6.70	7.75	8.82	9.88	10.97	12.07		13.53	/ 2														
reaction time	0.150	interval	1.05	1.03	1.02	1.03	1.05	1.07	1.06	1.09	1.10	1.46				3.10	3.15	3.25											
wind	0.0 m/s	velocity	5.34	8.70	8.87	8.96	8.87	8.70	8.54	8.62	8.39	8.31	9.60	8.13		8.85	8.70	8.44											
Semi-Final 1 - 1999 IAAF World Championships (Sevilla, ESP)																													
date	24-Aug-99	time	2.55	3.57	4.62	5.66	6.69	7.73	8.78	9.85	10.90	12.00		13.52	5 / 8														
reaction time	0.133	interval	1.02	1.05	1.04	1.03	1.04	1.05	1.07	1.05	1.10	1.52				3.11	3.12	3.22											
wind	0.0 m/s	velocity	5.38	8.96	8.70	8.79	8.87	8.79	8.70	8.54	8.70	8.31	9.22	8.14		8.82	8.79	8.52											
Lin Ken (CHN) (1999)																													
														Heat 1 - 2021 Chinese National Championships (Chongqing, CHN)			CAA Hurdle Development (2021)												
date	25-Jun-21	time	2.69	3.78	4.88	6.02	7.10	8.22	9.37	10.50	11.67	12.84		14.41	2 / 7														
reaction time	0.190	interval	1.09	1.10	1.14	1.08	1.12	1.15	1.13	1.17	1.17	1.57		PB		3.33	3.35	3.47											
wind	-1.0 m/s	velocity	5.10	8.39	8.31	8.02	8.46	8.16	7.95	8.09	7.81	7.81	8.93	7.63		8.23	8.19	7.90											
Lindén, Samuel (SWE) (1986)																													
														FINAL - 2008 Windsprint (Sundsvall, SWE)			(2008) - www.ssg.se/en/Windsprint/Split-times/												
date	06-Jul-08	time		3.97			7.42			10.93				14.97	2 / 4														
reaction time		interval					3.45			3.51			4.04																
wind	0.5 m/s	velocity		5.76			7.95			7.81			8.00	7.35															
Lindhart, David (CZE) (1989)																													
														Heat 2 - 2013 Czech Republic National Championships (Tábor, CZE)			Feher (2013) - Final report from the men's & women's Czech Republic national championships												
date	15-Jun-13	time	2.97	4.20	5.42	6.65	7.84	9.07	10.30	11.55	12.81			15.79	7 / 6														
reaction time	0.262	interval	1.23	1.22	1.23	1.19	1.23	1.23	1.25	1.26						3.68	3.65												
wind	-0.6 m/s	velocity	4.62	7.43	7.49	7.43	7.68	7.43	7.43	7.31	7.25			6.97		7.45	7.51												
Heat 1 - 2012 Czech Republic National Indoor Championships (Praha, CZE)																													
date	25-Feb-12	time	2.92	4.15	5.37	6.60	7.83							8.93	8 / 8														
reaction time	0.175	interval	1.23	1.22	1.23	1.23							1.10			3.68													
		velocity	4.70	7.43	7.49	7.43	7.43						8.84	6.72		7.45													
Lindsey, Justin (USA) (1979)																													
														Heat 1 - 2007 USATF National Championships (Indianapolis, IN)			USATF Men's Hurdle Development (2007)												
date	23-Jun-07	time	2.65	3.70	4.80	5.84	6.92	7.99	9.09	10.19	11.29	12.39		13.88	6 / 8														
reaction time		interval	1.05	1.10	1.04	1.08	1.07	1.10	1.10	1.10	1.10	1.49				3.19	3.25	3.30											
wind	0.1 m/s	velocity	5.18	8.70	8.31	8.79	8.46	8.54	8.31	8.31	8.31	8.31	9.41	7.93		8.60	8.44	8.31											
Liu Bowen (CHN) (2001)																													
														Heat 4 - 2021 Chinese National Championships (Chongqing, CHN)			CAA Hurdle Development (2021)												
date	25-Jun-21	time	2.60	3.70	4.80	5.91	6.99	8.11	9.22	10.33	11.48	12.65		14.19	7 / 3														
reaction time	0.201	interval	1.10	1.10	1.11	1.08	1.12	1.11	1.11	1.15	1.17	1.54				3.31	3.31	3.43											
wind	-0.2 m/s	velocity	5.28	8.31	8.31	8.23	8.46	8.16	8.23	8.23	7.95	7.81	9.10	7.75		8.28	8.28	7.99											
Heat 1 - 2020 Chinese Olympic Trials (Shaoxing, CHN)																													
date	12-Jun-21	time	2.51	3.60	4.72	5.84	6.94	8.07	9.18	10.32	11.46	12.65		14.30	3 / 5														
reaction time	0.148	interval	1.09	1.12	1.12	1.10	1.13	1.11	1.14	1.14	1.19	1.65				3.33	3.34	3.47											
wind	-0.4 m/s	velocity	5.47	8.39	8.16	8.16	8.31	8.09	8.23	8.02	8.02	7.68	8.50	7.69		8.23	8.21	7.90											
FINAL - 2021 Philippe Cup Athletics Invitational (Wuhan, CHN)																													
date	19-May-21	time	2.67	3.77	4.87	5.93	7.02	8.09	9.21	10.33	11.46	12.61		14.14	5 / 3														
reaction time	0.163	interval	1.10	1.10	1.06	1.09	1.07	1.12	1.12	1.13	1.15	1.53		PB		3.26	3.28	3.40											
wind	1.9 m/s	velocity	5.14	8.31	8.31	8.62	8.39	8.54	8.16	8.16	8.09	7.95	9.16	7.78		8.41	8.36	8.06											

Heat 1 - 2021 East China District Meeting (Zhaoqing, CHN)

CAA Hurdle Development (2021)

date	24-Apr-21	time	2.66	3.77	4.92	6.02	7.14	8.29	9.49	10.70	11.90	13.14	14.78	5 / 7			
reaction time	0.164	interval		1.11	1.15	1.10	1.12	1.15	1.20	1.21	1.20	1.24	1.64		3.36	3.47	3.65
wind	-1.1 m/s	velocity	5.16	8.23	7.95	8.31	8.16	7.95	7.62	7.55	7.62	7.37	8.55	7.44	8.16	7.90	7.51

U20 FINAL - 2019 Chinese National Youth Games (Taiyuan, CHN) (99cm)

CAA Hurdle Development (2019)

date	14-Aug-19	time	2.54	3.61	4.67	5.69	6.73	7.76	8.80	9.86	10.91	11.99	13.47	5 / 2			
reaction time	0.144	interval		1.07	1.06	1.02	1.04	1.03	1.04	1.06	1.05	1.08	1.48	PB	3.15	3.11	3.19
wind	-0.3 m/s	velocity	5.40	8.54	8.62	8.96	8.79	8.87	8.79	8.62	8.70	8.46	9.47	8.17	8.70	8.82	8.60

U20 Heat 3 - 2019 Chinese National Youth Games (Taiyuan, CHN) (99cm)

CAA Hurdle Development (2019)

date	14-Aug-19	time	2.57	3.61	4.67	5.71	6.74	7.77	8.83	9.89	10.98	12.08	13.66	7 / 2			
reaction time	0.152	interval		1.04	1.06	1.04	1.03	1.03	1.06	1.06	1.09	1.10	1.58		3.14	3.12	3.25
wind	0.6 m/s	velocity	5.34	8.79	8.62	8.79	8.87	8.87	8.62	8.62	8.39	8.31	8.87	8.05	8.73	8.79	8.44

Liu Junqian (CHN) (2003)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

FINAL - 2021 Yangtze River Delta Athletics Meeting (Shaoxing, CHN)

CAA Hurdle Development (2021)

date	08-Apr-21	time	2.68	3.80	4.92	6.04	7.16	8.28	9.40	10.52	11.72	12.90	14.51	8 / 7			
reaction time		interval		1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.20	1.18	1.61		3.36	3.36	3.50
wind	-0.1 m/s	velocity	5.12	8.16	8.16	8.16	8.16	8.16	8.16	8.16	7.62	7.75	8.71	7.58	8.16	8.16	7.83

Liu Junxi (CHN) (2003)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

Repechage 1 - 2024 Olympic Games (Paris, FRA)

Paris 2024 Olympic Games - Results Book (2024)

date	06-Aug-24	time	2.38	3.45	4.50	5.54	6.58	7.61	8.67	9.74	10.81	11.92	13.52	8 / 3			
reaction time	0.143	interval	7 steps	1.07	1.05	1.04	1.04	1.03	1.06	1.07	1.07	1.11	1.60		3.16	3.13	3.25
wind	0.2 m/s	velocity	5.76	8.54	8.70	8.79	8.79	8.87	8.62	8.54	8.54	8.23	8.76	8.14	8.68	8.76	8.44

Heat 4 - 2024 Olympic Games (Paris, FRA)

Paris 2024 Olympic Games - Results Book (2024)

date	04-Aug-24	time	2.40	3.48	4.52	5.52	6.56	7.60	8.66	9.73	10.81	11.91	13.54	2 / 6			
reaction time	0.162	interval	7 steps	1.08	1.04	1.00	1.04	1.04	1.06	1.07	1.08	1.10	1.63		3.12	3.14	3.25
wind	0.3 m/s	velocity	5.72	8.46	8.79	9.14	8.79	8.79	8.62	8.54	8.46	8.31	8.60	8.12	8.79	8.73	8.44

FINAL - 2024 Xiamen Diamond League (Xiamen, CHN)

Omega Timing (2024) - diamond league race analysis

date	20-Apr-24	time	2.44	3.51	4.55	5.57	6.63	7.65	8.68	9.72	10.78	11.86	13.48	10 / 7			
reaction time	0.159	interval	7 steps	1.07	1.04	1.02	1.06	1.02	1.03	1.04	1.06	1.08	1.62		3.13	3.11	3.18
wind	-0.3 m/s	velocity	5.62	8.54	8.79	8.96	8.62	8.96	8.87	8.79	8.62	8.46	8.65	8.16	8.76	8.82	8.62

U18 FINAL - 2019 Chinese National Youth Games (Taiyuan, CHN) (91cm)

CAA Hurdle Development (2019)

date	14-Aug-19	time	2.61	3.78										dnf	4 / --		
reaction time		interval		1.17													
wind	-0.1 m/s	velocity	5.26	7.81													

Liu Xiang (CHN) (1983)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

FINAL - 2012 Prefontaine Classic (Eugene, OR) (TV Analysis)

Henson (2020) - Athlete First: 2012 Aries Merritt world record season

date	02-Jun-12	time	2.50	3.52	4.52	5.50	6.48	7.50	8.48	9.48	10.48	11.50	12.87	5 / 1			
reaction time	0.131	interval	7 steps	1.02	1.00	0.98	0.98	1.02	0.98	1.00	1.00	1.02	1.37		3.00	2.98	3.02
wind	2.4 m/s	velocity	5.49	8.96	9.14	9.33	9.33	8.96	9.33	9.14	9.14	8.96	10.23	8.55	9.14	9.20	9.08

FINAL - 2012 Golden Grand Prix (Shanghai, CHN)

Feng (2016) - Liu Xiang's seven-step starting: discussion on the key issues of 110m hurdles technical training

date	19-May-12	time	2.38	3.38	4.45	5.42	6.42	7.45	8.42	9.46	10.43	11.47	12.97	5 / 1			
reaction time	0.160	interval		1.00	1.07	0.97	1.00	1.03	0.97	1.04	0.97	1.04	1.50		3.04	3.00	3.05
wind	0.4 m/s	velocity	5.76	9.14	8.54	9.42	9.14	8.87	9.42	8.79	9.42	8.79	9.35	8.48	9.02	9.14	8.99

FINAL - 2012 Seiko Golden Grand Prix (Kawasaki, JPN)

Karube (2013) - the analysis of hurdle clearance and interval sprint in men's 110m sprint hurdle

date	06-May-12	time	2.51	3.57	4.57	5.59	6.58	7.59	8.61	9.62	10.63	11.67	13.09	4 / 1			
reaction time		interval	7 steps	1.06	1.00	1.02	0.99	1.01	1.02	1.01	1.01	1.04	1.42		3.08	3.02	3.06
wind	0.2 m/s	velocity	5.47	8.62	9.14	8.96	9.23	9.05	8.96	9.05	9.05	8.79	9.87	8.40	8.90	9.08	8.96

FINAL - 2012 IAAF World Indoor Championships (Istanbul, TUR) (TV Analysis)

Henson (2020) - Athlete First: 2012 Aries Merritt world record season

date	11-Mar-12	time	2.50	3.52	4.54	5.56	6.58						7.49	3 / 2			
reaction time	0.167	interval	7 steps	1.02	1.02	1.02	1.02						0.91		3.06		
		velocity	5.49	8.96	8.96	8.96	8.96						10.68	8.01	8.96		

FINAL - 2012 Aviva Grand Prix (Birmingham, GBR)

Wang (2012) - analysis of the time characteristics of Liu Xiang in his first 110m hurdles competition of 2012

date	18-Feb-12	time	2.54	3.54	4.54	5.54	6.51						7.41	/ 1			
reaction time	0.154	interval		1.00	1.00	1.00	0.97						0.90	AR PB	3.00		
		velocity	5.40	9.14	9.14	9.14	9.42						10.80	8.10	9.14		

FINAL - 2011 IAAF World Championships (Daegu, KOR) (TV Analysis)

Henson (2021) - Athlete First: major championships report

date	29-Aug-11	time	2.48	3.52	4.52	5.52	6.52	7.51	8.51	9.52	10.54	11.62	13.27	6 / 3-2			
reaction time	0.164	interval	7 steps	1.04	1.00	1.00	1.00	0.99	1.00	1.01	1.02	1.08	1.65		3.04	2.99	3.11
wind	-1.1 m/s	velocity	5.53	8.79	9.14	9.14	9.14	9.23	9.14	9.05	8.96	8.46	8.50	8.29	9.02	9.17	8.82

FINAL - 2010 IAAF World Indoor Championships (Doha, QAT)

date	14-Mar-10	time	2.61	3.67	4.70	5.73	6.77											
reaction time	0.151	interval		1.06	1.03	1.03	1.04						0.88					3.12
		velocity	5.26	8.62	8.87	8.87	8.79						11.05	7.84				8.79

Kuitunen (2010) - biomechanical analysis of the 14th IAAF World Indoor championships

																		7.65	7 / 7

FINAL - 2007 Golden Grand Prix (Shanghai, CHN)

date	28-Sep-07	time	2.26	3.22	4.36	5.44	6.40	7.42	8.29	9.32	10.42	11.46	13.21							
reaction time	0.164	interval		0.96	1.14	1.08	0.96	1.02	0.87	1.03	1.10	1.04	1.75					3.18	2.85	3.17
wind	-0.4 m/s	velocity	6.07	9.52	8.02	8.46	9.52	8.96	10.51	8.87	8.31	8.79	8.01	8.33				8.62	9.62	8.65

*Ma (2008) - analysis of Liu Xiang's time characteristic in men's 110m hurdles during golden grand prix in Shanghai***FINAL - 2007 IAAF World Championships (Osaka, JPN)**

date	31-Aug-07	time	2.57	3.61	4.58	5.58	6.57	7.55	8.55	9.55	10.53	11.57	12.95							
reaction time	0.161	interval		1.04	0.97	1.00	0.99	0.98	1.00	1.00	0.98	1.04	1.38					3.01	2.97	3.02
wind	1.7 m/s	velocity	5.34	8.79	9.42	9.14	9.23	9.33	9.14	9.14	9.33	8.79	10.16	8.49				9.11	9.23	9.08

*Ae (2008) - IAAF biomechanics team - a booklet of biomechanics data***Semi-Final 3 - 2007 IAAF World Championships (Osaka, JPN)**

date	30-Aug-07	time	2.63	3.65	4.67	5.67	6.69	7.69	8.71	9.74	10.77	11.82	13.25							
reaction time	0.158	interval		1.02	1.02	1.00	1.02	1.00	1.02	1.03	1.03	1.05	1.43					3.04	3.04	3.11
wind	-1.0 m/s	velocity	5.22	8.96	8.96	9.14	8.96	9.14	8.96	8.87	8.87	8.70	9.80	8.30				9.02	9.02	8.82

*Shibayama (2008) - analysis of racing patterns in the men's 110m & women's 100m sprint hurdles***Heat 2 - 2007 IAAF World Championships (Osaka, JPN)**

date	29-Aug-07	time	2.63	3.68	4.71	5.74	6.77	7.79	8.82	9.84	10.89	11.96	13.36							
reaction time	0.141	interval		1.05	1.03	1.03	1.03	1.02	1.03	1.02	1.05	1.07	1.40					3.11	3.08	3.14
wind	-0.6 m/s	velocity	5.22	8.70	8.87	8.87	8.87	8.96	8.87	8.96	8.70	8.54	10.01	8.23				8.82	8.90	8.73

*Shibayama (2008) - analysis of racing patterns in the men's 110m & women's 100m sprint hurdles***FINAL - 2007 Osaka Grand Prix (Osaka, JPN)**

date	05-May-07	time	2.43	3.49	4.51	5.50	6.50	7.50	8.51	9.53	10.55	11.58	13.14							
reaction time		interval		1.06	1.02	0.99	1.00	1.00	1.01	1.02	1.02	1.03	1.56					3.07	3.01	3.07
wind	0.8 m/s	velocity	5.65	8.62	8.96	9.23	9.14	9.14	9.05	8.96	8.96	8.87	8.99	8.37				8.93	9.11	8.93

*Akirabun (2008) - 2007 speed analysis of the men's & women's 100m, 100m hurdles, & 110m hurdles***FINAL - 2006 IAAF World Athletic Final (Stuttgart, GER) (TV Analysis)**

date	09-Sep-06	time	2.57	3.59	4.58	5.57	6.55	7.53	8.54	9.55	10.56	11.57	12.93								
reaction time	0.108	interval		1.02	0.99	0.99	0.98	0.98	1.01	1.01	1.01	1.01	1.36					CR	3.00	2.97	3.03
wind	-0.8 m/s	velocity	5.34	8.96	9.23	9.23	9.33	9.33	9.05	9.05	9.05	9.05	10.31	8.51					9.14	9.23	9.05

*Graubner (2009) - <http://www.fgs.uni-halle.de>***Race 2 - 2006 Athletissima (Lausanne, SU)**

date	11-Jun-06	time	2.52	3.54	4.55	5.56	6.54	7.51	8.49	9.47	10.50	11.53	12.88								
reaction time		interval		1.02	1.01	1.01	0.98	0.97	0.98	0.98	1.03	1.03	1.35					WR	3.04	2.93	3.04
wind	1.1 m/s	velocity	5.44	8.96	9.05	9.05	9.33	9.42	9.33	9.33	8.87	8.87	10.39	8.54					9.02	9.36	9.02

*Xiao (2014) - development process of the characteristics about 110m hurdle training in China***FINAL - 2006 Osaka Grand Prix (Osaka, JPN)**

date	06-May-06	time	2.42	3.48	4.49	5.50	6.51	7.53	8.55	9.58	10.60	11.67	13.22								
reaction time		interval		1.06	1.01	1.01	1.01	1.02	1.02	1.03	1.02	1.07	1.55						3.08	3.05	3.12
wind	1.2 m/s	velocity	5.67	8.62	9.05	9.05	9.05	8.96	8.96	8.87	8.96	8.54	9.05	8.32					8.90	8.99	8.79

*Akirabun (2007) - speed analysis of the 100m and hurdles with a laser system***FINAL - 2005 Chinese National Games (Nanjing, CHN)**

date	20-Oct-05	time	2.60	3.63	4.65	5.64	6.65	7.65	8.65	9.67	10.69	11.71	13.10								
reaction time		interval		1.03	1.02	0.99	1.01	1.00	1.00	1.02	1.02	1.02	1.39						3.04	3.01	3.06
wind	0.4 m/s	velocity	5.28	8.87	8.96	9.23	9.05	9.14	9.14	8.96	8.96	8.96	10.09	8.40					9.02	9.11	8.96

*Wang (2013) - analysis on the technical characteristics of Liu Xiang's and Shi Dongpeng's 110m Hurdles***FINAL - 2005 Chinese National Grand Prix (Zhongshan, CHN)**

date	24-Apr-05	time	2.43	3.52	4.56	5.58	6.59	7.59	8.60	9.65	10.71	11.79	13.23								
reaction time		interval		1.10	1.04	1.02	1.01	1.00	1.01	1.05	1.06	1.08	1.45						3.15	3.02	3.19
wind	1.4 m/s	velocity	5.66	8.35	8.79	9.00	9.05	9.14	9.05	8.69	8.60	8.50	9.70	8.31					8.70	9.08	8.60

*Xu (2005) - analysis on Liu Xiang's rhythm between the hurdles in 110m hurdle race***FINAL - 2004 Olympic Games (Athens, GRE)**

date	27-Aug-04	time	2.41	3.43	4.43	5.42	6.41	7.39	8.39	9.39	10.41	11.44	12.91								
reaction time	0.139	interval		1.02	1.00	0.99	0.99	0.98	1.00	1.00	1.02	1.03	1.47					=WR / OR	3.01	2.97	3.05
wind	0.3 m/s	velocity	5.69	8.96	9.14	9.23	9.23	9.33	9.14	9.14	8.96	8.87	9.54	8.52					9.11	9.23	8.99

*Ruiz (2004) - las carreras con vallas de juegos olímpicos de atenas '04***FINAL - 2004 Chinese National Grand Prix (Tianjin, CHN)**

date	01-Aug-04	time	2.57	3.61	4.62	5.62	6.62	7.63	8.63	9.65	10.67	11.72	13.06								
reaction time		interval		1.04	1.01	1.00	1.00	1.01	1.00	1.02	1.02	1.05	1.34						3.05	3.01	3.09
wind	-0.8 m/s	velocity	5.34	8.79	9.05	9.14	9.14	9.05	9.14	8.96	8.96	8.70	10.46	8.42					8.99	9.11	8.87

*Wang (2016) - comparative analysis of the grey relational grade of segment times and final results of the 110m hurdles***FINAL - 2004 Osaka Grand Prix (Osaka, JPN)**

date	08-May-04	time	2.56	3.59	4.59	5.57	6.58	7.58	8.60	9.62	10.65	11.69	13.06									
reaction time		interval		1.03	1.00	0.98	1.01	1.00	1.02	1.02	1.03	1.04	1.37						AR	3.01	3.03	3.09
wind	-1.2 m/s	velocity	5.36	8.87	9.14	9.33	9.05	9.14	8.96	8.96	8.87	8.79	10.23	8.42					9.11	9.05	8.87	

*Zhang (2005) - technical characteristics analysis of 110m hurdles race of Liu Xiang***FINAL - 2003 IAAF World Championships (Paris, FRA)**

date	30-Aug-03	time	2.58	3.63	4.65	5.65	6.67	7.68	8.70	9.74	10.80	11.85	13.23						

Xu (2004) - analysis on the hurdling techniques of the excellence chinese male 110m hurdle athletes

reaction time	0.140	interval	1.05	1.02	1.00	1.02	1.01	1.02	1.04	1.06	1.05	1.38			3.07	3.05	3.15
wind	0.3 m/s	velocity	5.32	8.70	8.96	9.14	8.96	9.05	8.96	8.79	8.62	8.70	10.16	8.31	8.93	8.99	8.70

FINAL - 2003 Athletissima Meeting (Lausanne, SUI)*Xu (2004) - an analysis of Liu Xiang's technique in 100m hurdle final at the Athens Olympic Games*

date	01-Jul-03	time	2.57	3.61	4.63	5.63	6.65	7.65	8.67	9.69	10.73	11.79	13.17	/ 3			
reaction time		interval	1.04	1.02	1.00	1.02	1.00	1.02	1.02	1.02	1.04	1.06	1.38		3.06	3.04	3.12
wind	0.0 m/s	velocity	5.34	8.79	8.96	9.14	8.96	9.14	8.96	8.96	8.79	8.62	10.16	8.35	8.96	9.02	8.79

Race 1 - 2003 Chinese National Grand Prix (Nanning, CHN)*Wang (2016) - comparative analysis of the grey relational grade of segment times and final results of the 110m hurdles*

date	05-Apr-03	time	2.63	3.73	4.73	5.73	6.75	7.77	8.82	9.87	10.92	11.98	13.32	/ 1			
reaction time		interval	1.10	1.00	1.00	1.02	1.02	1.05	1.05	1.05	1.06	1.34			3.10	3.09	3.16
wind	0.4 m/s	velocity	5.22	8.31	9.14	9.14	8.96	8.96	8.70	8.70	8.70	8.62	10.46	8.26	8.85	8.87	8.68

FINAL - 2002 Chinese National Grand Prix (Shanghai, CHN)*Huang (2002) - technical research on the men's 110m hurdles at the 9th national games*

date	19-May-02	time	2.59	3.63	4.64	5.69	6.71	7.73	8.76	9.80	10.84	11.91	13.36	/ 1			
reaction time		interval	1.04	1.01	1.05	1.02	1.02	1.03	1.04	1.04	1.07	1.45			3.10	3.07	3.15
wind	0.4 m/s	velocity	5.30	8.79	9.05	8.70	8.96	8.96	8.87	8.79	8.79	8.54	9.67	8.23	8.85	8.93	8.70

FINAL - 2001 Chinese National Grand Prix (Shanghai, CHN)*Fang (2001) - analysis on technical characteristics in Liu Xiang's 110m hurdles*

date	06-May-01	time	2.63	3.73	4.73	5.73	6.75	7.77	8.82	9.87	10.92	11.98	13.32	/ 1			
reaction time		interval	1.10	1.00	1.00	1.02	1.02	1.05	1.05	1.05	1.06	1.34	WYB17 / PB		3.10	3.09	3.16
wind	1.9 m/s	velocity	5.22	8.31	9.14	9.14	8.96	8.96	8.70	8.70	8.70	8.62	10.46	8.26	8.85	8.87	8.68

FINAL - 2001 Chinese National Grand Prix (Ningbo, CHN)*Fang (2001) - analysis on technical characteristics in Liu Xiang's 110m hurdles*

date	28-Apr-01	time	2.66	3.74	4.78	5.82	6.85	7.88	8.90	9.92	10.97	12.04	13.45	/ 1			
reaction time		interval	1.08	1.04	1.04	1.03	1.03	1.02	1.02	1.05	1.07	1.41			3.16	3.08	3.14
wind	2.5 m/s	velocity	5.16	8.46	8.79	8.79	8.87	8.87	8.96	8.96	8.70	8.54	9.94	8.18	8.68	8.90	8.73

Llopis, Enrique (ESP) (2000)

H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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FINAL - 2024 Olympic Games (Paris, FRA)*Paris 2024 Olympic Games - Results Book (2024)*

date	08-Aug-24	time	2.40	3.49	4.52	5.53	6.53	7.53	8.53	9.56	10.59	11.64	13.20	3 / 3			
reaction time	0.144	interval	7 steps	1.09	1.03	1.01	1.00	1.00	1.00	1.03	1.03	1.05	1.56		3.13	3.00	3.11
wind	-0.1 m/s	velocity	5.72	8.39	8.87	9.05	9.14	9.14	9.14	8.87	8.87	8.70	8.99	8.33	8.76	9.14	8.82

Semi-Final 1 - 2024 Olympic Games (Paris, FRA)*Paris 2024 Olympic Games - Results Book (2024)*

date	07-Aug-24	time	2.41	3.46	4.48	5.48	6.48	7.47	8.49	9.52	10.55	11.61	13.17	5 / 2			
reaction time	0.138	interval	7 steps	1.05	1.02	1.00	1.00	0.99	1.02	1.03	1.03	1.06	1.56		3.07	3.01	3.12
wind	0.1 m/s	velocity	5.69	8.70	8.96	9.14	9.14	9.23	8.96	8.87	8.87	8.62	8.99	8.35	8.93	9.11	8.79

Heat 1 - 2024 Olympic Games (Paris, FRA)*Paris 2024 Olympic Games - Results Book (2024)*

date	04-Aug-24	time	2.41	3.48	4.51	5.51	6.51	7.51	8.53	9.56	10.61	11.67	13.28	9 / 2			
reaction time	0.143	interval	7 steps	1.07	1.03	1.00	1.00	1.00	1.02	1.03	1.05	1.06	1.61		3.10	3.02	3.14
wind	0.1 m/s	velocity	5.69	8.54	8.87	9.14	9.14	9.14	8.96	8.87	8.70	8.62	8.71	8.28	8.85	9.08	8.73

FINAL - 2024 Meeting de Paris (Paris, FRA)*Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season*

date	07-Jul-24	time	2.39	3.47	4.47	5.49	6.49	7.50	8.52	9.55	10.58	11.63	13.21	1 / 4			
reaction time	0.146	interval	7 steps	1.08	1.00	1.02	1.00	1.01	1.02	1.03	1.03	1.05	1.58		3.10	3.03	3.11
wind	-0.6 m/s	velocity	5.74	8.46	9.14	8.96	9.14	9.05	8.96	8.87	8.87	8.70	8.87	8.33	8.85	9.05	8.82

Heat 1 - 2024 Meeting de Paris (Paris, FRA)*Omega Timing (2024) - diamond league race analysis*

date	07-Jul-24	time	2.46	3.52	4.51	5.54	6.54	7.55	8.57	9.60	10.63	11.67	13.23	3 / 4			
reaction time	0.144	interval	7 steps	1.06	0.99	1.03	1.00	1.01	1.02	1.03	1.03	1.04	1.56		3.08	3.03	3.10
wind	0.1 m/s	velocity	5.58	8.62	9.23	8.87	9.14	9.05	8.96	8.87	8.87	8.79	8.99	8.31	8.90	9.05	8.85

FINAL - 2024 European Athletics Championships (Roma, ITA) (TV Analysis)*Henson (2024) - Athlete First: 2024 year end hurdle report*

date	08-Jun-24	time	2.57	3.58	4.58	5.59	6.58	7.59	8.60	9.62	10.65	11.75	13.16	7 / 2			
reaction time	0.144	interval	7 steps	1.01	1.00	1.01	0.99	1.01	1.01	1.02	1.03	1.10	1.41	PB	3.02	3.01	3.15
wind	0.6 m/s	velocity	5.34	9.05	9.14	9.05	9.23	9.05	9.05	8.96	8.87	8.31	9.94	8.36	9.08	9.11	8.70

FINAL - 2024 World Athletics Indoor Championships (Glasgow, GBR) (TV Analysis)*Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record*

date	02-Mar-24	time	2.57	3.60	4.62	5.62	6.61						7.53	7.53	2 / 4		3.05
reaction time	0.137	interval	7 steps	1.03	1.02	1.00	0.99						7.53	7.53			3.05
		velocity	5.34	8.87	8.96	9.14	9.23						1.86	7.97			8.99

FINAL - 2024 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)*Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record*

date	10-Feb-24	time	2.50	3.55	4.58	5.57	6.58						7.62	7.62	2 / 6		3.07
reaction time	0.148	interval	7 steps	1.05	1.03	0.99	1.01						7.62	=NR			3.07
		velocity	5.49	8.70	8.87	9.23	9.05						1.84	7.87			8.93

FINAL - 2023 Weltklasse (Zürich, SUI)*Omega Timing (2023) - diamond league race analysis*

date	31-Aug-23	time	2.43	3.51	4.53	5.55	6.55	7.57	8.58	9.63	10.67	11.74	13.31	3 / 2			
reaction time	0.117	interval	7 steps	1.08	1.02	1.02	1.00	1.02	1.01	1.05	1.04	1.07	1.57		3.12	3.03	3.16
wind	-0.1 m/s	velocity	5.65	8.46	8.96	8.96	9.14	8.96	9.05	8.70	8.79	8.54	8.93	8.26	8.79	9.05	8.68

Semi-Final 2 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)*Henson (2023) - Athlete First: 2023 year end hurdle report*

date	21-Aug-23	time	2.56	3.62	4.64	5.62	6.63	7.65	8.67	9.70	10.76	11.86	13.30	6 / 3				
reaction time	0.146	interval	7 steps	1.06	1.02	0.98	1.01	1.02	1.02	1.03	1.06	1.10	1.44	PB	3.06	3.05	3.19	
wind	-0.2 m/s	velocity	5.36	8.62	8.96	9.33	9.05	8.96	8.96	8.87	8.62	8.31	9.74	8.27	8.96	8.99	8.60	

Heat 1 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)*Henson (2023) - Athlete First: 2023 year end hurdle report*

date	20-Aug-23	time	2.56	3.60	4.60	5.62	6.63	7.68	8.70	9.73	10.80	11.88	13.33	2 / 2				
reaction time	0.136	interval	7 steps	1.04	1.00	1.02	1.01	1.05	1.02	1.03	1.07	1.08	1.45		3.06	3.08	3.18	
wind	-0.3 m/s	velocity	5.36	8.79	9.14	8.96	9.05	8.70	8.96	8.87	8.54	8.46	9.67	8.25	8.96	8.90	8.62	

FINAL - 2023 Athletissima (Lausanne, SUI)*Omega Timing (2023) - diamond league race analysis*

date	30-Jun-23	time	2.44	3.52	4.54	5.56	6.57	7.59	8.62	9.67	10.74	11.82	13.43	7 / 5				
reaction time	0.135	interval	7 steps	1.08	1.02	1.02	1.01	1.02	1.03	1.05	1.07	1.08	1.61		3.12	3.06	3.20	
wind	-1.0 m/s	velocity	5.62	8.46	8.96	8.96	9.05	8.96	8.87	8.70	8.54	8.46	8.71	8.19	8.79	8.96	8.57	

FINAL - 2022 European Athletics Championships (Munich, GER) (TV Analysis)*Henson (2022) - Athlete First: 2022 year end hurdle report*

date	17-Aug-22	time	2.56	3.64	4.84	6.00	7.20	8.36	9.52	10.68	11.84	13.06	14.81	6 / 7				
reaction time	0.145	interval	7 steps	1.08	1.20	1.16	1.20	1.16	1.16	1.16	1.16	1.22	1.75		3.44	3.52	3.54	
wind	-0.2 m/s	velocity	5.36	8.46	7.62	7.88	7.62	7.88	7.88	7.88	7.88	7.49	8.01	7.43	7.97	7.79	7.75	

Semi-Final 3 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)*Henson (2022) - Athlete First: 2022 year end hurdle report*

date	17-Jul-22	time	2.56	3.60	4.60	5.63	6.63	7.66	8.70	9.80	10.86	11.96	13.44	2 / 8				
reaction time	0.113	interval	7 steps	1.04	1.00	1.03	1.00	1.03	1.04	1.10	1.06	1.10	1.48		3.07	3.07	3.26	
wind	2.5 m/s	velocity	5.36	8.79	9.14	8.87	9.14	8.87	8.79	8.31	8.62	8.31	9.47	8.18	8.93	8.93	8.41	

FINAL - 2022 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)*Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record*

date	17-Feb-22	time	2.55	3.58	4.60	5.60	6.60						7.62	2 / 4				
reaction time	0.163	interval	7 steps	1.03	1.02	1.00	1.00						1.02		3.05			
		velocity	5.38	8.87	8.96	9.14	9.14						9.53	7.87	8.99			

FINAL - 2021 Villa de Madrid (Madrid, ESP) (TV Analysis)*Henson (2021) - men's 60m hurdles world record season - Grant Holloway*

date	24-Feb-21	time	2.45	3.52	4.58	5.62	6.65						7.69	1 / 6				
reaction time		interval	7 steps	1.07	1.06	1.04	1.03						1.04		PB	3.17		
		velocity	5.60	8.54	8.62	8.79	8.87						9.35	7.80	8.65			

Lloyd, Antoine (USA) (1996)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2018 USATF Championships (Des Moines, IA) (TV Analysis)***Henson (2020) - Athlete First: 2018 year end hurdle report*

date	24-Jun-18	time	2.47	3.57	4.63	5.70	6.74	7.77	8.84	9.94	11.04	12.14	13.72	2 / 6				
reaction time		interval	7 steps	1.10	1.06	1.07	1.04	1.03	1.07	1.10	1.10	1.10	1.58		3.23	3.14	3.30	
wind	-1.8 m/s	velocity	5.55	8.31	8.62	8.54	8.79	8.87	8.54	8.31	8.31	8.31	8.87	8.02	8.49	8.73	8.31	

Long Wei (CHN) (1997)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Heat 3 - 2021 Chinese National Championships (Chongqing, CHN)***CAA Hurdle Development (2021)*

date	25-Jun-21	time	2.62	3.71	4.81	5.91	7.01	8.11	9.24	10.34	11.50	12.65	14.17	2 / 6				
reaction time	0.162	interval	1.09	1.10	1.10	1.10	1.10	1.13	1.10	1.16	1.15	1.52	PB		3.29	3.33	3.41	
wind	0.5 m/s	velocity	5.24	8.39	8.31	8.31	8.31	8.31	8.09	8.31	7.88	7.95	9.22	7.76	8.33	8.23	8.04	

Heat 2 - 2019 Chinese National Grand Prix Final (Daqing, CHN)*CAA Hurdle Development (2019)*

date	23-Aug-19	time	2.77	3.94	5.11	6.27	7.46	8.67	9.86	11.08	12.29	13.51	15.11	2 / 8				
reaction time	0.199	interval	1.17	1.17	1.16	1.19	1.21	1.19	1.22	1.21	1.22	1.60			3.50	3.59	3.65	
wind	-0.2 m/s	velocity	4.95	7.81	7.81	7.88	7.68	7.55	7.68	7.49	7.55	7.49	8.76	7.28	7.83	7.64	7.51	

Lööv, Filip (SWE) (1992)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Heat 4 - 2013 European Indoor Championships (Göteborg, SWE)***Blomkvist (2013) - www.elitlandslag.se/SprintHäck/KortHäck.aspx*

date	01-Mar-13	time	2.66	3.80	4.90	5.97	7.08						8.02	2 / 7				
reaction time	0.167	interval	1.14	1.10	1.07	1.11							0.94		3.31			
		velocity	5.16	8.02	8.31	8.54	8.23						10.34	7.48	8.28			

Junior Final - 2010 ExxonMobil Bislett Games (Oslo, NOR) (99cm)*Blomkvist (2010) - www.sub13.se*

date	04-Jun-10	time	2.56	3.62	4.68	5.76	6.84	7.89	9.00	10.08	11.16	12.30	13.95	2 / 3				
reaction time	0.214	interval	1.06	1.06	1.08	1.08	1.05	1.11	1.08	1.08	1.14	1.65			3.20	3.24	3.30	
wind	0.3 m/s	velocity	5.36	8.62	8.62	8.46	8.46	8.70	8.23	8.46	8.46	8.02	8.50	7.89	8.57	8.46	8.31	

López, Francisco (ESP) (1973)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 1998 Spanish National Championships (San Sebastián, ESP)***Ruiz (1998) - campeonato des españa absoluto: análisis de la carreras con villas*

date	02-Aug-98	time	2.64	3.72	4.82	5.94	6.98	8.05	9.12	10.25	11.37	12.52	14.12	5 / 1				
reaction time		interval	1.08	1.10	1.12	1.04	1.07	1.07	1.13	1.12	1.15	1.60			3.30	3.18	3.40	
wind	0.1 m/s	velocity	5.20	8.46	8.31	8.16	8.79	8.54	8.54	8.09	8.16	7.95	8.76	7.79	8.31	8.62	8.06	

Lovett, Eddie (ISV) (1992)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2021 American Track League 1 (Fayetteville, AR) (TV Analysis)***Henson (2021) - men's 60m hurdles world record season - Grant Holloway*

date	24-Jan-21	time	2.58	3.67	4.70	5.78	6.85						7.84	7 / 5				
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reaction time 0.182 interval 1.09 1.03 1.08 1.07
velocity 5.32 8.39 8.87 8.46 8.54

0.99 3.20
9.82 7.65 8.57

FINAL - 2020 Millrose Games (New York, NY) (TV Analysis)*Henson (2020) - Athlete First: 2020 year end hurdle report*

date 08-Feb-20 time 2.57 3.67 4.74 5.77 6.87
reaction time 0.180 interval 7 steps 1.10 1.07 1.03 1.10
velocity 5.34 8.31 8.54 8.87 8.31

7.85 3 / 6 3.20
9.92 7.64 8.57

Semi-Final 3 - 2017 IAAF World Championships (London, GBR)*Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles*

date 06-Aug-17 time 2.49 3.56 4.62 5.67 6.71 7.77 8.81 9.90 10.99 12.10
reaction time 0.180 interval 7 steps 1.07 1.06 1.05 1.04 1.06 1.04 1.09 1.09 1.11 1.57
wind 0.3 m/s velocity 5.51 8.54 8.62 8.70 8.79 8.62 8.79 8.39 8.39 8.23 8.93 8.05

13.67 6 / 5 3.18 3.14 3.29
8.62 8.73 8.33

FINAL - 2017 Müller's Anniversary Games (London, GBR) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date 09-Jul-17 time 2.52 3.56 4.60 5.64 6.68 7.70 8.74 9.80 10.90 12.00
reaction time 0.144 interval 7 steps 1.04 1.04 1.04 1.04 1.02 1.04 1.06 1.10 1.10 1.48
wind 0.0 m/s velocity 5.44 8.79 8.79 8.79 8.79 8.96 8.79 8.62 8.31 8.31 9.47 8.16

13.48 3 / 7 3.12 3.10 3.26
8.79 8.85 8.41

Lloyd, Michael (USA) (1984)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

FINAL - 2003 USATF National Junior Championships (Palo Alto, CA) (99cm)*USATF Women's Sprint Development (2003)*

date 22-Jun-03 time 2.58 3.73 4.82 5.87 6.97 8.09 9.21 10.34 11.48 12.63
reaction time interval 1.15 1.09 1.05 1.10 1.12 1.12 1.13 1.14 1.15 1.65
wind -0.4 m/s velocity 5.32 7.95 8.39 8.70 8.31 8.16 8.16 8.09 8.02 7.95 8.50 7.70

14.28 8 / 4 3.29 3.34 3.42
8.33 8.21 8.02

Lu Wei (CHN) (2000)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

Heat 2 - 2019 Chinese National Grand Prix Final (Daqing, CHN)*CAA Hurdle Development (2019)*

date 23-Aug-19 time 2.83 3.98 5.09 6.26 7.41 8.54 9.67 10.80 11.98 13.18
reaction time 0.208 interval 1.15 1.11 1.17 1.15 1.13 1.13 1.13 1.18 1.20 1.62
wind -0.2 m/s velocity 4.85 7.95 8.23 7.81 7.95 8.09 8.09 8.09 7.75 7.62 8.65 7.43

14.80 6 / 5 3.43 3.41 3.51
7.99 8.04 7.81

U20 FINAL - 2019 Chinese National Youth Games (Taiyuan, CHN) (99cm)*CAA Hurdle Development (2019)*

date 14-Aug-19 time 2.67 3.73 4.77 5.82 6.82 7.86 8.89 9.93 11.01 12.09
reaction time 0.170 interval 1.06 1.04 1.05 1.00 1.04 1.03 1.04 1.08 1.08 1.46
wind -0.3 m/s velocity 5.14 8.62 8.79 8.70 9.14 8.79 8.87 8.79 8.46 8.46 9.60 8.12

13.55 7 / 4 3.15 3.07 3.20
8.70 8.93 8.57

U20 Heat 2 - 2019 Chinese National Youth Games (Taiyuan, CHN) (99cm)*CAA Hurdle Development (2019)*

date 14-Aug-19 time 2.71 3.80 4.84 5.89 6.91 7.94 8.99 10.04 11.13 12.21
reaction time 0.205 interval 1.09 1.04 1.05 1.02 1.03 1.05 1.05 1.09 1.08 1.51
wind -0.3 m/s velocity 5.06 8.39 8.79 8.70 8.96 8.87 8.70 8.70 8.39 8.46 9.28 8.02

13.72 6 / 1 3.18 3.10 3.22
8.62 8.85 8.52

Heat 1 - 2019 Chinese National Grand Prix 2 (Huangshi, CHN)*CAA Hurdle Development (2019)*

date 13-Apr-19 time 2.77 3.90 5.02 6.11 7.22 8.36 9.50 10.67 11.82 12.98
reaction time 0.170 interval 1.13 1.12 1.09 1.11 1.14 1.14 1.17 1.15 1.16 1.54
wind 0.0 m/s velocity 4.95 8.09 8.16 8.39 8.23 8.02 8.02 7.81 7.95 7.88 9.10 7.58

14.52 7 / 2 3.34 3.39 3.48
8.21 8.09 7.88

B-FINAL - 2019 Chinese Indoor National Grand Prix 2 (Nanjing, CHN)*CAA Hurdle Development (2019)*

date 24-Feb-19 time 2.77 3.89 4.99 6.09 7.19
reaction time interval 1.12 1.10 1.10 1.10
velocity 4.95 8.16 8.31 8.31 8.31

8.17 3 / 4 3.32 8.26

Lu Yang (CHN) (1996)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

Heat 2 - 2021 Chinese National Championships (Chongqing, CHN)*CAA Hurdle Development (2021)*

date 25-Jun-21 time 2.70 3.82 4.90 5.99 7.07 8.17 9.27 10.38 11.53 12.70
reaction time 0.163 interval 1.12 1.08 1.09 1.08 1.10 1.10 1.11 1.15 1.17 1.58
wind -1.2 m/s velocity 5.08 8.16 8.46 8.39 8.46 8.31 8.31 8.23 7.95 7.81 8.87 7.70

14.28 5 / 4 3.29 3.28 3.43
8.33 8.36 7.99

FINAL - 2021 Yangtze River Delta Athletics Meeting (Shaoxing, CHN)*CAA Hurdle Development (2021)*

date 08-Apr-21 time 2.76 3.88 4.96 6.08 7.16 8.24 9.34 10.48 11.60 12.76
reaction time interval 1.12 1.08 1.12 1.08 1.08 1.10 1.14 1.12 1.16 1.54
wind -0.1 m/s velocity 4.97 8.16 8.46 8.16 8.46 8.46 8.31 8.02 8.16 7.88 9.10 7.69

14.30 7 / 5 3.32 3.26 3.42
8.26 8.41 8.02

Heat 2 - 2020 Chinese National Championships (Shaoxing, CHN)*CAA Hurdle Development (2020)*

date 16-Sep-20 time 2.72 3.84 4.95 6.02 7.11 8.19 9.27 10.38 11.50 12.68
reaction time 0.145 interval 1.12 1.11 1.07 1.09 1.08 1.08 1.11 1.12 1.18 1.49
wind -0.5 m/s velocity 5.04 8.16 8.23 8.54 8.39 8.46 8.46 8.23 8.16 7.75 9.41 7.76

14.17 8 / 4 3.30 3.25 3.41
8.31 8.44 8.04

Heat 1 - 2019 Chinese National Grand Prix Final (Daqing, CHN)*CAA Hurdle Development (2019)*

date 23-Aug-19 time 2.84 4.00 5.15
reaction time 0.179 interval 1.16 1.15
wind -0.2 m/s velocity 4.83 7.88 7.95

dnf 2 / --

Heat 2 - 2019 Chinese World Championship Trials (Shenyang, CHN)*CAA Hurdle Development (2019)*

date 02-Aug-19 time 2.85 4.01 5.15 6.30 7.44 8.61 9.80 11.05 12.34 13.72

15.90 6 / 5

reaction time	0.196	interval	1.16	1.14	1.15	1.14	1.17	1.19	1.25	1.29	1.38	2.18			3.45	3.50	3.92
wind	-0.2 m/s	velocity	4.81	7.88	8.02	7.95	8.02	7.81	7.68	7.31	7.09	6.62	6.43	6.92	7.95	7.83	6.99

Heat 3 - 2019 Chinese National Championships (Shenyang, CHN)

date	08-Jul-19	time	2.70	3.79	4.89	5.94	7.01	8.07	9.15	10.26	11.34	12.55		14.10	CAA Hurdle Development (2019)		
reaction time	0.170	interval	1.09	1.10	1.05	1.07	1.06	1.08	1.11	1.08	1.21	1.55			3.24	3.21	3.40
wind	-0.5 m/s	velocity	5.08	8.39	8.31	8.70	8.54	8.62	8.46	8.23	8.46	7.55	9.05	7.80	8.46	8.54	8.06

FINAL - 2019 Chinese National Grand Prix 2 (Huangshi, CHN)

date	13-Apr-19	time	2.74	3.86	4.92	6.00	7.06	8.14	9.22	10.32	11.42	12.56		14.03	CAA Hurdle Development (2019)		
reaction time	0.187	interval	1.12	1.06	1.08	1.06	1.08	1.08	1.10	1.10	1.14	1.47			3.26	3.22	3.34
wind	-0.3 m/s	velocity	5.01	8.16	8.62	8.46	8.62	8.46	8.46	8.31	8.31	8.02	9.54	7.84	8.41	8.52	8.21

Heat 3 - 2019 Chinese National Grand Prix 2 (Huangshi, CHN)

date	13-Apr-19	time	2.68	3.78	4.84	5.92	6.98	8.03	9.11	10.22	11.34	12.52		14.07	CAA Hurdle Development (2019)		
reaction time	0.160	interval	1.10	1.06	1.08	1.06	1.05	1.08	1.11	1.12	1.18	1.55			3.24	3.19	3.41
wind	0.0 m/s	velocity	5.12	8.31	8.62	8.46	8.62	8.70	8.46	8.23	8.16	7.75	9.05	7.82	8.46	8.60	8.04

FINAL - 2019 Chinese National Grand Prix 1 (Zhaoqing, CHN)

date	09-Apr-19	time	2.78	3.90	4.98	6.06	7.13	8.20	9.30	10.37	11.48	12.60		14.09	CAA Hurdle Development (2019)		
reaction time	0.192	interval	1.12	1.08	1.08	1.07	1.07	1.10	1.07	1.11	1.12	1.49			3.28	3.24	3.30
wind	0.2 m/s	velocity	4.94	8.16	8.46	8.46	8.54	8.54	8.31	8.54	8.23	8.16	9.41	7.81	8.36	8.46	8.31

Heat 5 - 2019 Chinese National Grand Prix 1 (Zhaoqing, CHN)

date	08-Apr-19	time	2.74	3.84	4.92	5.98	7.06	8.15	9.24	10.31	11.44	12.58		14.11	CAA Hurdle Development (2019)		
reaction time	0.201	interval	1.10	1.08	1.06	1.08	1.09	1.09	1.07	1.13	1.14	1.53			3.24	3.26	3.34
wind	0.6 m/s	velocity	5.01	8.31	8.46	8.62	8.46	8.39	8.39	8.54	8.09	8.02	9.16	7.80	8.46	8.41	8.21

B-FINAL - 2019 Chinese Indoor National Grand Prix 1 (Nanjing, CHN)

date	20-Feb-19	time	2.73	3.85	4.95	6.02	7.12							8.04	CAA Hurdle Development (2019)		
reaction time		interval	1.12	1.10	1.07	1.10							0.92		3.29		
		velocity	5.03	8.16	8.31	8.54	8.31						10.57	7.46	8.33		

Luff, Darius (USA) (2001)

			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Semi-Final 2 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)														<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>				
date	27-Jun-24	time	2.57	3.61	4.63	5.63	6.65	7.70	8.72	9.78	10.84	11.90		13.37	5 / 5			
reaction time		interval	1.04	1.02	1.00	1.02	1.05	1.02	1.06	1.06	1.06	1.47				3.06	3.09	3.18
wind	-0.2 m/s	velocity	5.34	8.79	8.96	9.14	8.96	8.70	8.96	8.62	8.62	8.62	9.54	8.23	8.23	8.96	8.87	8.62

Heat 1 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)

date	24-Jun-24	time	2.56	3.63	4.66	5.64	6.65	7.68	8.72	9.78	10.83	11.90		13.33	1 / 3			
reaction time		interval	1.07	1.03	0.98	1.01	1.03	1.04	1.06	1.05	1.07	1.43				3.08	3.08	3.18
wind	0.8 m/s	velocity	5.36	8.54	8.87	9.33	9.05	8.87	8.79	8.62	8.70	8.54	9.80	8.25	8.25	8.90	8.90	8.62

FINAL - 2024 NCAA Championships (Eugene, OR) (TV Analysis)

date	07-Jun-24	time	2.53	3.57	4.60	5.60	6.60	7.61	8.64	9.67	10.71	11.77		13.19	6 / 1			
reaction time		interval	1.04	1.03	1.00	1.00	1.01	1.03	1.03	1.04	1.06	1.42	PB			3.07	3.04	3.13
wind	0.1 m/s	velocity	5.42	8.79	8.87	9.14	9.14	9.05	8.87	8.87	8.79	8.62	9.87	8.34	8.34	8.93	9.02	8.76

FINAL - 2023 NCAA Championships (Austin, TX) (TV Analysis)

date	09-Jun-23	time	2.53	3.57	4.60	5.63	6.64	7.66	8.68	9.72	10.76	11.83		13.38	8 / 6			
reaction time		interval	1.04	1.03	1.03	1.01	1.02	1.02	1.04	1.04	1.07	1.55				3.10	3.05	3.15
wind	1.8 m/s	velocity	5.42	8.79	8.87	8.87	9.05	8.96	8.96	8.79	8.79	8.54	9.05	8.22	8.22	8.85	8.99	8.70

Lukáš, Marek (CZE) (1991)

			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2013 Czech Republic National Championships (Tábor, CZE)														<i>Feher (2013) - Final report from the men's & women's Czech Republic national championships</i>				
date	15-Jun-13	time	2.75	3.87	5.00	6.10	7.24	8.38	9.53	10.68	11.85	13.05		14.58	1 / 6			
reaction time	0.177	interval	1.12	1.13	1.10	1.14	1.14	1.15	1.15	1.17	1.20	1.53	PB			3.35	3.43	3.52
wind	0.4 m/s	velocity	4.99	8.16	8.09	8.31	8.02	8.02	7.95	7.95	7.81	7.62	9.16	7.54	7.54	8.19	7.99	7.79

Heat 3 - 2013 Czech Republic National Championships (Tábor, CZE)

date	15-Jun-13	time	2.78	3.91	5.03	6.17	7.32	8.46	9.62	10.79	12.00	13.16		14.75	3 / 3			
reaction time	0.176	interval	1.13	1.12	1.14	1.15	1.14	1.16	1.17	1.21	1.16	1.59				3.39	3.45	3.54
wind	-0.3 m/s	velocity	4.94	8.09	8.16	8.02	7.95	8.02	7.88	7.81	7.55	7.88	8.82	7.46	7.46	8.09	7.95	7.75

Heat 2 - 2012 Czech Republic National Indoor Championships (Praha, CZE)

date	25-Feb-12	time	2.66	3.83	4.99	6.14	7.29							8.27	2 / 4			
reaction time	0.111	interval	1.17	1.16	1.15	1.15							0.98			3.48		
		velocity	5.16	7.81	7.88	7.95	7.95						9.92	7.26	7.26	7.88		

Luo Xinyu (CHN) (2002)

			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
B FINAL - 2021 National Indoor Grand Prix (Chengdu, CHN)														<i>CAA Hurdle Development (2021)</i>				
date	13-Mar-21	time	2.85	4.14	5.38	6.66	7.92							9.00	4 / 5			

reaction time	0.199	interval	1.29	1.24	1.28	1.26							1.08	PB	3.81
		velocity	4.81	7.09	7.37	7.14	7.25						9.00	6.67	7.20

Lynsha, Maksim (BLR) (1985)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2013 European Indoor Championships (Göteborg, SWE)																	
date	01-Mar-13	time	2.56	3.60	4.64	5.66	6.68							Blomkvist (2013) - www.elitlandslag.se/SprintHäck/KortHäck.aspx			
reaction time	0.162	interval	1.04	1.04	1.02	1.02					0.90	PB	2 / 1	3.10			
wind		velocity	5.36	8.79	8.79	8.96	8.96				10.80	7.92		8.85			

Race 1 - 2011 European Team Championships (Stockholm, SWE)

date	19-Jun-11	time	2.60	3.66	4.72	5.80	6.84	7.92	8.98	10.06	11.16	12.24		Blomkvist (2011) - www.sub13.se			
reaction time	0.173	interval	1.06	1.06	1.08	1.04	1.08	1.06	1.08	1.10	1.08	1.52		6 / 3	3.20	3.18	3.26
wind	-0.8 m/s	velocity	5.28	8.62	8.62	8.46	8.79	8.46	8.62	8.46	8.31	8.46	9.22	7.99	8.57	8.62	8.41

Semi-Final 2 - 2009 IAAF World Championships (Berlin, GER)

date	20-Aug-09	time	2.59	3.62	4.67	5.70	6.73	7.79	8.85	9.89	10.97	12.05		Graubner (2009) - <i>biomechanical analyses at the 12th IAAF world championships</i>				
reaction time	0.154	interval	1.03	1.05	1.03	1.03	1.06	1.06	1.04	1.08	1.08	1.41		13.46	1 / 6	3.11	3.15	3.20
wind	0.6 m/s	velocity	5.30	8.87	8.70	8.87	8.87	8.62	8.62	8.79	8.46	8.46	9.94	8.17	8.82	8.70	8.57	

Ma Lei (CHN) (1989)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Heat 1 - 2019 Chinese National Championships (Shenyang, CHN)																	
date	08-Jul-19	time	2.72	3.85	4.95	6.04	7.14	8.22	9.31	10.43	11.54	12.69		CAA Hurdle Development (2019)			
reaction time	0.155	interval	7 steps	1.13	1.10	1.09	1.10	1.08	1.09	1.12	1.11	1.15	1.52	7 / 4	3.32	3.27	3.38
wind	0.1 m/s	velocity	5.04	8.09	8.31	8.39	8.31	8.46	8.39	8.16	8.23	7.95	9.22	7.74	8.26	8.39	8.11

FINAL - 2019 Chinese National Grand Prix 3 (Jinhau, CHN)

date	23-May-19	time	2.68	3.78	4.86	5.92	6.98	8.06	9.14	10.22	11.32	12.42		CAA Hurdle Development (2019)				
reaction time	0.158	interval	7 steps	1.10	1.08	1.06	1.06	1.08	1.08	1.08	1.10	1.10	1.49	13.91	4 / 4	3.24	3.22	3.28
wind	2.5 m/s	velocity	5.12	8.31	8.46	8.62	8.62	8.46	8.46	8.46	8.31	8.31	9.41	7.91	8.46	8.52	8.36	

Heat 4 - 2019 Chinese National Grand Prix 2 (Huangshi, CHN)

date	13-Apr-19	time	2.76	3.88	4.98	6.09	7.17	8.28	9.38	10.50	11.66	12.80		CAA Hurdle Development (2019)				
reaction time	0.164	interval	7 steps	1.12	1.10	1.11	1.08	1.11	1.10	1.12	1.16	1.14	1.56	14.36	7 / 2	3.33	3.29	3.42
wind	-0.8 m/s	velocity	4.97	8.16	8.31	8.23	8.46	8.23	8.31	8.16	7.88	8.02	8.99	7.66	8.23	8.33	8.02	

FINAL - 2019 Chinese National Grand Prix 1 (Zhaqing, CHN)

date	09-Apr-19	time	2.94	4.10	5.22	6.34	7.46	8.59	9.71	10.87	12.04	13.24		CAA Hurdle Development (2019)				
reaction time	0.328	interval	7 steps	1.16	1.12	1.12	1.12	1.13	1.12	1.16	1.17	1.20	1.63	14.87	2 / 8	3.40	3.37	3.53
wind	0.2 m/s	velocity	4.67	7.88	8.16	8.16	8.16	8.09	8.16	7.88	7.81	7.62	8.60	7.40	8.06	8.14	7.77	

Heat 5 - 2019 Chinese National Grand Prix 1 (Zhaqing, CHN)

date	08-Apr-19	time	2.75	3.89	5.00	6.09	7.18	8.30	9.42	10.54	11.68	12.82		CAA Hurdle Development (2019)				
reaction time	0.159	interval	7 steps	1.14	1.11	1.09	1.09	1.12	1.12	1.12	1.14	1.14	1.52	14.34	8 / 2	3.34	3.33	3.40
wind	0.6 m/s	velocity	4.99	8.02	8.23	8.39	8.39	8.16	8.16	8.16	8.02	8.02	9.22	7.67	8.21	8.23	8.06	

FINAL - 2018 Chinese National Championships (Taiyuan, CHN)

date	16-Sep-18	time	2.74	3.87	4.96	6.07	7.21	8.36	9.53	10.69	11.89	13.11		Henson (2018) - <i>coaching observations</i>				
reaction time		interval	7 steps	1.13	1.09	1.11	1.14	1.15	1.17	1.16	1.20	1.22	1.69	14.80	5 / 7	3.33	3.46	3.58
wind	-0.3 m/s	velocity	5.01	8.09	8.39	8.23	8.02	7.95	7.81	7.88	7.62	7.49	8.30	7.43	8.23	7.92	7.66	

Heat 2 - 2018 Chinese National Championships (Taiyuan, CHN)

date	15-Sep-18	time	2.72	3.82	4.90	5.99	7.07	8.14	9.24	10.34	11.46	12.61		Henson (2018) - <i>coaching observations</i>				
reaction time		interval	7 steps	1.10	1.08	1.09	1.08	1.07	1.10	1.10	1.12	1.15	1.49	14.10	5 / 2	3.27	3.25	3.37
wind	0.7 m/s	velocity	5.04	8.31	8.46	8.39	8.46	8.54	8.31	8.31	8.16	7.95	9.41	7.80	8.39	8.44	8.14	

FINAL - 2018 National Grand Prix Final (Guiyang, CHN) (Altitude)

date	17-Jun-18	time	2.69	3.78	4.84	5.91	6.98	8.04	9.13	10.21	11.32	12.45		Zhang (2019) - <i>comparative analysis characteristics Chinese elite men's 110m hurdles in different age groups</i>				
reaction time		interval	7 steps	1.09	1.06	1.07	1.07	1.06	1.09	1.08	1.11	1.13	1.48	13.93	/ 3	3.22	3.22	3.32
wind	-0.3 m/s	velocity	5.10	8.39	8.62	8.54	8.54	8.62	8.39	8.46	8.23	8.09	9.47	7.90	8.52	8.52	8.26	

FINAL - 2017 Chinese National Games (Tianjin, CHN)

date	03-Sep-17	time	2.72	3.81	4.87	5.94	6.99	8.07	9.13	10.23	11.36	12.48		Henson (2017) - <i>coaching observations</i>				
reaction time		interval	7 steps	1.09	1.06	1.07	1.05	1.08	1.06	1.10	1.13	1.12	1.48	13.96	7 / 5	3.22	3.19	3.35
wind	0.3 m/s	velocity	5.04	8.39	8.62	8.54	8.70	8.46	8.62	8.31	8.09	8.16	9.47	7.88	8.52	8.60	8.19	

Machi, Ryota (JPN) (2001)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
FINAL - 2019 National Sports Festival (Hitachinaka, JPN) (99cm)																		
date	06-Oct-19	time	2.64	3.74	4.80	5.86	6.93	7.95	9.01	10.08	11.16	12.26		Enomoto (2019) - <i>research on athlete performance and technique- 2019 data book</i>				
reaction time	0.145	interval	1.10	1.06	1.06	1.07	1.02	1.06	1.07	1.08	1.10	1.46		13.72	7 / 6	3.22	3.15	3.25
wind	2.7 m/s	velocity	5.20	8.31	8.62	8.62	8.54	8.96	8.62	8.54	8.46	8.31	9.60	8.02	8.52	8.70	8.44	

Mack, Thomas (USA) (1985)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Heat 4 - 2007 USATF National Championships (Indianapolis, IN)																
USATF Men's Hurdle Development (2007)																

date	23-Jun-07	time	2.64	3.74	4.82	5.91	7.01	8.11	9.20	10.31	11.43	12.56	14.03	4 / 5					
reaction time		interval		1.10	1.08	1.09	1.10	1.10	1.09	1.11	1.12	1.13	1.47			3.27	3.29	3.36	
wind	-2.8 m/s	velocity	5.20	8.31	8.46	8.39	8.31	8.31	8.39	8.23	8.16	8.09	9.54	7.84		8.39	8.33	8.16	
Maeda, Hirotake (JPN) (1996)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10			
														Heat 3 - 2017 Japanese National Championships (Osaka, JPN)					
														<i>(2017) - tfdata-store.com/2017/07/13/post-1040/</i>					
date	24-Jun-17	time	2.60	3.73	4.82	5.92	7.01	8.16	9.30	10.41	11.51	12.64	14.05	8 / 5					
reaction time	0.137	interval		1.13	1.09	1.10	1.09	1.15	1.14	1.11	1.10	1.13	1.41			3.32	3.38	3.34	
wind	0.5 m/s	velocity	5.28	8.09	8.39	8.31	8.39	7.95	8.02	8.23	8.31	8.09	9.94	7.83		8.26	8.11	8.21	
														FINAL - 2017 Kansai Regional University Championships (Osaka, JPN)					
														<i>(2017) - tfdata-store.com/2017/05/13/post-441/</i>					
date	11-May-17	time	2.65	3.74	4.85	5.94	7.03	8.12	9.22	10.35	11.46	12.59	14.03	5 / 3					
reaction time		interval		1.09	1.11	1.09	1.09	1.09	1.10	1.13	1.11	1.13	1.44	PB		3.29	3.28	3.37	
wind	1.6 m/s	velocity	5.18	8.39	8.23	8.39	8.39	8.39	8.31	8.09	8.23	8.09	9.74	7.84		8.33	8.36	8.14	
														FINAL - 2017 Kyoto University Meeting (Kyoto, JPN)					
														<i>(2017) - tfdata-store.com/2017/04/12/post-362/</i>					
date	09-Apr-17	time	2.65	3.78	4.89	5.99	7.09	8.19	9.30	10.41	11.51	12.64	14.09	5 / 2					
reaction time		interval		1.13	1.11	1.10	1.10	1.10	1.11	1.11	1.10	1.13	1.45	PB		3.34	3.31	3.34	
wind	1.5 m/s	velocity	5.18	8.09	8.23	8.31	8.31	8.31	8.23	8.23	8.31	8.09	9.67	7.81		8.21	8.28	8.21	
Maeda, Koki (JPN)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10			
														FINAL - 2018 Kinami Michitaka Memorial (Osaka, JPN)					
														<i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>					
date	06-May-18	time	2.65	3.75	4.82	5.91	6.99	8.09	9.18	10.31	11.45	12.59	14.11	9 / 7					
reaction time		interval		1.10	1.07	1.09	1.08	1.10	1.09	1.13	1.14	1.14	1.52			3.26	3.27	3.41	
wind	1.6 m/s	velocity	5.18	8.31	8.54	8.39	8.46	8.31	8.39	8.09	8.02	8.02	9.22	7.80		8.41	8.39	8.04	
Maeda, Takanori (JPN) (1997)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10			
														FINAL - 2017 Osaka University Athletics Championships (Osaka, JPN)					
														<i>(2017) - tfdata-store.com/2017/04/07/post-249/</i>					
date	06-Apr-17	time	2.74	3.88	5.05	6.21	7.36	8.52	9.71	10.91	12.10	13.30	14.87	5 / 4					
reaction time		interval		1.14	1.17	1.16	1.15	1.16	1.19	1.20	1.19	1.20	1.57			3.47	3.50	3.59	
wind	-1.8 m/s	velocity	5.01	8.02	7.81	7.88	7.95	7.88	7.68	7.62	7.68	7.62	8.93	7.40		7.90	7.83	7.64	
Mágos, Stamátios (GRE) (1972)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10			
														FINAL - 1997 European Cup (Munich, GER)					
														<i>Jung (2003) - http://www.fgs.uni-halle.de</i>					
date	22-Jun-97	time	2.66	3.74	4.82	5.88	6.94	8.02	9.12	10.24	11.36	12.52	13.97	/ 7					
reaction time		interval		1.08	1.08	1.06	1.06	1.08	1.10	1.12	1.12	1.16	1.45			3.22	3.24	3.40	
wind	0.2 m/s	velocity	5.16	8.46	8.46	8.62	8.62	8.46	8.31	8.16	8.16	7.88	9.67	7.87		8.52	8.46	8.06	
Mählmann, René (GER) (1993)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10			
														FINAL - 2011 German National Indoor Junior Championships (Leverkusen, GER) (99cm)					
														<i>May (2011) - zwei jugendliche hürdensprinter im vergleich</i>					
date	19-Feb-11	time	2.66	3.74	4.80	5.87	6.96						7.91	6 / 2					
reaction time		interval		1.08	1.06	1.07	1.09					0.95				3.21			
		velocity	5.16	8.46	8.62	8.54	8.39					10.23	7.59			8.54			
Makoto, Ino (JPN)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10			
														FINAL - 2016 Miyazaki Prefecture High School Meeting (Miyazaki, JPN)					
														<i>(2016.06.01) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>					
date	31-May-16	time	2.74	3.89	5.06	6.24	7.41	8.58	9.75	10.91	12.09	13.29	14.80	5 / 1					
reaction time		interval		1.15	1.17	1.18	1.17	1.17	1.17	1.16	1.18	1.20	1.51			3.50	3.51	3.54	
wind	-1.0 m/s	velocity	5.01	7.95	7.81	7.75	7.81	7.81	7.81	7.88	7.75	7.62	9.28	7.43		7.83	7.81	7.75	
Mališka, Rostislav (CZE) (1998)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10			
														FINAL - 2015 Czech Republic National U18 Indoor Championships (Praha, CZE) (91cm)					
														<i>Feher (2015) - Final report U18 & U20 Czech Republic indoor national champs</i>					
date	14-Feb-15	time	2.73	3.85	4.95	6.04	7.15						8.11	4 / 3					
reaction time	0.185	interval		1.12	1.10	1.09	1.11					0.96				3.31			
		velocity	5.03	8.16	8.31	8.39	8.23					10.13	7.40			8.28			
														FINAL - 2014 Czech Republic National U18 Championships (Trinec, CZE) (91cm)					
														<i>Feher (2014) - Final report from the U18 & U20 Czech Republic national championships</i>					
date	28-Jun-14	time	2.91	4.07	5.25	6.43	7.59	8.78	9.95	11.15	12.36	13.58	15.24	1 / 6					
reaction time	0.193	interval		1.16	1.18	1.18	1.16	1.19	1.17	1.20	1.21	1.22	1.66			3.52	3.52	3.63	
wind	-3.7 m/s	velocity	4.71	7.88	7.75	7.75	7.88	7.68	7.81	7.62	7.55	7.49	8.45	7.22		7.79	7.79	7.55	
														Heat 2 - 2014 Czech Republic National U18 Championships (Trinec, CZE) (91cm)					
														<i>Feher (2014) - Final report from the U18 & U20 Czech Republic national championships</i>					
date	28-Jun-14	time	2.86	4.05	5.19	6.38	7.53	8.70	9.87	11.03	12.25	13.50	15.15	4 / 2					
reaction time	0.228	interval		1.19	1.14	1.19	1.15	1.17	1.17	1.16	1.22	1.25	1.65			3.52	3.49	3.63	
wind	-4.1 m/s	velocity	4.80	7.68	8.02	7.68	7.95	7.81	7.81	7.88	7.49	7.31	8.50	7.26		7.79	7.86	7.55	
Mallett, Aaron (USA) (1994)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10			
														Semi-Final 1 - 2022 USATF National Championships (Eugene, OR)					
														<i>USATF (2022) - Results powered by Karmarush.com</i>					
date	26-Jun-22	time	2.53	3.59	4.59	5.59	6.60	7.68	8.69	9.72	10.79	11.88	13.38	7 / 5					
reaction time		interval		1.06	1.00	1.00	1.01	1.08	1.01	1.03	1.07	1.09	1.50			3.06	3.10	3.19	
wind	0.4 m/s	velocity	5.42	8.62	9.14	9.14	9.05	8.46	9.05	8.87	8.54	8.39	9.35	8.22		8.96	8.85	8.60	
														FINAL - 2022 Meeting de Paris (Paris, FRA) (TV Analysis)					
														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>					

FINAL - 2019 USATF National Championships (Des Moines, IA) (TV Analysis)

date	28-Jul-19	time	2.53	3.60	4.63	5.67	6.67	7.73	8.78	9.84	10.91	11.97	13.51	5 / 7				
reaction time		interval	7 steps	1.07	1.03	1.04	1.00	1.06	1.05	1.06	1.07	1.06	1.54			3.14	3.11	3.19
wind	-0.8 m/s	velocity	5.42	8.54	8.87	8.79	9.14	8.62	8.70	8.62	8.54	8.62	9.10	8.14		8.73	8.82	8.60

*Henson (2020) - Athlete First: 2019 year end hurdle report***FINAL - 2019 PSD Bank Meeting (Düsseldorf, GER) (TV Analysis)**

date	20-Feb-19	time	2.40	3.46	4.50	5.52	6.56						7.66	6 / 4				
reaction time	0.166	interval	7 steps	1.06	1.04	1.02	1.04						1.10			3.12		
		velocity	5.72	8.62	8.79	8.96	8.79						8.84	7.83		8.79		

*Henson (2020) - Athlete First: 2019 year end hurdle report***FINAL - 2019 Müller Indoor Grand Prix (Birmingham, GBR) (TV Analysis)**

date	16-Feb-19	time	2.54	3.58	4.65	5.65	6.68						7.63	7 / 5				
reaction time	0.152	interval	7 steps	1.04	1.07	1.00	1.03						0.95			3.11		
		velocity	5.40	8.79	8.54	9.14	8.87						10.23	7.86		8.82		

*Henson (2020) - Athlete First: 2019 year end hurdle report***FINAL - 2017 Müller's Anniversary Games (London, GBR) (TV Analysis)**

date	09-Jul-17	time	2.58	3.66	4.74	5.76	6.78	7.82	8.84	9.88	10.92	11.98	13.47	1 / 6				
reaction time	0.198	interval	7 steps	1.08	1.08	1.02	1.02	1.04	1.02	1.04	1.04	1.06	1.49			3.18	3.08	3.14
wind	0.0 m/s	velocity	5.32	8.46	8.46	8.96	8.96	8.79	8.96	8.79	8.62	9.41	8.17			8.62	8.90	8.73

*Henson (2020) - Athlete First: 2017 year end hurdle report***Manago, Ryona (JPN) (2003)**

			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10

FINAL - 2022 Japanese U20 National Championships (Osaka, JPN) (99cm)

date	12-Jun-22	time	2.58	3.67	4.70	5.73	6.76	7.80	8.88	9.94	11.02	12.08	13.55	5 / 2				
reaction time	0.151	interval	7 steps	1.09	1.03	1.03	1.03	1.04	1.08	1.06	1.08	1.06	1.47			3.15	3.15	3.20
wind	1.1 m/s	velocity	5.32	8.39	8.87	8.87	8.79	8.46	8.62	8.46	8.62	9.54	8.12			8.70	8.70	8.57

*Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season***Manga, Aurel (FRA) (1992)**

			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10

FINAL - 2023 French National Championships (Albi, FRA) (TV Analysis)

date	29-Jul-23	time	2.52	3.56	4.62	5.62	6.64	7.64	8.68	9.72	10.78	11.84	13.39	7 / 5				
reaction time	0.166	interval	7 steps	1.04	1.06	1.00	1.02	1.00	1.04	1.04	1.06	1.06	1.55			3.10	3.06	3.16
wind	2.3 m/s	velocity	5.44	8.79	8.62	9.14	8.96	9.14	8.79	8.79	8.62	8.62	9.05	8.22		8.85	8.96	8.68

*Henson (2023) - Athlete First: 2023 year end hurdle report***Heat 2 - 2023 Kamila Skolimowska Memorial (Silesia, POL)**

date	16-Jul-23	time	2.45	3.55	4.59	5.63	6.66	7.69	8.72	9.76	10.82	11.88	13.45	1 / 4				
reaction time	0.156	interval	7 steps	1.10	1.04	1.04	1.03	1.03	1.03	1.04	1.06	1.06	1.57			3.18	3.09	3.16
wind	-0.2 m/s	velocity	5.60	8.31	8.79	8.79	8.87	8.87	8.87	8.79	8.62	8.62	8.93	8.18		8.62	8.87	8.68

*Omega Timing (2023) - diamond league race analysis***Heat 2 - 2023 Meeting de Paris (Paris, FRA)**

date	09-Jun-23	time	2.41	3.48	4.52	5.55	6.58	7.61	8.67	9.76	10.84	11.92	13.55	1 / 7				
reaction time	0.163	interval	7 steps	1.07	1.04	1.03	1.03	1.03	1.06	1.09	1.08	1.08	1.63			3.14	3.12	3.25
wind	-0.6 m/s	velocity	5.69	8.54	8.79	8.87	8.87	8.87	8.62	8.39	8.46	8.46	8.60	8.12		8.73	8.79	8.44

*Omega Timing (2023) - diamond league race analysis***FINAL - 2023 FBK Games (Hengelo, NED) (TV Analysis)**

date	04-Jun-23	time	2.58	3.66	4.72	5.75	6.77	7.82	8.86	9.95	11.03	12.14	13.58	8 / 7				
reaction time	0.151	interval	7 steps	1.08	1.06	1.03	1.02	1.05	1.04	1.09	1.08	1.11	1.44			3.17	3.11	3.28
wind	0.4 m/s	velocity	5.32	8.46	8.62	8.87	8.96	8.70	8.79	8.39	8.46	8.23	9.74	8.10		8.65	8.82	8.36

*Henson (2023) - Athlete First: 2023 year end hurdle report***FINAL - 2022 Müller Birmingham Diamond League (Birmingham, GBR) (TV Analysis)**

date	21-May-22	time	2.47	3.53	4.59	5.67	6.70	7.75	8.80	9.87	10.93	12.03	13.61	7 / 6				
reaction time	0.153	interval	7 steps	1.06	1.06	1.08	1.03	1.05	1.05	1.07	1.06	1.10	1.58			3.20	3.13	3.23
wind	0.7 m/s	velocity	5.55	8.62	8.62	8.46	8.87	8.70	8.70	8.54	8.62	8.31	8.87	8.08		8.57	8.76	8.49

*Henson (2022) - Athlete First: 2022 year end hurdle report***FINAL - 2021 Meeting de Paris (Paris, FRA) (TV Analysis)**

date	28-Aug-21	time	2.44	3.50	4.54	5.58	6.60	7.62	8.64	9.70	10.76	11.84	13.40	7 / 5				
reaction time	0.154	interval	7 steps	1.06	1.04	1.04	1.02	1.02	1.02	1.06	1.06	1.08	1.56			3.14	3.06	3.20
wind	0.7 m/s	velocity	5.62	8.62	8.79	8.79	8.96	8.96	8.96	8.62	8.62	8.46	8.99	8.21		8.73	8.96	8.57

*Henson (2021) - Athlete First: 2021 year end hurdle report***FINAL - 2020 Olympic Games (Tokyo, JPN) (TV Analysis)**

date	06-Aug-21	time	2.50	3.58	4.62	5.62	6.64	7.66	8.68	9.70	10.78	11.86	13.38	9 / 8				
reaction time	0.151	interval	7 steps	1.08	1.04	1.00	1.02	1.02	1.02	1.02	1.08	1.08	1.52			3.12	3.06	3.18
wind	-0.5 m/s	velocity	5.49	8.46	8.79	9.14	8.96	8.96	8.96	8.96	8.46	8.46	9.22	8.22		8.79	8.96	8.62

*Henson (2021) - Athlete First: 2021 year end hurdle report***FINAL - 2021 European Indoor Championships (Toruń, POL) (TV Analysis)**

date	07-Mar-21	time	2.42	3.48	4.50	5.52	6.58						7.63	3 / 5				
reaction time	0.152	interval	7 steps	1.06	1.02	1.02	1.06						1.05			3.10		
		velocity	5.67	8.62	8.96	8.96	8.62						9.26	7.86		8.85		

*Henson (2021) - Athlete First: 2021 year end hurdle report***FINAL - 2021 Meeting Elite en Salle de L'Eure (Val-de-Reuil, FRA) (TV Analysis)**

date	14-Feb-21	time	2.50	3.58	4.66	5.70	6.74						7.77	6 / 4				
reaction time	0.160	interval	7 steps	1.08	1.08	1.04	1.04						1.03			3.20		
		velocity	5.49	8.46	8.46	8.79	8.79						9.44	7.72		8.57		

Henson (2021) - men's 60m hurdles world record season - Grant Holloway

Heat 2 - 2021 Meeting Elite en Salle de L'Eure (Val-de-Reuil, FRA) (TV Analysis)

date	14-Feb-21	time	2.58	3.64	4.68	5.72	6.74												
reaction time	0.176	interval	7 steps	1.06	1.04	1.04	1.02												
		velocity	5.32	8.62	8.79	8.79	8.96												

Henson (2021) - men's 60m hurdles world record season - Grant Holloway

FINAL - 2019 Meeting International Mohammed VI d'Athlétisme (Rabat, MAR) (TV Analysis)

date	16-Jun-19	time	2.52	3.58	4.66	5.72	6.80	7.86	8.94	10.04	11.12	12.26							
reaction time	0.163	interval	7 steps	1.06	1.08	1.06	1.08	1.06	1.08	1.10	1.08	1.14	1.62						
wind	0.3 m/s	velocity	5.44	8.62	8.46	8.62	8.46	8.62	8.46	8.31	8.46	8.02	8.65	7.93					

Henson (2020) - Athlete First: 2019 year end hurdle report

FINAL - 2019 Golden Gala Pietro Mennea (Rome, ITA) (TV Analysis)

date	06-Jun-19	time	2.53	3.60	4.62	5.65	6.71	7.75	8.80	9.88	10.94	12.03							
reaction time	0.150	interval	7 steps	1.07	1.02	1.03	1.06	1.04	1.05	1.08	1.06	1.09	1.48						
wind	0.4 m/s	velocity	5.42	8.54	8.96	8.87	8.62	8.79	8.70	8.46	8.62	8.39	9.47	8.14					

Henson (2020) - Athlete First: 2019 year end hurdle report

FINAL - 2019 French National Indoor Championships (Miramas, FRA) (TV Analysis)

date	16-Feb-19	time	2.52	3.58	4.58	5.58	6.58												
reaction time	0.155	interval	7 steps	1.06	1.00	1.00	1.00												
		velocity	5.44	8.62	9.14	9.14	9.14												

Henson (2020) - Athlete First: 2019 year end hurdle report

FINAL - 2018 Meeting de Paris (Paris, FRA) (TV Analysis)

date	30-Jun-18	time	2.50	3.56	4.60	5.64	6.66	7.70	8.74	9.78	10.86	11.94							
reaction time	0.157	interval	7 steps	1.06	1.04	1.04	1.02	1.04	1.04	1.04	1.08	1.08	1.54						
wind	1.5 m/s	velocity	5.49	8.62	8.79	8.79	8.96	8.79	8.79	8.79	8.46	8.46	9.10	8.16					

Henson (2020) - Athlete First: 2018 year end hurdle report

FINAL - 2018 Shanghai Diamond League (Shanghai, CHN) (TV Analysis)

date	12-May-18	time	2.52	3.60	4.70	5.76	6.82	7.90	8.96	10.04	11.16	12.28							
reaction time	0.147	interval	7 steps	1.08	1.10	1.06	1.06	1.08	1.06	1.08	1.12	1.12	1.58						
wind	0.2 m/s	velocity	5.44	8.46	8.31	8.62	8.62	8.46	8.62	8.46	8.16	8.16	8.87	7.94					

Henson (2020) - Athlete First: 2018 year end hurdle report

FINAL - 2018 IAAF World Indoor Championships (Birmingham, GBR)

date	04-Mar-18	time	2.57	3.63	4.68	5.69	6.68												
reaction time	0.169	interval	7 steps	1.06	1.05	1.01	0.99												
		velocity	5.34	8.62	8.70	9.05	9.23												

Walker (2019). Biomechanical Report for the IAAF World Indoor Championships 2018: 60m Hurdles Men

FINAL - 2017 Bauhaus Athletics (Stockholm, SWE) (TV Analysis)

date	18-Jun-17	time	2.46	3.48	4.50	5.54	6.54	7.56	8.58	9.62	10.70	11.78							
reaction time	0.147	interval	7 steps	1.02	1.02	1.04	1.00	1.02	1.02	1.04	1.08	1.08	1.52						
wind	3.5 m/s	velocity	5.58	8.96	8.96	8.79	9.14	8.96	8.96	8.79	8.46	8.46	9.22	8.27					

Henson (2020) - Athlete First: 2017 year end hurdle report

FINAL - 2016 Memorial van Damme (Brussels, BEL) (TV Analysis)

date	09-Sep-16	time	2.50	3.57	4.60	5.62	6.64	7.69	8.75	9.81	10.91	12.06							
reaction time	0.173	interval	7 steps	1.07	1.03	1.02	1.02	1.05	1.06	1.06	1.10	1.15	1.58						
wind	0.2 m/s	velocity	5.49	8.54	8.87	8.96	8.96	8.70	8.62	8.62	8.31	7.95	8.87	8.06					

Henson (2020) - Athlete First: 2016 year end hurdle report

FINAL - 2016 London Anniversary Games (London, GBR) (TV Analysis)

date	23-Jul-16	time	2.46	3.52	4.58	5.62	6.63	7.74	8.82	9.88	11.02	12.08							
reaction time	0.155	interval	7 steps	1.06	1.06	1.04	1.01	1.11	1.08	1.06	1.14	1.06	1.51						
wind	-1.0 m/s	velocity	5.58	8.62	8.62	8.79	9.05	8.23	8.46	8.62	8.02	8.62	9.28	8.09					

Henson (2021) - Athlete First: 2016 year end hurdle report

Manninen, Ilari (FIN) (1997)

FINAL - 2020 Paavo Nurmi Games (Turku, FIN) (TV Analysis)

date	11-Aug-20	time	2.60	3.70	4.80	5.90	7.00	8.08	9.21	10.31	11.44	12.58							
reaction time	0.201	interval	7 steps	1.10	1.10	1.10	1.10	1.08	1.13	1.10	1.13	1.14	1.53						
wind	1.1 m/s	velocity	5.28	8.31	8.31	8.31	8.31	8.46	8.09	8.31	8.09	8.02	9.16	7.80					

Henson (2020) - Athlete First: 2020 year end hurdle report

Mao Chenchen (CHN) (2002)

U18 FINAL - 2019 Chinese National Youth Games (Taiyuan, CHN) (91cm)

date	14-Aug-19	time	2.67	3.82	4.93	6.02	7.09	8.19	9.29	10.44	11.59	12.73							
reaction time	0.162	interval		1.15	1.11	1.09	1.07	1.10	1.10	1.15	1.15	1.14	1.62						
wind	-0.1 m/s	velocity	5.14	7.95	8.23	8.39	8.54	8.31</											

Martinez, Asier (ESP) (2000)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2024 Golden Gala • Pietro Mennea (Roma, ITA)													<i>Omega Timing (2024) - diamond league race analysis</i>				
date	30-Aug-24	time	2.45	3.52	4.53	5.53	6.54	7.57	8.59	9.62	10.66	11.71	13.27	2 / 2			
reaction time	0.157	interval	7 steps	1.07	1.01	1.00	1.01	1.03	1.02	1.03	1.04	1.05	1.56		3.08	3.06	3.12
wind	0.4 m/s	velocity	5.60	8.54	9.05	9.14	9.05	8.87	8.96	8.87	8.79	8.70	8.99	8.29	8.90	8.96	8.79
Semi-Final 3 - 2024 Olympic Games (Paris, FRA)													<i>Paris 2024 Olympic Games - Results Book (2024)</i>				
date	07-Aug-24	time	2.38	3.47	4.51	5.51	6.53	7.55	8.58	9.62	10.66	11.73	13.35	2 / 5			
reaction time	0.130	interval	7 steps	1.09	1.04	1.00	1.02	1.02	1.03	1.04	1.04	1.07	1.62		3.13	3.07	3.15
wind	0.6 m/s	velocity	5.76	8.39	8.79	9.14	8.96	8.96	8.87	8.79	8.79	8.54	8.65	8.24	8.76	8.93	8.70
Repechage 1 - 2024 Olympic Games (Paris, FRA)													<i>Paris 2024 Olympic Games - Results Book (2024)</i>				
date	06-Aug-24	time	2.50	3.58	4.62	5.65	6.68	7.70	8.73	9.76	10.80	11.86	13.46	5 / 2			
reaction time	0.162	interval	7 steps	1.08	1.04	1.03	1.03	1.02	1.03	1.03	1.04	1.06	1.60		3.15	3.08	3.13
wind	0.2 m/s	velocity	5.49	8.46	8.79	8.87	8.87	8.96	8.87	8.87	8.79	8.62	8.76	8.17	8.70	8.90	8.76
Heat 2 - 2024 Olympic Games (Paris, FRA)													<i>Paris 2024 Olympic Games - Results Book (2024)</i>				
date	04-Aug-24	time	2.46	3.56	4.62	5.65	6.69	7.73	8.77	9.82	10.86	11.92	13.47	5 / 4			
reaction time	0.141	interval	7 steps	1.10	1.06	1.03	1.04	1.04	1.04	1.05	1.04	1.06	1.55		3.19	3.12	3.15
wind	1.2 m/s	velocity	5.58	8.31	8.62	8.87	8.79	8.79	8.79	8.70	8.79	8.62	9.05	8.17	8.60	8.79	8.70
FINAL - 2024 Meeting de Paris (Paris, FRA)													<i>Omega Timing (2024) - diamond league race analysis</i>				
date	07-Jul-24	time	2.43	3.51	4.55	5.58	6.60	7.61	8.63	9.67	10.72	11.77	13.35	2 / 7			
reaction time	0.139	interval	7 steps	1.08	1.04	1.03	1.02	1.01	1.02	1.04	1.05	1.05	1.58		3.15	3.05	3.14
wind	-0.6 m/s	velocity	5.65	8.46	8.79	8.87	8.96	9.05	8.96	8.79	8.70	8.70	8.87	8.24	8.70	8.99	8.73
Heat 2 - 2024 Meeting de Paris (Paris, FRA)													<i>Omega Timing (2024) - diamond league race analysis</i>				
date	07-Jul-24	time	2.43	3.52	4.55	5.57	6.58	7.60	8.63	9.66	10.71	11.76	13.32	8 / 3			
reaction time	0.140	interval	7 steps	1.09	1.03	1.02	1.01	1.02	1.03	1.03	1.05	1.05	1.56		3.14	3.06	3.13
wind	0.4 m/s	velocity	5.65	8.39	8.87	8.96	9.05	8.96	8.87	8.87	8.70	8.70	8.99	8.26	8.73	8.96	8.76
FINAL - 2024 European Athletics Championships (Roma, ITA) (TV Analysis)													<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>				
date	08-Jun-24	time	2.60	3.66	4.67	5.67	6.68	7.72	8.76	9.80	10.86	11.95	13.45	4 / =4			
reaction time	0.165	interval	7 steps	1.06	1.01	1.00	1.01	1.04	1.04	1.04	1.06	1.09	1.50		3.07	3.09	3.19
wind	0.6 m/s	velocity	5.28	8.62	9.05	9.14	9.05	8.79	8.79	8.79	8.62	8.39	9.35	8.18	8.93	8.87	8.60
FINAL - 2024 Prefontaine Classic (Eugene, OR)													<i>Omega Timing (2024) - diamond league race analysis</i>				
date	25-May-24	time	2.46	3.53	4.56	5.57	6.59	7.61	8.63	9.66	10.70	11.75	13.31	1 / 6			
reaction time	0.136	interval	7 steps	1.07	1.03	1.01	1.02	1.02	1.02	1.03	1.04	1.05	1.56		3.11	3.06	3.12
wind	-0.1 m/s	velocity	5.58	8.54	8.87	9.05	8.96	8.96	8.87	8.79	8.70	8.70	8.99	8.26	8.82	8.96	8.79
FINAL - 2022 Weltklasse (Zürich, SUI) (TV Analysis)													<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
date	08-Sep-22	time	2.57	3.65	4.68	5.70	6.71	7.74	8.74	9.81	10.84	11.88	13.29	3 / 4			
reaction time	0.144	interval	7 steps	1.08	1.03	1.02	1.01	1.03	1.00	1.07	1.03	1.04	1.41		3.13	3.04	3.14
wind	-1.0 m/s	velocity	5.34	8.46	8.87	8.96	9.05	8.87	9.14	8.54	8.87	8.79	9.94	8.28	8.76	9.02	8.73
FINAL - 2022 European Athletics Championships (Munich, GER) (TV Analysis)													<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
date	17-Aug-22	time	2.56	3.60	4.60	5.60	6.62	7.62	8.64	9.66	10.68	11.74	13.14	4 / 1			
reaction time	0.149	interval	7 steps	1.04	1.00	1.00	1.02	1.00	1.02	1.02	1.02	1.06	1.40	PB	3.04	3.04	3.10
wind	-0.2 m/s	velocity	5.36	8.79	9.14	9.14	8.96	9.14	8.96	8.96	8.96	8.62	10.01	8.37	9.02	9.02	8.85
FINAL - 2022 World Athletics Championships (Eugene, OR)													<i>Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season</i>				
date	17-Jul-22	time	2.62	3.70	4.72	5.73	6.73	7.74	8.75	9.75	10.78	11.83	13.17	8 / 3			
reaction time	0.126	interval	7 steps	1.08	1.02	1.01	1.00	1.01	1.01	1.00	1.03	1.05	1.34	PB	3.11	3.02	3.08
wind	1.2 m/s	velocity	5.24	8.46	8.96	9.05	9.14	9.05	9.05	9.14	8.87	8.70	10.46	8.35	8.82	9.08	8.90
Semi-Final 2 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)													<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
date	17-Jul-22	time	2.66	3.70	4.74	5.76	6.80	7.80	8.83	9.83	10.83	11.87	13.26	6 / 2			
reaction time	0.141	interval	7 steps	1.04	1.04	1.02	1.04	1.00	1.03	1.00	1.00	1.04	1.39		3.10	3.07	3.04
wind	0.3 m/s	velocity	5.16	8.79	8.79	8.96	8.79	9.14	8.87	9.14	9.14	8.79	10.09	8.30	8.85	8.93	9.02
Heat 3 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)													<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
date	16-Jul-22	time	2.56	3.60	4.60	5.60	6.63	7.66	8.70	9.73	10.80	11.83	13.37	2 / 1			
reaction time	0.137	interval	7 steps	1.04	1.00	1.00	1.03	1.03	1.04	1.03	1.07	1.03	1.54		3.04	3.10	3.13
wind	-0.3 m/s	velocity	5.36	8.79	9.14	9.14	8.87	8.87	8.79	8.87	8.54	8.87	9.10	8.23	9.02	8.85	8.76
FINAL - 2022 Meeting de Paris (Paris, FRA) (TV Analysis)													<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
date	18-Jun-22	time	2.58	3.64	4.66	5.68	6.68	7.70	8.76	9.84	10.92	12.02	13.69	6 / 7			
reaction time	0.161	interval	7 steps	1.06	1.02	1.02	1.00	1.02	1.06	1.08	1.08	1.10	1.67		3.10	3.08	3.26
wind	-0.2 m/s	velocity	5.32	8.62	8.96	8.96	9.14	8.96	8.62	8.46	8.46	8.31	8.40	8.04	8.85	8.90	8.41
FINAL - 2022 Bislett Games (Oslo, NOR) (TV Analysis)													<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
date	16-Jun-22	time	2.56	3.62	4.64	5.66	6.68	7.70	8.72	9.76	10.80	11.84	13.30	6 / 2			

reaction time	0.137	interval	7 steps	1.06	1.02	1.02	1.02	1.02	1.02	1.02	1.04	1.04	1.04	1.46		3.10	3.06	3.12
wind	-1.2 m/s	velocity	5.36	8.62	8.96	8.96	8.96	8.96	8.96	8.96	8.79	8.79	8.79	9.60	8.27	8.85	8.96	8.79
FINAL - 2022 Müller Birmingham Diamond League (Birmingham, GBR) (TV Analysis)															<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>			
date	21-May-22	time	2.50	3.57	4.60	5.63	6.68	7.68	8.73	9.77	10.80	11.87			13.32		6 / 3	
reaction time	0.150	interval	7 steps	1.07	1.03	1.03	1.05	1.00	1.05	1.04	1.03	1.07	1.45			3.13	3.10	3.14
wind	0.7 m/s	velocity	5.49	8.54	8.87	8.87	8.70	9.14	8.70	8.79	8.87	8.54	9.67	8.26		8.76	8.85	8.73
FINAL - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)															<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>			
date	20-Mar-22	time	2.50	3.54	4.58	5.58	6.58							7.57		2 / 4		
reaction time	0.150	interval	7 steps	1.04	1.04	1.00	1.00						0.99			3.08		
wind		velocity	5.49	8.79	8.79	9.14	9.14						9.82	7.93		8.90		
Semi-Final 2 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)															<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>			
date	20-Mar-22	time	2.50	3.56	4.58	5.58	6.62							7.55		2 / 3		
reaction time	0.138	interval	7 steps	1.06	1.02	1.00	1.04						0.93	=PB		3.08		
wind		velocity	5.49	8.62	8.96	9.14	8.79						10.45	7.95		8.90		
FINAL - 2020 Olympic Games (Tokyo, JPN) (TV Analysis)															<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>			
date	06-Aug-21	time	2.56	3.60	4.64	5.66	6.66	7.68	8.70	9.72	10.76	11.80			13.22		2 / 6	
reaction time	0.155	interval	7 steps	1.04	1.04	1.02	1.00	1.02	1.02	1.02	1.04	1.04	1.42		PB	3.10	3.04	3.10
wind	-0.5 m/s	velocity	5.36	8.79	8.79	8.96	9.14	8.96	8.96	8.96	8.79	8.79	9.87		8.32	8.85	9.02	8.85
FINAL - 2021 European Indoor Championships (Toruń, POL) (TV Analysis)															<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>			
date	07-Mar-21	time	2.50	3.54	4.56	5.58	6.62							7.60		8 / 4		
reaction time	0.150	interval	7 steps	1.04	1.02	1.02	1.04						0.98	PB		3.08		
wind		velocity	5.49	8.79	8.96	8.96	8.79						9.92	7.89		8.90		
FINAL - 2021 Villa de Madrid (Madrid, ESP) (TV Analysis)															<i>Henson (2021) - men's 60m hurdles world record season - Grant Holloway</i>			
date	24-Feb-21	time	2.48	3.54	4.56	5.58	6.59							7.61		4 / 4		
reaction time		interval	7 steps	1.06	1.02	1.02	1.01						1.02	=PB		3.10		
wind		velocity	5.53	8.62	8.96	8.96	9.05						9.53	7.88		8.85		
Heat 1 - 2021 Villa de Madrid (Madrid, ESP) (TV Analysis)															<i>Henson (2021) - men's 60m hurdles world record season - Grant Holloway</i>			
date	24-Feb-21	time	2.52	3.56	4.57	5.58	6.60							7.61		4 / 2		
reaction time	0.131	interval	7 steps	1.04	1.01	1.01	1.02						1.01	PB		3.06		
wind		velocity	5.44	8.79	9.05	9.05	8.96						9.62	7.88		8.96		
Martinot Lagarde, Pascal (FRA) (199 H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10)																		
FINAL - 2023 French National Championships (Albi, FRA) (TV Analysis)															<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>			
date	29-Jul-23	time	2.52	3.56	4.58	5.60	6.60	7.62	8.64	9.66	10.70	11.76			13.25		2 / 4	
reaction time	0.180	interval	7 steps	1.04	1.02	1.02	1.00	1.02	1.02	1.02	1.04	1.06	1.49			3.08	3.04	3.12
wind	2.3 m/s	velocity	5.44	8.79	8.96	8.96	9.14	8.96	8.96	8.96	8.79	8.62	9.41	8.30		8.90	9.02	8.79
Heat 2 - 2023 Kamila Skolimowska Memorial (Silesia, POL)															<i>Omega Timing (2023) - diamond league race analysis</i>			
date	16-Jul-23	time	2.45	3.55	4.60	5.64	6.69	7.74	8.79	9.85	10.91	11.99			13.59		3 / 7	
reaction time	0.153	interval	7 steps	1.10	1.05	1.04	1.05	1.05	1.05	1.06	1.06	1.08	1.60			3.19	3.15	3.20
wind	-0.2 m/s	velocity	5.60	8.31	8.70	8.79	8.70	8.70	8.70	8.62	8.62	8.46	8.76	8.09		8.60	8.70	8.57
Heat 2 - 2023 Meeting de Paris (Paris, FRA)															<i>Omega Timing (2023) - diamond league race analysis</i>			
date	09-Jun-23	time	2.42	3.49	4.52	5.56	6.59	7.63	8.68	9.73	10.79	11.85			13.45		3 / 5	
reaction time	0.156	interval	7 steps	1.07	1.03	1.04	1.03	1.04	1.05	1.05	1.06	1.06	1.60			3.14	3.12	3.17
wind	-0.6 m/s	velocity	5.67	8.54	8.87	8.79	8.87	8.79	8.70	8.70	8.62	8.62	8.76	8.18		8.73	8.79	8.65
FINAL - 2023 Meeting International Mohammed VI d'Athlétisme (Rabat, MAR)															<i>Omega Timing (2023) - diamond league race analysis</i>			
date	28-May-23	time	2.45	3.53	4.57	5.64	6.68	7.75	8.82	9.89	10.97	12.07			13.69		2 / 7	
reaction time	0.183	interval	7 steps	1.08	1.04	1.07	1.04	1.07	1.07	1.07	1.08	1.10	1.62			3.19	3.18	3.25
wind	-1.3 m/s	velocity	5.60	8.46	8.79	8.54	8.79	8.54	8.54	8.54	8.46	8.31	8.65	8.04		8.60	8.62	8.44
FINAL - 2022 Athletissima (Lausanne, SUI) (TV Analysis)															<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>			
date	26-Aug-22	time	2.60	3.65	4.70	5.74	6.76	7.81	8.84	9.91	10.99	12.09			13.58		7 / 7	
reaction time	0.155	interval	7 steps	1.05	1.05	1.04	1.02	1.05	1.03	1.07	1.08	1.10	1.49			3.14	3.10	3.25
wind	0.0 m/s	velocity	5.28	8.70	8.70	8.79	8.96	8.70	8.87	8.54	8.46	8.31	9.41	8.10		8.73	8.85	8.44
FINAL - 2022 European Athletics Championships (Munich, GER) (TV Analysis)															<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>			
date	17-Aug-22	time	2.52	3.54	4.58	5.58	6.56	7.58	8.60	9.62	10.64	11.70			13.14		5 / 2	
reaction time	0.167	interval	7 steps	1.02	1.04	1.00	0.98	1.02	1.02	1.02	1.02	1.06	1.44			3.06	3.02	3.10
wind	-0.2 m/s	velocity	5.44	8.96	8.79	9.14	9.33	8.96	8.96	8.96	8.96	8.62	9.74	8.37		8.96	9.08	8.85
FINAL - 2022 Herculis Meeting International d'Athlétisme (Monaco, MON) (TV Analysis)															<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>			
date	10-Aug-22	time	2.46	3.53	4.53	5.53	6.53	7.56	8.60	9.63	10.66	11.76			13.26		8 / 6	
reaction time	0.137	interval	7 steps	1.07	1.00	1.00	1.00	1.03	1.04	1.03	1.03	1.10	1.50			3.07	3.07	3.16
wind	0.6 m/s	velocity	5.58	8.54	9.14	9.14	9.14	8.87	8.79	8.87	8.87	8.31	9.35	8.30		8.93	8.93	8.68

Semi-Final 2 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)*Henson (2022) - Athlete First: 2022 year end hurdle report*

date	17-Jul-22	time	2.50	3.56	4.60	5.63	6.63	7.66	8.70	9.76	10.83	11.90	13.40	1 / 4			
reaction time	0.129	interval	7 steps	1.06	1.04	1.03	1.00	1.03	1.04	1.06	1.07	1.07	1.50		3.13	3.07	3.20
wind	0.3 m/s	velocity	5.49	8.62	8.79	8.87	9.14	8.87	8.79	8.62	8.54	8.54	9.35	8.21	8.76	8.93	8.57

Heat 1 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)*Henson (2022) - Athlete First: 2022 year end hurdle report*

date	16-Jul-22	time	2.53	3.56	4.60	5.63	6.66	7.70	8.76	9.80	10.86	11.96	13.49	1 / 5			
reaction time	0.134	interval	7 steps	1.03	1.04	1.03	1.03	1.04	1.06	1.04	1.06	1.10	1.53		3.10	3.13	3.20
wind	-0.5 m/s	velocity	5.42	8.87	8.79	8.87	8.87	8.79	8.62	8.79	8.62	8.31	9.16	8.15	8.85	8.76	8.57

FINAL - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)*Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record*

date	20-Mar-22	time	2.46	3.50	4.52	5.52	6.54						7.50	5 / 2			
reaction time	0.154	interval	7 steps	1.04	1.02	1.00	1.02						0.96		3.06		
		velocity	5.58	8.79	8.96	9.14	8.96						10.13	8.00	8.96		

Semi-Final 2 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)*Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record*

date	20-Mar-22	time	2.50	3.52	4.54	5.54	6.56						7.53	4 / 2			
reaction time	0.136	interval	7 steps	1.02	1.02	1.00	1.02						0.97		3.04		
		velocity	5.49	8.96	8.96	9.14	8.96						10.02	7.97	9.02		

Heat 2 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)*Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record*

date	20-Mar-22	time	2.51	3.56	4.60	5.65	6.70						7.69	3 / 2			
reaction time	0.137	interval	7 steps	1.05	1.04	1.05	1.05						0.99		3.14		
		velocity	5.47	8.70	8.79	8.70	8.70						9.82	7.80	8.73		

FINAL - 2022 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)*Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record*

date	17-Feb-22	time	2.43	3.46	4.46	5.46	6.46						7.46	6 / 2			
reaction time	0.144	interval	7 steps	1.03	1.00	1.00	1.00						1.00		3.03		
		velocity	5.65	8.87	9.14	9.14	9.14						9.72	8.04	9.05		

FINAL - 2021 Meeting de Paris (Paris, FRA) (TV Analysis)*Henson (2021) - Athlete First: 2021 year end hurdle report*

date	28-Aug-21	time	2.46	3.48	4.50	5.52	6.54	7.58	8.66					3 / --			
reaction time	0.150	interval	7 steps	1.02	1.02	1.02	1.02	1.04	1.08				DQ		3.06	3.14	
wind	0.7 m/s	velocity	5.58	8.96	8.96	8.96	8.96	8.79	8.46						8.96	8.73	

FINAL - 2021 Athletissima (Lausanne, SUI) (TV Analysis)*Henson (2021) - Athlete First: 2021 year end hurdle report*

date	26-Aug-21	time	2.52	3.54	4.56	5.56	6.56	7.56	8.60	9.62	10.68	11.72	13.17	2 / 3			
reaction time	0.149	interval	7 steps	1.02	1.02	1.00	1.00	1.00	1.04	1.02	1.06	1.04	1.45		3.04	3.04	3.12
wind	2.5 m/s	velocity	5.44	8.96	8.96	9.14	9.14	9.14	8.79	8.96	8.62	8.79	9.67	8.35	9.02	9.02	8.79

FINAL - 2020 Olympic Games (Tokyo, JPN) (TV Analysis)*Henson (2021) - Athlete First: 2021 year end hurdle report*

date	06-Aug-21	time	2.48	3.52	4.54	5.54	6.54	7.56	8.56	9.58	10.62	11.70	13.16	8 / 5			
reaction time	0.120	interval	7 steps	1.04	1.02	1.00	1.00	1.02	1.00	1.02	1.04	1.08	1.46		3.06	3.02	3.14
wind	-0.5 m/s	velocity	5.53	8.79	8.96	9.14	9.14	8.96	9.14	8.96	8.79	8.46	9.60	8.36	8.96	9.08	8.73

FINAL - 2021 Golden Gala Pietro Mennea (Florence, ITA) (TV Analysis)*Henson (2021) - Athlete First: 2021 year end hurdle report*

date	10-Jun-21	time	2.56	3.64	4.74	5.80	6.88	7.98	9.08	10.24	11.42	12.58	14.26	7 / 8			
reaction time	0.162	interval	7 steps	1.08	1.10	1.06	1.08	1.10	1.10	1.16	1.18	1.16	1.68		3.24	3.28	3.50
wind	-0.1 m/s	velocity	5.36	8.46	8.31	8.62	8.46	8.31	8.31	7.88	7.75	7.88	8.35	7.71	8.46	8.36	7.83

FINAL - 2020 Meeting Pro Athlé Tour de Marseille (Marseille, FRA) (TV Analysis)*Henson (2020) - Athlete First: 2020 year end hurdle report*

date	03-Sep-20	time	2.56	3.60	4.67	5.65	6.70	7.74	8.78	9.86	11.00	12.06	13.63	4 / 3			
reaction time		interval	7 steps	1.04	1.07	0.98	1.05	1.04	1.04	1.08	1.14	1.06	1.57		3.09	3.13	3.28
wind	-0.3 m/s	velocity	5.36	8.79	8.54	9.33	8.70	8.79	8.79	8.46	8.02	8.62	8.93	8.07	8.87	8.76	8.36

FINAL - 2019 IAAF World Championships (Doha, QAT)*CAA Hurdle Development (2019)*

date	02-Oct-19	time	2.55	3.59	4.61	5.61	6.61	7.63	8.64	9.65	10.69	11.75	13.18	7 / 3			
reaction time	0.161	interval	7 steps	1.04	1.02	1.00	1.00	1.02	1.01	1.01	1.04	1.06	1.43		3.06	3.03	3.11
wind	0.6 m/s	velocity	5.38	8.79	8.96	9.14	9.14	8.96	9.05	9.05	8.79	8.62	9.80	8.35	8.96	9.05	8.82

Semi-Final 2 - 2019 IAAF World Championships (Doha, QAT)*CAA Hurdle Development (2019)*

date	02-Oct-19	time	2.55	3.60	4.61	5.61	6.62	7.62	8.62	9.65	10.68	11.73	13.12	6 / 2			
reaction time	0.163	interval	7 steps	1.05	1.01	1.00	1.01	1.00	1.00	1.03	1.03	1.05	1.39		3.06	3.01	3.11
wind	0.9 m/s	velocity	5.38	8.70	9.05	9.14	9.05	9.14	9.14	8.87	8.87	8.70	10.09	8.38	8.96	9.11	8.82

Heat 3 - 2019 IAAF World Championships (Doha, QAT) (TV Analysis)*Henson (2021) - Athlete First: 2019 year end hurdle report*

date	30-Sep-19	time	2.48	3.52	4.56	5.58	6.60	7.62	8.68	9.72	10.80	11.90	13.45	5 / 2 1			
reaction time	0.160	interval	7 steps	1.04	1.04	1.02	1.02	1.02	1.06	1.04	1.08	1.10	1.55		3.10	3.10	3.22
wind	-0.4 m/s	velocity	5.53	8.79	8.79	8.96	8.96	8.96	8.62	8.79	8.46	8.31	9.05	8.18	8.85	8.85	8.52

FINAL - 2019 ISTAF (Berlin, GER) (TV Analysis)*Henson (2020) - Athlete First: 2019 year end hurdle report*

date	01-Sep-19	time	2.53	3.56	4.58	5.58	6.58	7.62	8.63	9.65	10.70	11.78	13.25	7 / 2			
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reaction time	0.158	interval	7 steps	1.03	1.02	1.00	1.00	1.04	1.01	1.02	1.05	1.08	1.47		3.05	3.05	3.15
wind	0.8 m/s	velocity	5.42	8.87	8.96	9.14	9.14	8.79	9.05	8.96	8.70	8.46	9.54	8.30	8.99	8.99	8.70
FINAL - 2019 Meeting de Paris (Paris, FRA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>			
date	24-Aug-19	time	2.50	3.54	4.56	5.56	6.56	7.58	8.58	9.62	10.66	11.76		13.24	2 / 5		
reaction time	0.165	interval	7 steps	1.04	1.02	1.00	1.00	1.02	1.00	1.04	1.04	1.10	1.48		3.06	3.02	3.18
wind	0.8 m/s	velocity	5.49	8.79	8.96	9.14	9.14	8.96	9.14	8.79	8.79	8.31	9.47	8.31	8.96	9.08	8.62
FINAL - 2019 Müller Anniversary Games (London, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>			
date	21-Jul-19	time	2.45	3.51	4.55	5.58	6.60	7.63	8.66	9.73	10.80	11.90		13.49	8 / 4		
reaction time	0.152	interval	7 steps	1.06	1.04	1.03	1.02	1.03	1.03	1.07	1.07	1.10	1.59		3.13	3.08	3.24
wind	0.4 m/s	velocity	5.60	8.62	8.79	8.87	8.96	8.87	8.87	8.54	8.54	8.31	8.82	8.15	8.76	8.90	8.46
FINAL - 2019 Athletissima (Lausanne, SUI) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>			
date	05-Jul-19	time	2.56	3.60	4.60	5.60	6.62	7.64	8.66	9.68	10.76	11.84		13.34	2 / 6		
reaction time	0.157	interval	7 steps	1.04	1.00	1.00	1.02	1.02	1.02	1.08	1.08	1.50			3.04	3.06	3.18
wind	1.0 m/s	velocity	5.36	8.79	9.14	9.14	8.96	8.96	8.96	8.46	8.46	9.35	8.25		9.02	8.96	8.62
FINAL - 2019 French National Indoor Championships (Miramas, FRA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>			
date	16-Feb-19	time	2.48	3.52	4.54	5.54	6.54							7.52	5 / 1		
reaction time	0.150	interval	7 steps	1.04	1.02	1.00	1.00						0.98		3.06		
		velocity	5.53	8.79	8.96	9.14	9.14						9.92	7.98	8.96		
FINAL - 2018 IAAF Continental Cup (Ostrava, CZE) (TV Analysis)														<i>Henson (2021) - Athlete First: 2018 year end hurdle report</i>			
date	09-Sep-18	time	2.48	3.56	4.58	5.60	6.60	7.60	8.60	9.64	10.70	11.78		13.31	6 / 3		
reaction time	0.146	interval	7 steps	1.08	1.02	1.02	1.00	1.00	1.00	1.04	1.06	1.08	1.53		3.12	3.00	3.18
wind	0.9 m/s	velocity	5.53	8.46	8.96	8.96	9.14	9.14	9.14	8.79	8.62	8.46	9.16	8.26	8.79	9.14	8.62
FINAL - 2018 AG Memorial van Damme (Brussels, BEL) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>			
date	31-Aug-18	time	2.50	3.54	4.56	5.58	6.58	7.64	8.68	9.74	10.80	11.88		13.36	3 / 4		
reaction time	0.153	interval	7 steps	1.04	1.02	1.02	1.00	1.06	1.04	1.06	1.06	1.08	1.48		3.08	3.10	3.20
wind	-0.1 m/s	velocity	5.49	8.79	8.96	8.96	9.14	8.62	8.79	8.62	8.62	8.46	9.47	8.23	8.90	8.85	8.57
FINAL - 2018 Müller Grand Prix (Birmingham, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>			
date	18-Aug-18	time	2.46	3.52	4.56	5.56	6.54	7.58	8.58	9.60	10.62	11.70		13.27	7 / 3		
reaction time	0.166	interval	7 steps	1.06	1.04	1.00	0.98	1.04	1.00	1.02	1.02	1.08	1.57		3.10	3.02	3.12
wind	1.3 m/s	velocity	5.58	8.62	8.79	9.14	9.33	8.79	9.14	8.96	8.96	8.46	8.93	8.29	8.85	9.08	8.79
FINAL - 2018 Herculis Meeting International d'Athletisme (Monaco, MON) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>			
date	20-Jul-18	time	2.46	3.50	4.52	5.52	6.52	7.52	8.56	9.60	10.64	11.70		13.20	6 / 3		
reaction time	0.157	interval	7 steps	1.04	1.02	1.00	1.00	1.00	1.04	1.04	1.04	1.06	1.50		3.06	3.04	3.14
wind	-0.2 m/s	velocity	5.58	8.79	8.96	9.14	9.14	9.14	8.79	8.79	8.79	8.62	9.35	8.33	8.96	9.02	8.73
FINAL - 2018 Athletissima (Lausanne, SUI) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>			
date	05-Jul-18	time	2.57	3.59	4.63	5.63	6.64	7.68	8.70	9.72	10.80	11.86		13.30	3 / 3		
reaction time	0.147	interval	7 steps	1.02	1.04	1.00	1.01	1.04	1.02	1.02	1.08	1.06	1.44		3.06	3.07	3.16
wind	0.6 m/s	velocity	5.34	8.96	8.79	9.14	9.05	8.79	8.96	8.96	8.46	8.62	9.74	8.27	8.96	8.93	8.68
FINAL - 2018 Meeting International de Montreuil (Montreuil, FRA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>			
date	19-Jun-18	time	2.58	3.62	4.66	5.68	6.68	7.68	8.70	9.72	10.74	11.86		13.28	4 / 3		
reaction time	0.156	interval	7 steps	1.04	1.04	1.02	1.00	1.00	1.02	1.02	1.02	1.12	1.42		3.10	3.02	3.16
wind	0.5 m/s	velocity	5.32	8.79	8.79	8.96	9.14	9.14	8.96	8.96	8.96	8.16	9.87	8.28	8.85	9.08	8.68
FINAL - 2018 IAAF World Indoor Championships (Birmingham, GBR) Walker (2019). Biomechanical Report for the IAAF World Indoor Championships 2018: 60 Metres Hurdles Men														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>			
date	04-Mar-18	time	2.55	3.61	4.70	5.74	6.77							7.68	3 / 5		
reaction time	0.154	interval	7 steps	1.06	1.09	1.04	1.03						0.91		3.19		
		velocity	5.38	8.62	8.39	8.79	8.87						10.68	7.81	8.60		
FINAL - 2017 European Indoor Championships (Beograd, SRB)														<i>(2017.03.05) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>			
date	03-Mar-17	time	2.59	3.63	4.64	5.65	6.65							7.52	4 / 2		
reaction time		interval	7 steps	1.04	1.01	1.01	1.00						0.87		3.06		
		velocity	5.30	8.79	9.05	9.05	9.14						11.17	7.98	8.96		
FINAL - 2016 Memorial van Damme (Brussels, BEL) (TV Analysis)														<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>			
date	09-Sep-16	time	2.48	3.50	4.50	5.50	6.50	7.50	8.50	9.54	10.57	11.64		13.12	6 / 2		
reaction time	0.160	interval	7 steps	1.02	1.00	1.00	1.00	1.00	1.00	1.04	1.03	1.07	1.48		3.02	3.00	3.14
wind	0.2 m/s	velocity	5.53	8.96	9.14	9.14	9.14	9.14	9.14	8.79	8.87	8.54	9.47	8.38	9.08	9.14	8.73
FINAL - 2016 Athletissima (Lausanne, SUI) (TV Analysis)														<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>			
date	25-Aug-16	time	2.52	3.56	4.58	5.60	6.62	7.64	8.68	9.72	10.76	11.84		13.37	2 / 6		
reaction time	0.146	interval	7 steps	1.04	1.02	1.02	1.02	1.02	1.04	1.04	1.04	1.08	1.53		3.08	3.08	3.16
wind	0.5 m/s	velocity	5.44	8.79	8.96	8.96	8.96	8.96	8.79	8.79	8.79	8.46	9.16	8.23	8.90	8.90	8.68

FINAL - 2016 Olympic Games (Rio de Janeiro, BRA) (TV Analysis)*Henson (2020) - Athlete First: 2016 year end hurdle report*

date	16-Aug-16	time	2.46	3.50	4.52	5.54	6.56	7.56	8.60	9.66	10.72	11.80	13.29	4 / 4			
reaction time	0.142	interval	7 steps	1.04	1.02	1.02	1.02	1.00	1.04	1.06	1.06	1.08	1.49		3.08	3.06	3.20
wind	0.2 m/s	velocity	5.58	8.79	8.96	8.96	8.96	9.14	8.79	8.62	8.62	8.46	9.41	8.28	8.90	8.96	8.57

FINAL - 2016 Herculis Meeting International d'Athlétisme (Monaco, MON) (TV Analysis)*Henson (2021) - Athlete First: 2016 year end hurdle report*

date	15-Jul-16	time	2.44	3.50	4.52	5.54	6.56	7.56	8.56	9.58	10.60	11.68	13.17	4 / 3			
reaction time	0.132	interval	7 steps	1.06	1.02	1.02	1.02	1.00	1.00	1.02	1.02	1.08	1.49		3.10	3.02	3.12
wind	0.0 m/s	velocity	5.62	8.62	8.96	8.96	8.96	9.14	9.14	8.96	8.96	8.46	9.41	8.35	8.85	9.08	8.79

FINAL - 2016 Golden Gala Pietro Mennea (Roma, ITA) (TV Analysis)*Henson (2020) - Athlete First: 2016 year end hurdle report*

date	02-Jun-16	time	2.50	3.54	4.56	5.58	6.58	7.58	8.62	9.68	10.70	11.78	13.29	5 / 2			
reaction time		interval	7 steps	1.04	1.02	1.02	1.00	1.00	1.04	1.06	1.02	1.08	1.51		3.08	3.04	3.16
wind	0.6 m/s	velocity	5.49	8.79	8.96	8.96	9.14	9.14	8.79	8.62	8.96	8.46	9.28	8.28	8.90	9.02	8.68

FINAL - 2016 Prefontaine Classic (Eugene, OR) (TV Analysis)*Henson (2021) - Athlete First: 2016 year end hurdle report*

date	28-May-16	time	2.52	3.56	4.58	5.62	6.66	7.70	8.74	9.78	10.86	11.96	13.55	5 / 6			
reaction time		interval	7 steps	1.04	1.02	1.04	1.04	1.04	1.04	1.04	1.08	1.10	1.59		3.10	3.12	3.22
wind	0.7 m/s	velocity	5.44	8.79	8.96	8.79	8.79	8.79	8.79	8.79	8.46	8.31	8.82	8.12	8.85	8.79	8.52

FINAL - 2015 IAAF World Championships (Beijing, CHN) (TV Analysis)*Henson (2021) - Athlete First: major championships report*

date	28-Aug-15	time	2.48	3.52	4.56	5.56	6.56	7.56	8.56	9.60	10.64	11.72	13.17	2 / 4			
reaction time	0.150	interval	7 steps	1.04	1.04	1.00	1.00	1.00	1.00	1.04	1.04	1.08	1.45		3.08	3.00	3.16
wind	0.2 m/s	velocity	5.53	8.79	8.79	9.14	9.14	9.14	9.14	8.79	8.79	8.46	9.67	8.35	8.90	9.14	8.68

Heat 1 - 2014 European Championships (Zurich, SUI)*Incalza (2014) - <https://www.youtube.com/watch?v=4CScuS4aCYI&list=UU7691fXeyNFIMROfkJ-WWUg>*

date	13-Aug-14	time	2.56	3.59	4.60	5.56	6.54	7.58	8.60	9.64	10.68	11.76	13.29	3 / 1			
reaction time	0.152	interval	7 steps	1.03	1.01	0.96	0.98	1.04	1.02	1.04	1.04	1.08	1.53		3.00	3.04	3.16
wind	-0.7 m/s	velocity	5.36	8.87	9.05	9.52	9.33	8.79	8.96	8.79	8.79	8.46	9.16	8.28	9.14	9.02	8.68

FINAL - 2013 IAAF World Championships (Moscow, RUS) (TV Analysis)*Henson (2021) - Athlete First: major championships report*

date	12-Aug-13	time	2.52	3.56	4.56	5.60	6.64	7.66	8.68	9.72	10.80	11.90	13.42	6 / 7			
reaction time	0.162	interval	7 steps	1.04	1.00	1.04	1.04	1.02	1.02	1.04	1.08	1.10	1.52		3.08	3.08	3.22
wind	0.3 m/s	velocity	5.44	8.79	9.14	8.79	8.79	8.96	8.96	8.79	8.46	8.31	9.22	8.20	8.90	8.90	8.52

FINAL - 2013 European Indoor Championships (Göteborg, SWE)*Blomkvist (2013) - www.elitlandslag.se/SprintHäck/KortHäck.aspx*

date	01-Mar-13	time	2.57	3.64	4.65	5.65	6.65						7.53	3 / 3			
reaction time	0.155	interval		1.07	1.01	1.00	1.00						0.88		=PB		3.08
		velocity	5.34	8.54	9.05	9.14	9.14						11.05	7.97			8.90

FINAL - 2012 IAAF World Indoor Championships (Istanbul, TUR) (TV Analysis)*Henson (2020) - Athlete First: 2012 Aries Merritt world record season*

date	11-Mar-12	time	2.50	3.54	4.56	5.58	6.58						7.53	6 / 3			
reaction time	0.141	interval		1.04	1.02	1.02	1.00						0.95				3.08
		velocity	5.49	8.79	8.96	8.96	9.14						10.23	7.97			8.90

Martinsen, Andreas (DEN) (1990)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2017 Golden Spike (Ostrava, CZE) (TV Analysis)***Henson (2020) - Athlete First: 2017 year end hurdle report*

date	28-Jun-17	time	2.54	3.62	4.66	5.70	6.74	7.78	8.82	9.90	10.96	12.06	13.55	3 / 6			
reaction time	0.149	interval	7 steps	1.08	1.04	1.04	1.04	1.04	1.04	1.08	1.06	1.10	1.49		3.16	3.12	3.24
wind	0.6 m/s	velocity	5.40	8.46	8.79	8.79	8.79	8.79	8.79	8.46	8.62	8.31	9.41	8.12	8.68	8.79	8.46

FINAL - 2011 Windsprint (Sundsvall, SWE)*Blomkvist (2011) - www.sub13.se*

date	31-Jul-11	time	2.71	3.81	4.87	5.94	7.01	8.08	9.17	10.31	11.44	12.59	14.19	1 / 3			
reaction time		interval		1.10	1.06	1.07	1.07	1.07	1.09	1.14	1.13	1.15	1.60		3.23	3.23	3.42
wind	2.8 m/s	velocity	5.06	8.31	8.62	8.54	8.54	8.54	8.39	8.02	8.09	7.95	8.76	7.75	8.49	8.49	8.02

Maruyama, Yuma (JPN) (1998)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Decathlon - Heat 2 - 2023 World Athletics Championships (Budapest, HUN)***Matsubayashi (2024) - performance analysis of decathlon athletes in the 2023 season*

date	26-Aug-23	time	2.74	3.88	4.98	6.06	7.16	8.24	9.35	10.48	11.59	12.70	14.18	7 / 2			
reaction time	0.192	interval		1.14	1.10	1.08	1.10	1.08	1.11	1.13	1.11	1.11	1.48		3.32	3.29	3.35
wind	-0.1 m/s	velocity	5.01	8.02	8.31	8.46	8.31	8.46	8.23	8.09	8.23	8.23	9.47	7.76	8.26	8.33	8.19

Decathlon - Heat 2 - 2023 Japanese Multi-Event National Championships (Akita, JPN)*Matsubayashi (2024) - performance analysis of decathlon athletes in the 2023 season*

date	11-Jun-23	time	2.72	3.88	5.03	6.15	7.24	8.34	9.47	10.60	11.75	12.90	14.41	7 / 2			
reaction time		interval		1.16	1.15	1.12	1.09	1.10	1.13	1.13	1.15	1.15	1.51		3.43	3.32	3.43
wind	-0.1 m/s	velocity	5.04	7.88	7.95	8.16	8.39	8.31	8.09	8.09	7.95	7.95	9.28	7.63	7.99	8.26	7.99

Decathlon - Heat 2 - 2022 Michitaka Kinami Memorial (Osaka, JPN)*Takefu (2023) - performance analysis of decathlon athletes in the 2022 season*

date	01-May-22	time	2.69	3.82	4.91	5.99	7.07	8.14	9.23	10.36	11.49	12.61	14.13	6 / 1			
reaction time	0.146	interval		1.13	1.09	1.08	1.08	1.07	1.09	1.13	1.13	1.12	1.52		3.30	3.24	3.38
wind	1.2 m/s	velocity	5.10	8.09	8.39	8.46	8.46	8.54	8.39	8.09	8.09	8.16	9.22	7.78	8.31	8.46	8.11

Decathlon - Heat 3 - 2021 Japanese Multi-Event National Championships (Nagano, JPN) Matsubayashi (2021) - 110m hurdling race analysis of decathlon athletes in the 2021 season

date	13-Jun-21	time	2.74	3.91	5.05	6.17	7.27	8.40	9.51	10.66	11.80	12.95	14.50	6 / 3				
reaction time	0.170	interval		1.17	1.14	1.12	1.10	1.13	1.11	1.15	1.14	1.15	1.55		3.43	3.34	3.44	
wind	-0.9 m/s	velocity	5.01	7.81	8.02	8.16	8.31	8.09	8.23	7.95	8.02	7.95	9.05	7.59	7.99	8.21	7.97	
Decathlon - Heat 2 - 2019 Japanese National Multi-Event Championships (Nagano, JPN) <i>Matsubayashi (2019) - research on athlete performance and technique- 2019 data book</i>																		
date	09-Jun-19	time	2.69	3.80	4.91	5.99	7.08	8.19	9.28	10.41	11.53	12.68	14.19	5 / 3				
reaction time		interval		1.11	1.11	1.08	1.09	1.11	1.09	1.13	1.12	1.15	1.51		3.30	3.29	3.40	
wind	2.1 m/s	velocity	5.10	8.23	8.23	8.46	8.39	8.23	8.39	8.09	8.16	7.95	9.28	7.75	8.31	8.33	8.06	
Decathlon - Heat 3 - 2018 Japanese National Multi-Event Championships (Nagano, JPN) <i>Matsubayashi (2018) - research on athlete performance and technique</i>																		
date	17-Jun-18	time	2.70	3.81	4.91	5.99	7.07	8.14	9.22	10.34	11.45	12.61	14.08	6 / 1				
reaction time		interval		1.11	1.10	1.08	1.08	1.07	1.08	1.12	1.11	1.16	1.47	PB	3.29	3.23	3.39	
wind	0.2 m/s	velocity	5.08	8.23	8.31	8.46	8.46	8.54	8.46	8.16	8.23	7.88	9.54	7.81	8.33	8.49	8.09	
Masashi, Kimoto (JPN)																		
			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2016 West Japan University Championships (Kyoto, JPN) <i>(2016.07.02) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>																		
date	01-Jul-16	time	2.66	3.74	4.84	5.93	7.01	8.10	9.20	10.31	11.44	12.58	14.01	4 / 1				
reaction time		interval		1.08	1.10	1.09	1.08	1.09	1.10	1.11	1.13	1.14	1.43		3.27	3.27	3.38	
wind	-2.1 m/s	velocity	5.16	8.46	8.31	8.39	8.46	8.39	8.31	8.23	8.09	8.02	9.80	7.85	8.39	8.39	8.11	
Mason, Tyler (JAM) (1995)																		
			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2023 Kamila Skolimowska Memorial (Silesia, POL) <i>Omega Timing (2023) - diamond league race analysis</i>																		
date	16-Jul-23	time	2.38	3.45	4.50	5.53	6.55	7.57	8.59	9.63	10.67	11.72	13.29	5 / 3				
reaction time	0.138	interval	7 steps	1.07	1.05	1.03	1.02	1.02	1.02	1.04	1.04	1.05	1.57		3.15	3.06	3.13	
wind	0.3 m/s	velocity	5.76	8.54	8.70	8.87	8.96	8.96	8.96	8.79	8.79	8.70	8.93	8.28	8.70	8.96	8.76	
Heat 2 - 2023 Kamila Skolimowska Memorial (Silesia, POL) <i>Omega Timing (2023) - diamond league race analysis</i>																		
date	16-Jul-23	time	2.40	3.46	4.49	5.52	6.53	7.57	8.60	9.64	10.67	11.71	13.28	4 / 2				
reaction time	0.152	interval	7 steps	1.06	1.03	1.03	1.01	1.04	1.03	1.04	1.03	1.04	1.57		3.12	3.08	3.11	
wind	-0.2 m/s	velocity	5.72	8.62	8.87	8.87	9.05	8.79	8.87	8.79	8.87	8.79	8.93	8.28	8.79	8.90	8.82	
FINAL - 2023 Jamaican National Championships (Kingston, JAM) (TV Analysis) <i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>																		
date	09-Jul-23	time	2.53	3.58	4.62	5.62	6.60	7.60	8.62	9.65	10.67	11.72	13.22	5 / 4				
reaction time		interval	7 steps	1.05	1.04	1.00	0.98	1.00	1.02	1.03	1.02	1.05	1.50		3.09	3.00	3.10	
wind	0.7 m/s	velocity	5.42	8.70	8.79	9.14	9.33	9.14	8.96	8.87	8.96	8.70	9.35	8.32	8.87	9.14	8.85	
FINAL - 2023 USATF Bermuda Grand Prix (Devonshire, BER) (TV Analysis) <i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>																		
date	21-May-23	time	2.56	3.66	4.67	5.66	6.66	7.66	8.68	9.72	10.75	11.86	13.30	3 / 4				
reaction time	0.155	interval	7 steps	1.10	1.01	0.99	1.00	1.00	1.02	1.04	1.03	1.11	1.44		3.10	3.02	3.18	
wind	4.0 m/s	velocity	5.36	8.31	9.05	9.23	9.14	9.14	8.96	8.79	8.87	8.23	9.74	8.27	8.85	9.08	8.62	
Masuno, Genta (JPN) (1993)																		
			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2020 Michitaka Kinami Memorial (Osaka, JPN) <i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>																		
date	24-Oct-20	time	2.61	3.68	4.75	5.80	6.87	7.92	8.98	10.06	11.18	12.27	13.77	2 / 5				
reaction time		interval		1.07	1.07	1.05	1.07	1.05	1.06	1.08	1.12	1.09	1.50		3.19	3.18	3.29	
wind	0.6 m/s	velocity	5.26	8.54	8.54	8.70	8.54	8.70	8.62	8.46	8.16	8.39	9.35	7.99	8.60	8.62	8.33	
FINAL - 2020 Japanese National Championships (Niigata, JPN) <i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>																		
date	03-Oct-20	time	2.59	3.65	4.71	5.76	6.81	7.87	8.94	10.00	11.09	12.18	13.61	4 / 5				
reaction time	0.136	interval		1.06	1.06	1.05	1.05	1.06	1.07	1.06	1.09	1.09	1.43		3.17	3.18	3.24	
wind	-0.1 m/s	velocity	5.30	8.62	8.62	8.70	8.70	8.62	8.54	8.62	8.39	8.39	9.80	8.08	8.65	8.62	8.46	
Heat 2 - 2020 Japanese National Championships (Niigata, JPN) <i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>																		
date	02-Oct-20	time	2.63	3.69	4.75	5.79	6.83	7.88	8.93	10.00	11.08	12.16	13.59	8 / 2				
reaction time	0.148	interval		1.06	1.06	1.04	1.04	1.05	1.05	1.07	1.08	1.08	1.43		3.16	3.14	3.23	
wind	0.4 m/s	velocity	5.22	8.62	8.62	8.79	8.79	8.70	8.70	8.54	8.46	8.46	9.80	8.09	8.68	8.73	8.49	
Race 2 - 2020 World Athletics Trials (Fuji, JPN) <i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>																		
date	06-Sep-20	time	2.60	3.67	4.73	5.76	6.81	7.88	8.95	10.03	11.12	12.23	13.69	3 / 1				
reaction time		interval		1.07	1.06	1.03	1.05	1.07	1.07	1.08	1.09	1.11	1.46		3.16	3.19	3.28	
wind	1.3 m/s	velocity	5.28	8.54	8.62	8.87	8.70	8.54	8.54	8.46	8.39	8.23	9.60	8.04	8.68	8.60	8.36	
FINAL - 2020 Athlete Night Games (Fukui, JPN) <i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>																		
date	29-Aug-20	time	2.61	3.67	4.72	5.75	6.81	7.88	8.94	10.00	11.09	12.19	13.62	1 / 7				
reaction time		interval		1.06	1.05	1.03	1.06	1.07	1.06	1.06	1.09	1.10	1.43		3.14	3.19	3.25	
wind	1.4 m/s	velocity	5.26	8.62	8.70	8.87	8.62	8.54	8.62	8.62	8.39	8.31	9.80	8.08	8.73	8.60	8.44	
A FINAL - 2018 National Sports Festival (Fukui, JPN) <i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>																		
date	08-Oct-18	time	2.60	3.65	4.67	5.70	6.74	7.78	8.84	9.91	10.98	12.07	13.50	5 / 2				
reaction time	0.143	interval		1.05	1.02	1.03	1.04	1.04	1.06	1.07	1.07	1.09	1.43		3.10	3.14	3.23	
wind	1.2 m/s	velocity	5.28	8.70	8.96	8.87	8.79	8.79	8.62	8.54	8.54	8.39	9.80	8.15	8.85	8.73	8.49	
FINAL - 2018 Japanese National Championships (Yamaguchi, JPN) <i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>																		

date	24-Jun-18	time	2.61	3.68	4.72	5.76	6.81	7.87	8.95	10.08	11.20	12.30	13.82	6 / 7			
reaction time	0.152	interval		1.07	1.04	1.04	1.05	1.06	1.08	1.13	1.12	1.10	1.52		3.15	3.19	3.35
wind	0.7 m/s	velocity	5.26	8.54	8.79	8.79	8.70	8.62	8.46	8.09	8.16	8.31	9.22	7.96	8.70	8.60	8.19
FINAL - 2018 Kinami Michitaka Memorial (Osaka, JPN)														<i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>			
date	06-May-18	time	2.61	3.66	4.73	5.77	6.83	7.87	8.91	10.00	11.10	12.20	13.64	7 / 1			
reaction time		interval		1.05	1.07	1.04	1.06	1.04	1.04	1.09	1.10	1.10	1.44		3.16	3.14	3.29
wind	1.6 m/s	velocity	5.26	8.70	8.54	8.79	8.62	8.79	8.79	8.39	8.31	8.31	9.74	8.06	8.68	8.73	8.33
FINAL - 2018 Mikio Oda Memorial (Hiroshima, JPN)														<i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>			
date	29-Apr-18	time	2.57	3.78	4.91	5.97	7.03	8.09	9.15	10.22	11.32	12.40	13.88	7 / 8			
reaction time		interval		1.21	1.13	1.06	1.06	1.06	1.06	1.07	1.10	1.08	1.48		3.40	3.18	3.25
wind	2.6 m/s	velocity	5.34	7.55	8.09	8.62	8.62	8.62	8.62	8.54	8.31	8.46	9.47	7.93	8.06	8.62	8.44
Semi-Final 1 - 2017 IAAF World Championships (London, GBR)														<i>Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles</i>			
date	06-Aug-17	time	2.46	3.51	4.57	5.63	6.71	7.78	8.87	9.94	11.05	12.17	13.79	2 / 7			
reaction time	0.160	interval		1.05	1.06	1.06	1.08	1.07	1.09	1.07	1.11	1.12	1.62		3.17	3.24	3.30
wind	0.2 m/s	velocity	5.58	8.70	8.62	8.62	8.46	8.54	8.39	8.54	8.23	8.16	8.65	7.98	8.65	8.46	8.31
FINAL - 2017 Japanese National Championships (Osaka, JPN)														<i>(2017) - tfdata-store.com/2017/07/13/post-1040/</i>			
date	25-Jun-17	time	2.61	3.67	4.71	5.74	6.81	7.85	8.92	9.99	11.05	12.15	13.61	5 / 3			
reaction time	0.156	interval		1.06	1.04	1.03	1.07	1.04	1.07	1.07	1.06	1.10	1.46		3.13	3.18	3.23
wind	-0.2 m/s	velocity	5.26	8.62	8.79	8.87	8.54	8.79	8.54	8.54	8.62	8.31	9.60	8.08	8.76	8.62	8.49
Semi-Final 2 - 2017 Japanese National Championships (Osaka, JPN)														<i>(2017) - tfdata-store.com/2017/07/13/post-1040/</i>			
date	24-Jun-17	time	2.60	3.68	4.71	5.73	6.76	7.81	8.87	9.93	11.01	12.09	13.54	7 / 1			
reaction time	0.148	interval		1.08	1.03	1.02	1.03	1.05	1.06	1.06	1.08	1.08	1.45		3.13	3.14	3.22
wind	0.3 m/s	velocity	5.28	8.46	8.87	8.96	8.87	8.70	8.62	8.62	8.46	8.46	9.67	8.12	8.76	8.73	8.52
Heat 2 - 2017 Japanese National Championships (Osaka, JPN)														<i>(2017) - tfdata-store.com/2017/07/13/post-1040/</i>			
date	24-Jun-17	time	2.60	3.65	4.68	5.70	6.72	7.75	8.80	9.85	10.92	11.99	13.40	8 / 1			
reaction time	0.156	interval		1.05	1.03	1.02	1.02	1.03	1.05	1.05	1.07	1.07	1.41	PB	3.10	3.10	3.19
wind	0.0 m/s	velocity	5.28	8.70	8.87	8.96	8.96	8.87	8.70	8.70	8.54	8.54	9.94	8.21	8.85	8.85	8.60
FINAL - 2017 Fuse Sprint (Tottori, JPN)														<i>(2017) - tfdata-store.com/2017/06/04/post-848/</i>			
date	04-Jun-17	time	2.59	3.65	4.70	5.74	6.77	7.80	8.84	9.89	10.96	12.04	13.43	6 / 1			
reaction time		interval		1.06	1.05	1.04	1.03	1.03	1.04	1.05	1.07	1.08	1.39		3.15	3.10	3.20
wind	3.2 m/s	velocity	5.30	8.62	8.70	8.79	8.87	8.87	8.79	8.70	8.54	8.46	10.09	8.19	8.70	8.85	8.57
Heat 5 - 2017 Fuse Sprint (Tottori, JPN)														<i>(2017) - tfdata-store.com/2017/06/04/post-848/</i>			
date	04-Jun-17	time	2.63	3.69	4.78	5.83	6.89	7.94	9.02	10.09	11.18	12.27	13.69	2 / 4			
reaction time		interval		1.06	1.09	1.05	1.06	1.05	1.08	1.07	1.09	1.09	1.42		3.20	3.19	3.25
wind	1.5 m/s	velocity	5.22	8.62	8.39	8.70	8.62	8.70	8.46	8.54	8.39	8.39	9.87	8.04	8.57	8.60	8.44
FINAL - 2017 Seiko Golden Grand Prix (Kawasaki, JPN)														<i>(2017) - tfdata-store.com/2017/05/22/post-599/</i>			
date	21-May-17	time	2.59	3.66	4.73	5.77	6.83	7.89	8.94	10.03	11.11	12.25	13.72	2 / 6			
reaction time	0.150	interval		1.07	1.07	1.04	1.06	1.06	1.05	1.09	1.08	1.14	1.47		3.18	3.17	3.31
wind	-1.8 m/s	velocity	5.30	8.54	8.54	8.79	8.62	8.62	8.70	8.39	8.46	8.02	9.54	8.02	8.62	8.65	8.28
Open FINAL - 2017 Michitaka Memorial (Osaka, JPN)														<i>(2017) - tfdata-store.com/2017/05/08/post-413/</i>			
date	07-May-17	time	2.63	3.70	4.77	5.81	6.90	7.96	9.04	10.12	11.21	12.30	13.74	8 / 2			
reaction time		interval		1.07	1.07	1.04	1.09	1.06	1.08	1.08	1.09	1.09	1.44		3.18	3.23	3.26
wind	-1.5 m/s	velocity	5.22	8.54	8.54	8.79	8.39	8.62	8.46	8.46	8.39	8.39	9.74	8.01	8.62	8.49	8.41
FINAL - 2017 Michitaka Memorial (Osaka, JPN)														<i>(2017) - tfdata-store.com/2017/05/08/post-413/</i>			
date	07-May-17	time	2.63	3.70	4.76	5.83	6.88	7.93	8.99	10.07	11.15	12.24	13.69	4 / 3			
reaction time		interval		1.07	1.06	1.07	1.05	1.05	1.06	1.08	1.08	1.09	1.45		3.20	3.16	3.25
wind	-0.8 m/s	velocity	5.22	8.54	8.62	8.54	8.70	8.70	8.62	8.46	8.46	8.39	9.67	8.04	8.57	8.68	8.44
FINAL - 2016 Japanese National Championships (Nagoya, JPN)														<i>Kota (2016) - race analysis of japanese top-ranked men 110m and women 100m hurdlers</i>			
date	26-Jun-16	time	2.64	3.70	4.75	5.79	6.82	7.86	8.92	9.96	11.03	12.09	13.51	5 / 2			
reaction time	0.161	interval		1.06	1.05	1.04	1.03	1.04	1.06	1.04	1.07	1.06	1.42		3.15	3.13	3.17
wind	2.4 m/s	velocity	5.20	8.62	8.70	8.79	8.87	8.79	8.62	8.79	8.54	8.62	9.87	8.14	8.70	8.76	8.65
FINAL - 2016 Fuse Sprint (Tottori, JPN)														<i>Kota (2016) - race analysis of japanese top-ranked men 110m and women 100m hurdlers</i>			
date	05-Jun-16	time	2.62	3.68	4.73	5.78	6.82	7.89	8.95	10.01	11.10	12.17	13.59	6 / 2			
reaction time		interval		1.06	1.05	1.05	1.04	1.07	1.06	1.06	1.09	1.07	1.42		3.16	3.17	3.22
wind	1.4 m/s	velocity	5.24	8.62	8.70	8.70	8.79	8.54	8.62	8.62	8.39	8.54	9.87	8.09	8.68	8.65	8.52
FINAL - 2016 Seiko Golden Grand Prix (Kawasaki, JPN)														<i>Kota (2016) - race analysis of japanese top-ranked men 110m and women 100m hurdlers</i>			
date	08-May-16	time	2.63	3.71	4.76	5.80	6.87	7.91	8.97	10.05	11.13	12.22	13.67	3 / 4			
reaction time	0.148	interval		1.08	1.05	1.04	1.07	1.04	1.06	1.08	1.08	1.09	1.45		3.17	3.17	3.25
wind	-0.6 m/s	velocity	5.22	8.46	8.70	8.79	8.54	8.79	8.62	8.46	8.46	8.39	9.67	8.05	8.65	8.65	8.44

FINAL - 2016 Mikio Oda Memorial (Hiroshima, JPN)*Kota (2016) - race analysis of japanese top-ranked men 110m and women 100m hurdlers*

date	29-Apr-16	time	2.66	3.72	4.78	5.83	6.90	7.99	9.06	10.16	11.27	12.39	13.86	/ 2				
reaction time		interval		1.06	1.06	1.05	1.07	1.09	1.07	1.10	1.11	1.12	1.47		3.17	3.23	3.33	
wind	-0.5 m/s	velocity	5.16	8.62	8.62	8.70	8.54	8.39	8.54	8.31	8.23	8.16	9.54	7.94	8.65	8.49	8.23	

FINAL - 2015 Japanese National Championships (Niigata, JPN)*Takashima (2015) - race analysis of 110m & 100m hurdles in Japan- results 2015 competitions*

date	28-Jun-15	time	2.63	3.70	4.77	5.82	6.88	7.97	9.05	10.13	11.22	12.35	13.85	7 / 3				
reaction time	0.142	interval		1.07	1.07	1.05	1.06	1.09	1.08	1.08	1.09	1.13	1.50		3.19	3.23	3.30	
wind	-1.4 m/s	velocity	5.22	8.54	8.54	8.70	8.62	8.39	8.46	8.46	8.39	8.09	9.35	7.94	8.60	8.49	8.31	

FINAL - 2015 Shizuoka International Athletics Meeting (Fukuroi, JPN)*Takashima (2015) - race analysis of 110m & 100m hurdles in Japan- results 2015 competitions*

date	03-May-15	time	2.63	3.71	4.78	5.87	6.93	8.04	9.12	10.21	11.30	12.39	13.80	/ 1				
reaction time		interval		1.08	1.07	1.09	1.06	1.11	1.08	1.09	1.09	1.09	1.41		3.24	3.25	3.27	
wind	-0.8 m/s	velocity	5.22	8.46	8.54	8.39	8.62	8.23	8.46	8.39	8.39	8.39	9.94	7.97	8.46	8.44	8.39	

FINAL - 2014 Japanese National Championships (Fukushima, JPN)*(2017.02.22) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en*

date	08-Jun-14	time	2.64	3.71	4.78	5.82	6.87	7.92	8.98	10.04	11.10	12.18	13.58	5 / 1				
reaction time	0.144	interval		1.07	1.07	1.04	1.05	1.05	1.06	1.06	1.06	1.08	1.40	PB	3.18	3.16	3.20	
wind	0.4 m/s	velocity	5.20	8.54	8.54	8.79	8.70	8.70	8.62	8.62	8.62	8.46	10.01	8.10	8.62	8.68	8.57	

Semi-Final 1 - 2014 Japanese National Championships (Fukushima, JPN)*(2017.02.27) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en*

date	08-Jun-14	time	2.65	3.71	4.75	5.80	6.85	7.90	8.95	10.02	11.09	12.19	13.61	5 / 1				
reaction time	0.148	interval		1.06	1.04	1.05	1.05	1.05	1.05	1.07	1.07	1.10	1.42	=PB	3.15	3.15	3.24	
wind	0.2 m/s	velocity	5.18	8.62	8.79	8.70	8.70	8.70	8.70	8.54	8.54	8.31	9.87	8.08	8.70	8.70	8.46	

Mathiszik, Willi (GER) (1984)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2009 ISTAF (Berlin, GER)																	
date	14-Jun-09	time	2.68	3.79	4.84	5.89	6.95	8.03	9.13	10.19	11.31	12.43	13.86	9 / 8			
reaction time	0.204	interval		1.11	1.05	1.05	1.06	1.08	1.10	1.06	1.12	1.12	1.43		3.21	3.24	3.30
wind	0.7 m/s	velocity	5.12	8.23	8.70	8.70	8.62	8.46	8.31	8.62	8.16	8.16	9.80	7.94	8.54	8.46	8.31

Matsumae, Taiga (JPN) (2007)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2024 Japanese National High School Championships (Fukuoka, JPN)																	
date	01-Aug-24	time	2.68	3.80	4.89	5.97	7.06	8.15	9.27	10.37	11.48	12.63	14.16	4 / 5			
reaction time	0.161	interval		1.12	1.09	1.08	1.09	1.09	1.12	1.10	1.11	1.15	1.53	=PB	3.29	3.30	3.36
wind	-0.7 m/s	velocity	5.12	8.16	8.39	8.46	8.39	8.39	8.16	8.31	8.23	7.95	9.16	7.77	8.33	8.31	8.16

Matsumoto, Nozomu (JPN) (2003)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2022 Japanese U20 National Championships (Osaka, JPN) (99cm)																	
date	12-Jun-22	time	2.68	3.77	4.81	5.86	6.91	7.95	9.01	10.11	11.20	12.31	13.83	9 / 6			
reaction time	0.171	interval	7 steps	1.09	1.04	1.05	1.05	1.04	1.06	1.10	1.09	1.11	1.52		3.18	3.15	3.30
wind	1.1 m/s	velocity	5.12	8.39	8.79	8.70	8.70	8.79	8.62	8.31	8.39	8.23	9.22	7.95	8.62	8.70	8.31

FINAL - 2021 Japanese High School National Championships (Fukui, JPN)*Shibayama (2021) - national high school and U20 national championships*

date	01-Aug-21	time	2.63	3.74	4.81	5.91	6.98	8.07	9.18	10.28	11.41	12.54	14.05	4 / 4			
reaction time	0.158	interval		1.11	1.07	1.10	1.07	1.09	1.11	1.10	1.13	1.13	1.51	PB	3.28	3.27	3.36
wind	1.4 m/s	velocity	5.22	8.23	8.54	8.31	8.54	8.39	8.23	8.31	8.09	8.09	9.28	7.83	8.36	8.39	8.16

Mayer, Kevin (FRA) (1992)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2021 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)																
date	09-Feb-21	time	2.58	3.68	4.76	5.77	6.81						7.79	1 / 8		
reaction time	0.179	interval	7 steps	1.10	1.08	1.01	1.04						0.98		3.19	
		velocity	5.32	8.31	8.46	9.05	8.79						9.92	7.70	8.60	

Heat 1 - 2021 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)*Henson (2021) - men's 60m hurdles world record season - Grant Holloway*

date	09-Feb-21	time	2.46	3.51	4.53	5.56	6.60						7.68	6 / 5		
reaction time	0.174	interval	7 steps	1.05	1.02	1.03	1.04						1.08	PB	3.10	
		velocity	5.58	8.70	8.96	8.87	8.79						9.00	7.81	8.85	

Mazáč, Martin (CZE) (1990)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2013 Czech Republic National Championships (Tábor, CZE)																	
date	15-Jun-13	time	2.66	3.72	4.76	5.78	6.79	7.81	8.88	9.95	11.00	12.04	13.48	4 / 1			
reaction time	0.151	interval		1.06	1.04	1.02	1.01	1.02	1.07	1.07	1.05	1.04	1.44	PB	3.12	3.10	3.16
wind	0.4 m/s	velocity	5.16	8.62	8.79	8.96	9.05	8.96	8.54	8.54	8.70	8.79	9.74	8.16	8.79	8.85	8.68

Heat 1 - 2013 Czech Republic National Championships (Tábor, CZE)*Fehér (2013) - Final report from the men's & women's Czech Republic national championships*

date	15-Jun-13	time	2.66	3.75	4.80	5.85	6.89	7.95	8.98	10.06	11.12	12.20	13.69	4 / 1			
reaction time	0.161	interval		1.09	1.05	1.05	1.04	1.06	1.03	1.08	1.06	1.08	1.49		3.19	3.13	3.22
wind	-0.6 m/s	velocity	5.16	8.39	8.70	8.70	8.79	8.62	8.87	8.46	8.62	8.46	9.41	8.04	8.60	8.76	8.52

FINAL - 2012 Czech Republic National Indoor Championships (Praha, CZE)*Fehér (2012) - Czech Republic indoor national championships - men's 60m hurdles*

date	25-Feb-12	time	2.68	3.76	4.77	5.82	6.84						7.81	4 / 1		
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reaction time 0.138 interval 1.08 1.01 1.05 1.02
velocity 5.12 8.46 9.05 8.70 8.96

0.97 3.14
10.02 7.68 8.73

Heat 1 - 2012 Czech Republic National Indoor Championships (Praha, CZE)*Feher (2012) - Czech Republic indoor national championships - men's 60m hurdles*

date 25-Feb-12 time 2.70 3.80 4.83 5.89 6.91
reaction time 0.161 interval 1.10 1.03 1.06 1.02
velocity 5.08 8.31 8.87 8.62 8.96

7.84 4 / 1 3.19
10.45 7.65 8.60

Race 1 - 2011 European Team Championships (Stockholm, SWE)*Blomkvist (2011) - www.sub13.se*

date 19-Jun-11 time 2.66 3.72 4.80 5.84 6.90 7.96 9.02 10.12 11.28 12.40 14.00
reaction time 0.179 interval 1.06 1.08 1.04 1.06 1.06 1.06 1.10 1.16 1.12 1.60
wind -0.8 m/s velocity 5.16 8.62 8.46 8.79 8.62 8.62 8.62 8.31 7.88 8.16 8.76 7.86

1 / 4 3.18 3.18 3.38
8.62 8.62 8.11

FINAL - 2010 European Team Championships, 1st League (Budapest, HUN)*Blomkvist (2010) - www.sub13.se*

date 20-Jun-10 time 2.57 3.67 4.76 5.80 6.87 7.93 9.01 10.12 11.20 12.33 13.95
reaction time 0.176 interval 1.10 1.09 1.04 1.07 1.06 1.08 1.11 1.08 1.13 1.62
wind 1.1 m/s velocity 5.34 8.31 8.39 8.79 8.54 8.62 8.46 8.23 8.46 8.09 8.65 7.89

6 / 5 3.23 3.21 3.32
8.49 8.54 8.26

McConico, Jaylan (USA) (1998)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

Semi-Final 1 - 2020 USA Olympic Trials (Eugene, OR) (TV Analysis)*Henson (2021) - Athlete First: 2021 year end hurdle report*

date 26-Jun-21 time 2.55 3.62 4.64 5.68 6.70 7.72 8.74 9.81 10.86 11.94
reaction time 0.209 interval 1.07 1.02 1.04 1.02 1.02 1.02 1.07 1.05 1.08 1.49
wind 1.8 m/s velocity 5.38 8.54 8.96 8.79 8.96 8.96 8.96 8.54 8.70 8.46 9.41 8.19

13.43 4 / 6 3.13 3.06 3.20
8.76 8.96 8.57

FINAL - 2021 NCAA Championships (Eugene, OR) (TV Analysis)*Henson (2021) - Athlete First: 2021 year end hurdle report*

date 11-Jun-21 time 2.55 3.57 4.60 5.63 6.63 7.63 8.73 9.80 10.83 11.93
reaction time 0.194 interval 1.02 1.03 1.03 1.00 1.00 1.10 1.07 1.03 1.10 1.45
wind -0.6 m/s velocity 5.38 8.96 8.87 8.87 9.14 9.14 8.31 8.54 8.87 8.31 9.67 8.22

13.38 4 / 2 3.08 3.10 3.20
8.90 8.85 8.57

McCorry, Jacob (AUS) (1997)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

FINAL - 2023 Seiko Golden Grand Prix (Yokohama, JPN)*Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season*

date 21-May-23 time 2.60 3.67 4.70 5.74 6.78 7.81 8.86 9.93 10.99 12.06
reaction time 0.117 interval 7 steps 1.07 1.03 1.04 1.04 1.03 1.05 1.07 1.06 1.07 1.42
wind 0.8 m/s velocity 5.28 8.54 8.87 8.79 8.79 8.87 8.70 8.54 8.62 8.54 9.87 8.16

13.48 9 / 7 3.14 3.12 3.20
8.73 8.79 8.57

FINAL - 2023 Michitaka Kinami Memorial (Osaka, JPN)*Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season*

date 07-May-23 time 2.63 3.70 4.76 5.83 6.88 7.92 9.00 10.08 11.15 12.27
reaction time 0.147 interval 7 steps 1.07 1.06 1.07 1.05 1.04 1.08 1.08 1.07 1.12 1.44
wind -0.3 m/s velocity 5.22 8.54 8.62 8.54 8.70 8.79 8.46 8.46 8.54 8.16 9.74 8.02

13.71 4 / 7 3.20 3.17 3.27
8.57 8.65 8.39

FINAL - 2023 Mikio Oda Memorial (Hiroshima, JPN)*Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season*

date 29-Apr-23 time 2.62 3.69 4.74 5.80 6.83 7.88 8.95 10.03 11.08 12.19
reaction time 0.110 interval 7 steps 1.07 1.05 1.06 1.03 1.05 1.07 1.08 1.05 1.11 1.46
wind 0.3 m/s velocity 5.24 8.54 8.70 8.62 8.87 8.70 8.54 8.46 8.70 8.23 9.60 8.06

13.65 1 / 6 3.18 3.15 3.24
8.62 8.70 8.46

B FINAL - 2019 Mikio Oda Memorial (Hiroshima, JPN)*Kobayashi (2019) - research on athlete performance and technique- 2019 data book*

date 28-Apr-19 time 2.67 3.76 4.83 5.92 7.03 8.14 9.25 10.36 11.46 12.63
reaction time interval 1.09 1.07 1.09 1.11 1.11 1.11 1.11 1.10 1.17 1.57
wind 1.4 m/s velocity 5.14 8.39 8.54 8.39 8.23 8.23 8.23 8.23 8.31 7.81 8.93 7.75

14.20 3 / 3 3.25 3.33 3.38
8.44 8.23 8.11

McDonald, Ian (IRL) (1984)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

FINAL - 2012 Windsprint (Sundsvall, SWE)*Blomkvist (2012) - www.sub13.se*

date 17-Jun-12 time 2.74 3.84 4.94 6.03 7.12 8.21 9.35 10.48 11.62 12.77
reaction time interval 1.10 1.10 1.09 1.09 1.09 1.14 1.13 1.14 1.15 1.59
wind 1.1 m/s velocity 5.01 8.31 8.31 8.39 8.39 8.39 8.02 8.09 8.02 7.95 8.82 7.66

14.36 1 / 5 3.29 3.32 3.42
8.33 8.26 8.02

McDonald, Rich (CAN) (1949)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

Heat 4 - 1972 Olympic Games (Munich, GER)*Letzelter (1977) - Hurdensprint: geschwindigkeitsverlauf und spezielle eigenschaften*

date 03-Sep-72 time 2.5 5.8
reaction time interval 3.32
wind 0.9 m/s velocity 5.44 8.26

14.36 8 / 3 3.32
7.66 8.26

McDowell, Andrew (USA) (1988)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

FINAL - 2007 USATF National Junior Championships (Indianapolis, IN) (99cm)*USATF Men's Hurdle Development (2007)*

date 21-Jun-07 time 2.69 3.74 4.77 5.82 6.89 7.94 8.98 10.09 11.18 12.30
reaction time interval 1.05 1.03 1.05 1.07 1.05 1.04 1.11 1.09 1.12 1.54
wind 2.7 m/s velocity 5.10 8.70 8.87 8.70 8.54 8.70 8.79 8.23 8.39 8.16 9.10 7.95

13.84 / 7 3.13 3.16 3.32
8.76 8.68 8.26

McDowell, Jon (USA) (1984)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

Heat 2 - 2007 USATF National Championships (Indianapolis, IN)*USATF Men's Hurdle Development (2007)*

date 23-Jun-07 time 2.84 3.94 5.00 6.11 7.18 8.26 9.36 10.46 11.58 12.71
reaction time interval 1.10 1.06 1.11 1.07 1.08 1.10 1.10 1.12 1.13 1.34
wind -1.9 m/s velocity 4.83 8.31 8.62 8.23 8.54 8.46 8.31 8.31 8.16 8.09 10.46 7.83

14.05 1 / 7 3.27 3.25 3.35
8.39 8.44 8.19

														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
McKoy, Mark (CAN) (1961)																													
FINAL - 1992 Olympic Games (Barcelona, ESP)														<i>Knight (1992) - 1992 Olympic report: the hurdling events</i>															
date	03-Aug-92	time	2.46	3.51	4.52	5.53	6.53	7.56	8.57	9.61	10.66	11.73		13.12	4 / 1														
reaction time	0.155	interval		1.05	1.01	1.01	1.00	1.03	1.01	1.04	1.05	1.07	1.39			3.07	3.04	3.16											
wind	0.8 m/s	velocity	5.58	8.70	9.05	9.05	9.14	8.87	9.05	8.79	8.70	8.54	10.09	8.38		8.93	9.02	8.68											
FINAL - 1988 Olympic Games (Seoul, KOR)														<i>Brüggemann (1990) - scientific research project at the games of the XXXIV Olympiad, Seoul 1988</i>															
date	26-Sep-88	time	2.49	3.55	4.57	5.62	6.65	7.77	8.86	9.97	11.08	12.17		13.61	8 / 7														
reaction time	0.142	interval		1.06	1.02	1.05	1.03	1.12	1.09	1.11	1.11	1.09	1.44			3.13	3.24	3.31											
wind	1.5 m/s	velocity	5.51	8.62	8.96	8.70	8.87	8.16	8.39	8.23	8.23	8.39	9.74	8.08		8.76	8.46	8.28											
Semi-Final 2 - 1988 Olympic Games (Seoul, KOR)														<i>Brüggemann (1990) - scientific research project at the games of the XXXIV Olympiad, Seoul 1988</i>															
date	26-Sep-88	time	2.49	3.54	4.61	5.66	6.72	7.77	8.82	9.91	10.99	12.08		13.54	5 / 3														
reaction time	0.144	interval		1.05	1.07	1.05	1.06	1.05	1.05	1.09	1.08	1.09	1.46			3.17	3.16	3.26											
wind	-0.7 m/s	velocity	5.51	8.70	8.54	8.70	8.62	8.70	8.70	8.39	8.46	8.39	9.60	8.12		8.65	8.68	8.41											
McLean, James (GBR) (1991)																													
Junior Final - 2010 ExxonMobil Bislett Games (Oslo, NOR) (99cm)														<i>Blomkvist (2010) - www.sub13.se</i>															
date	04-Jun-10	time	2.46	3.52	4.56	5.60	6.68	7.80	8.88	10.00	11.14	12.32		13.97	3 / 4														
reaction time	0.151	interval		1.06	1.04	1.04	1.08	1.12	1.08	1.12	1.14	1.18	1.65	PB		3.14	3.28	3.44											
wind	0.3 m/s	velocity	5.58	8.62	8.79	8.79	8.46	8.16	8.46	8.16	8.02	7.75	8.50	7.87		8.73	8.36	7.97											
McLeod, Omar (JAM) (1994)																													
FINAL - 2024 Golden Gala • Pietro Mennea (Roma, ITA)														<i>Omega Timing (2024) - diamond league race analysis</i>															
date	30-Aug-24	time	2.38	3.44	4.49	5.52	6.52	7.53	8.55	9.59	10.64	11.70		13.28	9 / 3														
reaction time	0.151	interval		1.06	1.05	1.03	1.00	1.01	1.02	1.04	1.05	1.06	1.58			3.14	3.03	3.15											
wind	0.4 m/s	velocity	5.76	8.62	8.70	8.87	9.14	9.05	8.96	8.79	8.70	8.62	8.87	8.28		8.73	9.05	8.70											
FINAL - 2022 Müller Birmingham Diamond League (Birmingham, GBR) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>															
date	21-May-22	time	2.40	3.47	4.47	5.47	6.47	7.45	8.49	9.53	10.58	11.66		13.17	5 / 2														
reaction time	0.132	interval		1.07	1.00	1.00	1.00	0.98	1.04	1.04	1.05	1.08	1.51			3.07	3.02	3.17											
wind	0.7 m/s	velocity	5.72	8.54	9.14	9.14	9.14	9.33	8.79	8.79	8.70	8.46	9.28	8.35		8.93	9.08	8.65											
FINAL - 2021 Müller British Grand Prix (Gateshead, GBR) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>															
date	13-Jul-21	time	2.56	3.62	4.62	5.66	6.68	7.68	8.68	9.74	10.78	11.94		13.42	5 / 2														
reaction time	0.140	interval		1.06	1.00	1.04	1.02	1.00	1.00	1.06	1.04	1.16	1.48			3.10	3.02	3.26											
wind	0.8 m/s	velocity	5.36	8.62	9.14	8.79	8.96	9.14	9.14	8.62	8.79	7.88	9.47	8.20		8.85	9.08	8.41											
Heat 1 - 2021 Jamaican National Championships (Kingston, JAM) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>															
date	26-Jun-21	time	2.47	3.53	4.53	5.56	6.53	7.57	8.57	9.57	10.58	11.59		13.04	4 / 1														
reaction time		interval		1.06	1.00	1.03	0.97	1.04	1.00	1.00	1.01	1.01	1.45			3.09	3.01	3.02											
wind	1.3 m/s	velocity	5.55	8.62	9.14	8.87	9.42	8.79	9.14	9.14	9.05	9.05	9.67	8.44		8.87	9.11	9.08											
FINAL - 2021 Golden Gala Pietro Mennea (Florence, ITA) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>															
date	10-Jun-21	time	2.44	3.50	4.48	5.48	6.48	7.48	8.48	9.50	10.50	11.56		13.01	4 / 1														
reaction time	0.147	interval		1.06	0.98	1.00	1.00	1.00	1.00	1.02	1.00	1.06	1.45			3.04	3.00	3.08											
wind	-0.1 m/s	velocity	5.62	8.62	9.33	9.14	9.14	9.14	9.14	8.96	9.14	8.62	9.67	8.46		9.02	9.14	8.90											
FINAL - 2021 Fanny Blankers Koen Games (Hengelo, NED) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>															
date	06-Jun-21	time	2.37	3.43	4.48	5.50	6.47	7.47	8.54	9.56	10.58	11.66		13.08	5 / 1														
reaction time		interval		1.06	1.05	1.02	0.97	1.00	1.07	1.02	1.02	1.08	1.42			3.13	3.04	3.12											
wind	1.7 m/s	velocity	5.79	8.62	8.70	8.96	9.42	9.14	8.54	8.96	8.96	8.46	9.87	8.41		8.76	9.02	8.79											
FINAL - 2019 IAAF World Championships (Doha, QAT)														<i>CAA Hurdle Development (2019)</i>															
date	02-Oct-19	time	2.53	3.53	4.54	5.57	6.56	7.53	8.54	9.54	10.70	12.00		14.10	4 / --														
reaction time	0.128	interval		1.00	1.01	1.03	0.99	0.97	1.01	1.00	1.16	1.30	2.10	DQ		3.04	2.97	3.46											
wind	0.6 m/s	velocity	5.42	9.14	9.05	8.87	9.23	9.42	9.05	9.14	7.88	7.03	6.68	7.80		9.02	9.23	7.92											
Semi-Final 2 - 2019 IAAF World Championships (Doha, QAT)														<i>CAA Hurdle Development (2019)</i>															
date	02-Oct-19	time	2.51	3.54	4.54	5.54	6.58	7.59	8.61	9.65	10.70	11.76		13.08	5 / 1														
reaction time	0.141	interval		1.03	1.00	1.00	1.04	1.01	1.02	1.04	1.05	1.06	1.32			3.03	3.07	3.15											
wind	0.9 m/s	velocity	5.47	8.87	9.14	9.14	8.79	9.05	8.96	8.79	8.70	8.62	10.62	8.41		9.05	8.93	8.70											
Heat 1 - 2019 IAAF World Championships (Doha, QAT) (TV Analysis)														<i>Henson (2021) - Athlete First: 2019 year end hurdle report</i>															
date	30-Sep-19	time	2.52	3.54	4.56	5.56	6.58	7.60	8.62	9.66	10.70	11.76		13.17	9 / 1														
reaction time	0.132	interval		1.02	1.02	1.00	1.02	1.02	1.02	1.04	1.04	1.06	1.41			3.04	3.06	3.14											
wind	0.2 m/s	velocity	5.44	8.96	8.96	9.14	8.96	8.96	8.96	8.79	8.79	8.62	9.94	8.35		9.02	8.96	8.73											
FINAL - 2019 ISTAF (Berlin, GER) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>															
date	01-Sep-19	time	2.46	3.46	4.46	5.50	6.50	7.50	8.52	9.58	10.62	11.68		13.07	5 / 1														
reaction time	0.130	interval		1.00	1.00	1.04	1.00	1.00	1.02	1.06	1.04	1.06	1.39			3.04	3.02	3.16											
wind	0.8 m/s	velocity	5.58	9.14	9.14	8.79	9.14	9.14	8.96	8.62	8.79	8.62	10.09	8.42		9.02	9.08	8.68											

FINAL - 2019 Müller Grand Prix (Birmingham, GBR) (TV Analysis)*Henson (2020) - Athlete First: 2019 year end hurdle report*

date	18-Aug-19	time	2.54	3.56	4.57	5.58	6.57	7.61	8.59	9.63	10.65	11.74	13.21	5 / 1			
reaction time	0.139	interval		1.02	1.01	1.01	0.99	1.04	0.98	1.04	1.02	1.09	1.47		3.04	3.01	3.15
wind	-0.2 m/s	velocity	5.40	8.96	9.05	9.05	9.23	8.79	9.33	8.79	8.96	8.39	9.54	8.33	9.02	9.11	8.70

FINAL - 2019 Müller Anniversary Games (London, GBR) (TV Analysis)*Henson (2020) - Athlete First: 2019 year end hurdle report*

date	21-Jul-19	time	2.39	3.45	4.48	5.53	6.55	7.56	8.58	9.64	10.72	11.77	13.32	4 / 3			
reaction time	0.134	interval		1.06	1.03	1.05	1.02	1.01	1.02	1.06	1.08	1.05	1.55		3.14	3.05	3.19
wind	0.4 m/s	velocity	5.74	8.62	8.87	8.70	8.96	9.05	8.96	8.62	8.46	8.70	9.05	8.26	8.73	8.99	8.60

FINAL - 2019 Prefontaine Classic (Stanford, CA) (TV Analysis)*Henson (2020) - Athlete First: 2019 year end hurdle report*

date	30-Jun-19	time	2.53	3.60	4.62	5.64	6.66	7.70	8.75	9.80	10.83	11.88	13.29	5 / 3			
reaction time	0.164	interval		1.07	1.02	1.02	1.02	1.04	1.05	1.05	1.03	1.05	1.41		3.11	3.11	3.13
wind	0.3 m/s	velocity	5.42	8.54	8.96	8.96	8.96	8.79	8.70	8.70	8.87	8.70	9.94	8.28	8.82	8.82	8.76

FINAL - 2019 Meeting International Mohammed VI d'Athlétisme (Rabat, MAR) (TV Analysis)*Henson (2020) - Athlete First: 2019 year end hurdle report*

date	16-Jun-19	time	2.44	3.46	4.48	5.48	6.50	7.52	8.56	9.58	10.62	11.72	13.48	5 / 5			
reaction time	0.145	interval		1.02	1.02	1.00	1.02	1.02	1.04	1.02	1.04	1.10	1.76		3.04	3.08	3.16
wind	0.3 m/s	velocity	5.62	8.96	8.96	9.14	8.96	8.96	8.79	8.96	8.79	8.31	7.97	8.16	9.02	8.90	8.68

FINAL - 2019 Nanjing World Challenge (Nanjing, CHN)*CAA Hurdle Development (2019)*

date	21-May-19	time	2.55	3.57	4.58	5.60	6.64	7.66	8.71	9.75	10.79	11.89	13.28	6 / 2			
reaction time	0.152	interval		1.02	1.01	1.02	1.04	1.02	1.05	1.04	1.04	1.10	1.39		3.05	3.11	3.18
wind	0.1 m/s	velocity	5.38	8.96	9.05	8.96	8.79	8.96	8.70	8.79	8.79	8.31	10.09	8.28	8.99	8.82	8.62

FINAL - 2019 Shanghai Diamond League (Shanghai, CHN)*CAA Hurdle Development (2019)*

date	18-May-19	time	2.52	3.56	4.58	5.56	6.56	7.58	8.60	9.62	10.68	11.76	13.12	4 / 1			
reaction time	0.149	interval		1.04	1.02	0.98	1.00	1.02	1.02	1.02	1.06	1.08	1.36		3.04	3.04	3.16
wind	0.7 m/s	velocity	5.44	8.79	8.96	9.33	9.14	8.96	8.96	8.96	8.62	8.46	10.31	8.38	9.02	9.02	8.68

FINAL - 2018 Athletissima (Lausanne, SUI) (TV Analysis)*Henson (2020) - Athlete First: 2018 year end hurdle report*

date	05-Jul-18	time	2.57	3.59	4.61	5.60	6.61	7.62	8.63	9.66	10.81	11.95	13.41	5 / 5			
reaction time	0.134	interval		1.02	1.02	0.99	1.01	1.01	1.01	1.03	1.15	1.14	1.46		3.03	3.03	3.32
wind	0.6 m/s	velocity	5.34	8.96	8.96	9.23	9.05	9.05	9.05	8.87	7.95	8.02	9.60	8.20	9.05	9.05	8.26

FINAL - 2018 István Gyulai Memorial (Székesfehérvár, HUN) (TV Analysis)*Henson (2020) - Athlete First: 2018 year end hurdle report*

date	02-Jul-18	time	2.48	3.52	4.54	5.56	6.56	7.56	8.58	9.74	10.82	11.94	13.45	4 / 6			
reaction time	0.152	interval		1.04	1.02	1.02	1.00	1.00	1.02	1.16	1.08	1.12	1.51		3.08	3.02	3.36
wind	0.6 m/s	velocity	5.53	8.79	8.96	8.96	9.14	9.14	8.96	7.88	8.46	8.16	9.28	8.18	8.90	9.08	8.16

FINAL - 2018 Prefontaine Classic (Eugene, OR) (TV Analysis)*Henson (2020) - Athlete First: 2018 year end hurdle report*

date	26-May-18	time	2.54	3.54	4.56	5.56	6.56	7.54	8.52	9.54	10.54	11.58	13.01	4 / 1			
reaction time	0.176	interval		1.00	1.02	1.00	1.00	0.98	0.98	1.02	1.00	1.04	1.43		3.02	2.96	3.06
wind	3.0 m/s	velocity	5.40	9.14	8.96	9.14	9.14	9.33	9.33	8.96	9.14	8.79	9.80	8.46	9.08	9.26	8.96

FINAL - 2018 Shanghai Diamond League (Shanghai, CHN) (TV Analysis)*Henson (2020) - Athlete First: 2018 year end hurdle report*

date	12-May-18	time	2.52	3.58	4.60	5.60	6.60	7.62	8.64	9.66	10.68	11.74	13.16	5 / 1			
reaction time	0.119	interval		1.06	1.02	1.00	1.00	1.02	1.02	1.02	1.02	1.06	1.42		3.08	3.04	3.10
wind	0.2 m/s	velocity	5.44	8.62	8.96	9.14	9.14	8.96	8.96	8.96	8.96	8.62	9.87	8.36	8.90	9.02	8.85

FINAL - 2017 IAAF World Championships (London, GBR)*Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles*

date	07-Aug-17	time	2.36	3.42	4.42	5.43	6.42	7.44	8.45	9.46	10.48	11.51	13.04	4 / 1			
reaction time	0.123	interval		1.06	1.00	1.01	0.99	1.02	1.01	1.01	1.02	1.03	1.53		3.07	3.02	3.06
wind	0.0 m/s	velocity	5.81	8.62	9.14	9.05	9.23	8.96	9.05	9.05	8.96	8.87	9.16	8.44	8.93	9.08	8.96

Semi-Final 1 - 2017 IAAF World Championships (London, GBR)*Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles*

date	06-Aug-17	time	2.37	3.43	4.45	5.46	6.48	7.47	8.47	9.49	10.53	11.57	13.10	7 / 1			
reaction time	0.135	interval		1.06	1.02	1.01	1.02	0.99	1.00	1.02	1.04	1.04	1.53		3.09	3.01	3.10
wind	0.2 m/s	velocity	5.79	8.62	8.96	9.05	8.96	9.23	9.14	8.96	8.79	8.79	9.16	8.40	8.87	9.11	8.85

FINAL - 2017 István Gyulai Memorial (Székesfehérvár, HUN) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date	04-Jul-17	time	2.48	3.50	4.50	5.50	6.50	7.50	8.48	9.52	10.54	11.56	12.96	4 / 1			
reaction time	0.138	interval		1.02	1.00	1.00	1.00	1.00	0.98	1.04	1.02	1.02	1.40		3.02	2.98	3.08
wind	0.3 m/s	velocity	5.53	8.96	9.14	9.14	9.14	9.14	9.33	8.79	8.96	8.96	10.01	8.49	9.08	9.20	8.90

FINAL - 2017 Meeting de Paris (Paris, FRA) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date	01-Jul-17	time	2.48	3.52	4.54	5.56	6.56	7.56	8.58	9.62	10.70	11.82	13.41	5 / 7			
reaction time	0.122	interval		1.04	1.02	1.02	1.00	1.00	1.02	1.04	1.08	1.12	1.59		3.08	3.02	3.24
wind	-0.1 m/s	velocity	5.53	8.79	8.96	8.96	9.14	9.14	8.96	8.79	8.46	8.16	8.82	8.20	8.90	9.08	8.46

FINAL - 2017 Jamaican National Championships (Kingston, JAM) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date	24-Jun-17	time	2.43	3.46	4.46	5.46	6.43	7.43	8.43	9.43	10.43	11.45	12.90	4 / 1			
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reaction time	interval	1.03	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.02	1.45	NR PB	3.03	2.97	3.02	
wind	0.7 m/s	velocity	5.65	8.87	9.14	9.14	9.42	9.14	9.14	9.14	8.96	9.67	8.53	9.05	9.23	9.08

FINAL - 2017 Prefontaine Classic (Eugene, OR) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date	27-May-17	time	2.48	3.52	4.52	5.52	6.52	7.54	8.52	9.52	10.54	11.58	13.01	4 / 1	3.04	3.00	3.06
reaction time	0.150	interval	1.04	1.00	1.00	1.00	1.02	0.98	1.00	1.02	1.04	1.43			3.04	3.00	3.06
wind	0.9 m/s	velocity	5.53	8.79	9.14	9.14	9.14	8.96	9.33	9.14	8.96	8.79	9.80	8.46	9.02	9.14	8.96

FINAL - 2017 Shanghai Diamond League (Shanghai, CHN) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date	13-May-17	time	2.48	3.50	4.54	5.58	6.56	7.58	8.58	9.62	10.64	11.70	13.09	5 / 1	3.10	3.00	3.12
reaction time	0.141	interval	1.02	1.04	1.04	0.98	1.02	1.00	1.04	1.02	1.06	1.39			3.10	3.00	3.12
wind	0.5 m/s	velocity	5.53	8.96	8.79	8.79	9.33	8.96	9.14	8.79	8.96	8.62	10.09	8.40	8.85	9.14	8.79

FINAL - 2017 Drake Relays (Des Moines, IA) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date	29-Apr-17	time	2.47	3.53	4.53	5.53	6.53	7.53	8.55	9.57	10.57	11.61	13.04	4 / 1	3.06	3.02	3.06
reaction time		interval	1.06	1.00	1.00	1.00	1.00	1.02	1.02	1.00	1.04	1.43			3.06	3.02	3.06
wind	1.8 m/s	velocity	5.55	8.62	9.14	9.14	9.14	9.14	8.96	8.96	9.14	8.79	9.80	8.44	8.96	9.08	8.96

FINAL - 2016 Athletissima (Lausanne, SUI) (TV Analysis)*Henson (2020) - Athlete First: 2016 year end hurdle report*

date	25-Aug-16	time	2.48	3.54	4.56	5.58	6.58	7.58	8.62	9.64	10.64	11.70	13.12	4 / 2	3.10	3.04	3.08
reaction time	0.144	interval	1.06	1.02	1.02	1.00	1.00	1.04	1.02	1.00	1.06	1.42			3.10	3.04	3.08
wind	0.5 m/s	velocity	5.53	8.62	8.96	8.96	9.14	9.14	8.79	8.96	9.14	8.62	9.87	8.38	8.85	9.02	8.90

FINAL - 2016 Olympic Games (Rio de Janeiro, BRA) (TV Analysis)*Henson (2020) - Athlete First: 2016 year end hurdle report*

date	16-Aug-16	time	2.44	3.50	4.52	5.54	6.54	7.54	8.56	9.60	10.60	11.62	13.05	5 / 1	3.10	3.02	3.06
reaction time	0.142	interval	1.06	1.02	1.02	1.00	1.00	1.02	1.04	1.00	1.02	1.43			3.10	3.02	3.06
wind	0.2 m/s	velocity	5.62	8.62	8.96	8.96	9.14	9.14	8.96	8.79	9.14	8.96	9.80	8.43	8.85	9.08	8.96

FINAL - 2016 Herculis Meeting International d'Athlétisme (Monaco, MON) (TV Analysis)*Henson (2021) - Athlete First: 2016 year end hurdle report*

date	15-Jul-16	time	2.42	3.48	4.48	5.48	6.48	7.50	8.52	9.60	10.68	11.72	13.82	5 / 8	3.06	3.04	3.20
reaction time	0.128	interval	1.06	1.00	1.00	1.00	1.02	1.02	1.08	1.08	1.04	2.10			3.06	3.04	3.20
wind	0.0 m/s	velocity	5.67	8.62	9.14	9.14	9.14	8.96	8.96	8.46	8.46	8.79	6.68	7.96	8.96	9.02	8.57

FINAL - 2016 Jamaican National Championships (Kingston, JAM) (TV Analysis)*Henson (2020) - Athlete First: 2016 year end hurdle report*

date	02-Jul-16	time	2.43	3.50	4.51	5.51	6.49	7.47	8.49	9.51	10.51	11.53	13.01	4 / 1	3.08	2.98	3.04
reaction time		interval	1.07	1.01	1.00	0.98	0.98	1.02	1.02	1.00	1.02	1.48			3.08	2.98	3.04
wind	0.4 m/s	velocity	5.65	8.54	9.05	9.14	9.33	9.33	8.96	8.96	9.14	8.96	9.47	8.46	8.90	9.20	9.02

FINAL - 2016 Prefontaine Classic (Eugene, OR) (TV Analysis)*Henson (2021) - Athlete First: 2016 year end hurdle report*

date	28-May-16	time	2.44	3.50	4.52	5.54	6.56	7.56	8.56	9.58	10.60	11.62	13.06	4 / 1	3.10	3.02	3.06
reaction time		interval	1.06	1.02	1.02	1.02	1.00	1.00	1.02	1.02	1.02	1.44			3.10	3.02	3.06
wind	0.7 m/s	velocity	5.62	8.62	8.96	8.96	8.96	9.14	9.14	8.96	8.96	8.96	9.74	8.42	8.85	9.08	8.96

FINAL - 2016 Shanghai Golden Grand Prix (Shanghai, CHN) (TV Analysis)*Henson (2021) - Athlete First: 2016 year end hurdle report*

date	14-May-16	time	2.42	3.48	4.48	5.48	6.50	7.52	8.54	9.56	10.56	11.58	12.98	5 / 1	3.06	3.06	3.04
reaction time	0.133	interval	1.06	1.00	1.00	1.02	1.02	1.02	1.02	1.00	1.02	1.40			3.06	3.06	3.04
wind	1.2 m/s	velocity	5.67	8.62	9.14	9.14	8.96	8.96	8.96	8.96	9.14	8.96	10.01	8.47	8.96	8.96	9.02

FINAL - 2016 Doha Diamond League (Doha, QAT) (TV Analysis)*Henson (2020) - Athlete First: 2016 year end hurdle report*

date	06-May-16	time	2.50	3.54	4.54	5.54	6.52	7.50	8.50	9.54	10.56	11.62	13.05	4 / 1	3.04	2.96	3.12
reaction time	0.131	interval	1.04	1.00	1.00	0.98	0.98	1.00	1.04	1.02	1.06	1.43			3.04	2.96	3.12
wind	1.4 m/s	velocity	5.49	8.79	9.14	9.14	9.33	9.33	9.14	8.79	8.96	8.62	9.80	8.43	9.02	9.26	8.79

FINAL - 2015 IAAF World Championships (Beijing, CHN) (TV Analysis)*Henson (2021) - Athlete First: major championships report*

date	28-Aug-15	time	2.44	3.46	4.48	5.52	6.54	7.58	8.62	9.66	10.72	11.78	13.18	6 / 6	3.08	3.10	3.16
reaction time	0.135	interval	1.02	1.02	1.04	1.02	1.04	1.04	1.04	1.06	1.06	1.40			3.08	3.10	3.16
wind	0.2 m/s	velocity	5.62	8.96	8.96	8.79	8.96	8.79	8.79	8.79	8.62	8.62	10.01	8.35	8.90	8.85	8.68

Mehlich, Krzysztof (POL) (1974)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2001 European Cup (Bremen, GER)***Graubner (2007) - <http://www.fgs.uni-halle.de>*

date	24-Jun-01	time	2.63	3.72	4.78	5.85	6.92	8.00	9.08	10.16	11.26	12.39	13.86	5 / 5	3.22	3.23	3.31
reaction time	0.157	interval	7 steps	1.09	1.06	1.07	1.07	1.08	1.08	1.08	1.10	1.13	1.47		3.22	3.23	3.31
wind	1.3 m/s	velocity	5.22	8.39	8.62	8.54	8.54	8.46	8.46	8.46	8.31	8.09	9.54	7.94	8.52	8.49	8.28

Mendy, Louis François (SEN) (1999)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Semi-Final 2 - 2024 Olympic Games (Paris, FRA)***Paris 2024 Olympc Games - Results Book (2024)*

date	07-Aug-24	time	2.44	3.52	4.57	5.58	6.60	7.62	8.65	9.67	10.72	11.77	13.34	4 / 3	3.14	3.07	3.12
reaction time	0.191	interval	1.08	1.05	1.01	1.02	1.02	1.03	1.02	1.05	1.05	1.57			3.14	3.07	3.12
wind	-0.1 m/s	velocity	5.62	8.46	8.70	9.05	8.96	8.96	8.87	8.96	8.70	8.70	8.93	8.25	8.73	8.93	8.79

Heat 2 - 2024 Olympic Games (Paris, FRA)*Paris 2024 Olympc Games - Results Book (2024)*

date	04-Aug-24	time	2.44	3.53	4.56	5.57	6.58	7.60	8.63	9.65	10.69	11.76	13.31	9 / 1	3.13	3.06	3.13
reaction time	0.170	interval	1.09	1.03	1.01	1.01	1.02	1.03	1.02	1.04	1.07	1.55			3.13	3.06	3.13

wind 1.2 m/s velocity 5.62 8.39 8.87 9.05 9.05 8.96 8.87 8.96 8.79 8.54 9.05 8.26 8.76 8.96 8.76

Heat 3 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)*Henson (2023) - Athlete First: 2023 year end hurdle report*

date 20-Aug-23 time 2.56 3.60 4.60 5.61 6.61 7.64 8.66 9.72 10.76 11.83 13.24 6 / 1
 reaction time 0.176 interval 1.04 1.00 1.01 1.00 1.03 1.02 1.06 1.04 1.07 1.41 3.05 3.05 3.17
 wind 0.0 m/s velocity 5.36 8.79 9.14 9.05 9.14 8.87 8.96 8.62 8.79 8.54 9.94 8.31 8.99 8.99 8.65

Meredith, Jack (GBR) (1992)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

Junior Final - 2010 ExxonMobil Bislett Games (Oslo, NOR) (99cm)*Blomkvist (2010) - www.sub13.se*

date 04-Jun-10 time 2.44 3.52 4.52 5.52 6.56 7.56 8.58 9.62 10.68 11.76 13.32 5 / 1
 reaction time 0.147 interval 1.08 1.00 1.00 1.04 1.00 1.02 1.04 1.06 1.08 1.56 **NJR** 3.08 3.06 3.18
 wind 0.3 m/s velocity 5.62 8.46 9.14 9.14 8.79 9.14 8.96 8.79 8.62 8.46 8.99 8.26 8.90 8.96 8.62

Merritt, Aries (USA) (1985)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

FINAL - 2018 Müller Anniversary Games (London, GBR) (TV Analysis)*Henson (2020) - Athlete First: 2018 year end hurdle report*

date 22-Jul-18 time 2.54 3.60 4.64 5.66 6.70 7.74 8.76 9.82 10.86 11.94 13.44 4 / 8
 reaction time 0.132 interval **7 steps** 1.06 1.04 1.02 1.04 1.04 1.02 1.06 1.04 1.08 1.50 3.12 3.10 3.18
 wind 0.2 m/s velocity 5.40 8.62 8.79 8.96 8.79 8.79 8.96 8.62 8.79 8.46 9.35 8.18 8.79 8.85 8.62

FINAL - 2018 Herculis Meeting International d'athlétisme (Monaco, MON) (TV Analysis)*Henson (2020) - Athlete First: 2018 year end hurdle report*

date 20-Jul-18 time 2.46 3.52 4.58 5.60 6.62 7.66 8.70 9.74 10.82 11.90 13.49 8 / 7
 reaction time 0.136 interval **7 steps** 1.06 1.06 1.02 1.02 1.04 1.04 1.04 1.08 1.08 1.59 3.14 3.10 3.20
 wind -0.2 m/s velocity 5.58 8.62 8.62 8.96 8.96 8.79 8.79 8.79 8.46 8.46 8.82 8.15 8.73 8.85 8.57

FINAL - 2018 Athletissima (Lausanne, SUI) (TV Analysis)*Henson (2020) - Athlete First: 2018 year end hurdle report*

date 05-Jul-18 time 2.59 3.61 4.63 5.65 6.69 7.73 8.77 9.83 10.87 11.95 13.44 2 / 6
 reaction time 0.129 interval **7 steps** 1.02 1.02 1.02 1.04 1.04 1.04 1.06 1.04 1.08 1.49 3.06 3.12 3.18
 wind 0.6 m/s velocity 5.30 8.96 8.96 8.96 8.79 8.79 8.79 8.62 8.79 8.46 9.41 8.18 8.96 8.79 8.62

FINAL - 2018 István Gyulai Memorial (Székesfehérvár, HUN) (TV Analysis)*Henson (2020) - Athlete First: 2018 year end hurdle report*

date 02-Jul-18 time 2.46 3.54 4.58 5.62 6.64 7.68 8.72 9.76 10.80 11.86 13.37 3 / 4
 reaction time 0.144 interval **7 steps** 1.08 1.04 1.04 1.02 1.04 1.04 1.04 1.04 1.04 1.06 1.51 3.16 3.10 3.14
 wind 0.6 m/s velocity 5.58 8.46 8.79 8.79 8.96 8.79 8.79 8.79 8.79 8.62 9.28 8.23 8.68 8.85 8.73

FINAL - 2018 USATF Championships (Des Moines, IA) (TV Analysis)*Henson (2020) - Athlete First: 2018 year end hurdle report*

date 24-Jun-18 time 2.47 3.54 4.60 5.65 6.68 7.72 8.76 9.81 10.88 11.96 13.52 4 / 4
 reaction time interval **7 steps** 1.07 1.06 1.05 1.03 1.04 1.04 1.05 1.07 1.08 1.56 3.18 3.11 3.20
 wind -1.8 m/s velocity 5.55 8.54 8.62 8.70 8.87 8.79 8.79 8.70 8.54 8.46 8.99 8.14 8.62 8.82 8.57

FINAL - 2018 Prefontaine Classic (Eugene, OR) (TV Analysis)*Henson (2020) - Athlete First: 2018 year end hurdle report*

date 26-May-18 time 2.52 3.58 4.60 5.60 6.62 7.64 8.66 9.70 10.74 11.80 13.27 7 / 6
 reaction time 0.144 interval **7 steps** 1.06 1.02 1.00 1.02 1.02 1.02 1.02 1.04 1.04 1.06 1.47 3.08 3.06 3.14
 wind **3.0 m/s** velocity 5.44 8.62 8.96 9.14 8.96 8.96 8.96 8.79 8.79 8.62 9.54 8.29 8.90 8.96 8.73

FINAL - 2018 Shanghai Diamond League (Shanghai, CHN) (TV Analysis)*Henson (2020) - Athlete First: 2018 year end hurdle report*

date 12-May-18 time 2.48 3.54 4.60 5.64 6.68 7.72 8.84 9.92 11.00 12.10 13.65 7 / 6
 reaction time 0.126 interval **7 steps** 1.06 1.06 1.04 1.04 1.04 1.12 1.08 1.08 1.10 1.55 3.16 3.20 3.26
 wind 0.2 m/s velocity 5.53 8.62 8.62 8.79 8.79 8.79 8.16 8.46 8.46 8.31 9.05 8.06 8.68 8.57 8.41

FINAL - 2018 IAAF World Indoor Championships (Birmingham, GBR)*Walker (2019). Biomechanical Report for the IAAF World Indoor Championships 2018: 60 Metres Hurdles Men*

date 04-Mar-18 time 2.53 3.58 4.62 5.63 6.64 7.56 1 / 4
 reaction time 0.141 interval **7 steps** 1.05 1.04 1.01 1.01 0.92 3.10
 velocity 5.42 8.70 8.79 9.05 9.05 10.57 7.94 8.85

FINAL - 2017 Memorial van Damme (Brussels, BEL) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date 01-Sep-17 time 2.48 3.52 4.54 5.54 6.54 7.54 8.58 9.60 10.62 11.68 13.20 6 / 3
 reaction time 0.133 interval **7 steps** 1.04 1.02 1.00 1.00 1.00 1.04 1.02 1.02 1.06 1.52 3.06 3.04 3.10
 wind 0.5 m/s velocity 5.53 8.79 8.96 9.14 9.14 9.14 8.79 8.96 8.96 8.62 9.22 8.33 8.96 9.02 8.85

FINAL - 2017 Müller Grand Prix (Birmingham, GBR) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date 20-Aug-17 time 2.48 3.52 4.54 5.52 6.56 7.60 8.62 9.66 10.70 11.78 13.29 6 / 1
 reaction time 0.127 interval **7 steps** 1.04 1.02 0.98 1.04 1.04 1.02 1.04 1.04 1.08 1.51 3.04 3.10 3.16
 wind -0.6 m/s velocity 5.53 8.79 8.96 9.33 8.79 8.79 8.96 8.79 8.79 8.46 9.28 8.28 9.02 8.85 8.68

FINAL - 2017 IAAF World Championships (London, GBR)*Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles*

date 07-Aug-17 time 2.43 3.48 4.50 5.51 6.53 7.55 8.57 9.60 10.66 11.72 13.31 9 / 5
 reaction time 0.163 interval 1.05 1.02 1.01 1.02 1.02 1.02 1.03 1.06 1.06 1.59 3.08 3.06 3.15
 wind 0.0 m/s velocity 5.65 8.70 8.96 9.05 8.96 8.96 8.96 8.87 8.62 8.62 8.82 8.26 8.90 8.96 8.70

Semi-Final 3 - 2017 IAAF World Championships (London, GBR)*Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles*

date 06-Aug-17 time 2.36 3.41 4.44 5.46 6.48 7.50 8.52 9.55 10.59 11.65 13.25 7 / 2
 reaction time 0.117 interval 1.05 1.03 1.02 1.02 1.02 1.02 1.03 1.04 1.06 1.60 3.10 3.06 3.13
 wind 0.3 m/s velocity 5.81 8.70 8.87 8.96 8.96 8.96 8.96 8.87 8.79 8.62 8.76 8.30 8.85 8.96 8.76

FINAL - 2017 Galà dei Castelli (Bellinzona, SUI)														<i>(2017.07.18) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>			
date	18-Jul-17	time	2.57	3.61	4.64	5.64	6.64	7.66	8.67	9.70	10.73	11.77	13.20	4 / 1			
reaction time		interval	7 steps	1.04	1.03	1.00	1.00	1.02	1.01	1.03	1.03	1.04	1.43		3.07	3.03	3.10
wind	-0.6 m/s	velocity	5.34	8.79	8.87	9.14	9.14	8.96	9.05	8.87	8.87	8.79	9.80	8.33	8.93	9.05	8.85
FINAL - 2017 Müller's Anniversary Games (London, GBR)														<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>			
date	09-Jul-17	time	2.52	3.56	4.58	5.56	6.58	7.58	8.58	9.58	10.62	11.62	13.09	4 / 1			
reaction time	0.134	interval	7 steps	1.04	1.02	0.98	1.02	1.00	1.00	1.00	1.04	1.00	1.47		3.04	3.02	3.04
wind	0.0 m/s	velocity	5.44	8.79	8.96	9.33	8.96	9.14	9.14	9.14	8.79	9.14	9.54	8.40	9.02	9.08	9.02
FINAL - 2017 István Gyulai Memorial (Székesfehérvár, HUN) (TV Analysis)														<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>			
date	04-Jul-17	time	2.48	3.52	4.52	5.52	6.52	7.52	8.54	9.58	10.60	11.66	13.11	3 / 3			
reaction time	0.126	interval	7 steps	1.04	1.00	1.00	1.00	1.00	1.02	1.04	1.02	1.06	1.45		3.04	3.02	3.12
wind	0.3 m/s	velocity	5.53	8.79	9.14	9.14	9.14	9.14	8.96	8.79	8.96	8.62	9.67	8.39	9.02	9.08	8.79
FINAL - 2017 Golden Gala Pietro Mennea (Rome, ITA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>			
date	08-Jun-17	time	2.44	3.48	4.48	5.48	6.50	7.50	8.54	9.56	10.60	11.66	13.13	7 / 1			
reaction time	0.132	interval	7 steps	1.04	1.00	1.00	1.02	1.00	1.04	1.02	1.04	1.06	1.47		3.04	3.06	3.12
wind	-0.3 m/s	velocity	5.62	8.79	9.14	9.14	8.96	9.14	8.79	8.96	8.79	8.62	9.54	8.38	9.02	8.96	8.79
FINAL - 2017 Prefontaine Classic (Eugene, OR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>			
date	27-May-17	time	2.48	3.50	4.52	5.52	6.54	7.54	8.56	9.58	10.62	11.66	13.13	6 / 4			
reaction time	0.132	interval	7 steps	1.02	1.02	1.00	1.02	1.00	1.02	1.02	1.04	1.04	1.47		3.04	3.04	3.10
wind	0.9 m/s	velocity	5.53	8.96	8.96	9.14	8.96	9.14	8.96	8.96	8.79	8.79	9.54	8.38	9.02	9.02	8.85
FINAL - 2017 Shanghai Diamond League (Shanghai, CHN) (TV Analysis)														<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>			
date	13-May-17	time	2.54	3.58	4.58	5.58	6.62	7.66	8.66	9.74	10.78	11.86	13.36	7 / 6			
reaction time	0.136	interval	7 steps	1.04	1.00	1.00	1.04	1.04	1.00	1.08	1.04	1.08	1.50		3.04	3.08	3.20
wind	0.5 m/s	velocity	5.40	8.79	9.14	9.14	8.79	8.79	9.14	8.46	8.79	8.46	9.35	8.23	9.02	8.90	8.57
FINAL - 2017 Drake Relays (Des Moines, IA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>			
date	29-Apr-17	time	2.53	3.60	4.63	5.63	6.63	7.66	8.70	9.76	10.83	11.93	13.44	5 / 4			
reaction time		interval	7 steps	1.07	1.03	1.00	1.00	1.03	1.04	1.06	1.07	1.10	1.51		3.10	3.07	3.23
wind	1.8 m/s	velocity	5.42	8.54	8.87	9.14	9.14	8.87	8.79	8.62	8.54	8.31	9.28	8.18	8.85	8.93	8.49
FINAL - 2016 USA Olympic Trials (Eugene, OR)														<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>			
date	09-Jul-16	time	2.47	3.49	4.49	5.49	6.47	7.47	8.49	9.54	10.60	11.66	13.22	1 / 4			
reaction time	0.155	interval	7 steps	1.02	1.00	1.00	0.98	1.00	1.02	1.05	1.06	1.06	1.56		3.02	3.00	3.17
wind	1.0 m/s	velocity	5.55	8.96	9.14	9.14	9.33	9.14	8.96	8.70	8.62	8.62	8.99	8.32	9.08	9.14	8.65
FINAL - 2016 Prefontaine Classic (Eugene, OR) (TV Analysis)														<i>Henson (2021) - Athlete First: 2016 year end hurdle report</i>			
date	28-May-16	time	2.46	3.52	4.54	5.56	6.60	7.62	8.64	9.68	10.74	11.86	13.51	3 / 4			
reaction time		interval	7 steps	1.06	1.02	1.02	1.04	1.02	1.02	1.04	1.06	1.12	1.65		3.10	3.08	3.22
wind	0.7 m/s	velocity	5.58	8.62	8.96	8.96	8.79	8.96	8.96	8.79	8.62	8.16	8.50	8.14	8.85	8.90	8.52
FINAL - 2016 Doha Diamond League (Doha, QAT) (TV Analysis)														<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>			
date	06-May-16	time	2.52	3.60	4.64	5.68	6.70	7.72	8.76	9.80	10.84	11.92	13.37	5 / 6			
reaction time	0.125	interval	7 steps	1.08	1.04	1.04	1.02	1.02	1.04	1.04	1.04	1.08	1.45		3.16	3.08	3.16
wind	1.4 m/s	velocity	5.44	8.46	8.79	8.79	8.96	8.96	8.79	8.79	8.79	8.46	9.67	8.23	8.68	8.90	8.68
FINAL - 2015 IAAF World Championships (Beijing, CHN) (TV Analysis)														<i>Henson (2021) - Athlete First: major championships report</i>			
date	28-Aug-15	time	2.48	3.52	4.52	5.52	6.52	7.52	8.52	9.54	10.58	11.62	13.04	4 / 3			
reaction time	0.141	interval	7 steps	1.04	1.00	1.00	1.00	1.00	1.00	1.02	1.04	1.04	1.42		3.04	3.00	3.10
wind	0.2 m/s	velocity	5.53	8.79	9.14	9.14	9.14	9.14	9.14	8.96	8.79	8.79	9.87	8.44	9.02	9.14	8.85
FINAL - 2013 IAAF World Championships (Moscow, RUS) (TV Analysis)														<i>Henson (2021) - Athlete First: major championships report</i>			
date	12-Aug-13	time	2.50	3.54	4.54	5.54	6.54	7.54	8.58	9.62	10.68	11.78	13.31	8 / 6			
reaction time	0.147	interval	7 steps	1.04	1.00	1.00	1.00	1.00	1.04	1.04	1.06	1.10	1.53		3.04	3.04	3.20
wind	0.3 m/s	velocity	5.49	8.79	9.14	9.14	9.14	9.14	8.79	8.79	8.62	8.31	9.16	8.26	9.02	9.02	8.57
FINAL - 2012 Memorial Van Damme (Brussels, BEL) (TV Analysis)														<i>May (2012) - http://www.fgs.uni-halle.de</i>			
date	07-Sep-12	time	2.52	3.56	4.56	5.53	6.50	7.48	8.46	9.44	10.44	11.46	12.80	6 / 1			
reaction time	0.145	interval	7 steps	1.04	1.00	0.97	0.97	0.98	0.98	0.98	1.00	1.02	1.34	WR	3.01	2.93	3.00
wind	0.3 m/s	velocity	5.44	8.79	9.14	9.42	9.42	9.33	9.33	9.33	9.14	8.96	10.46	8.59	9.11	9.36	9.14
FINAL - 2012 ISTAF (Berlin, GER) (TV Analysis)														<i>Henson (2021) - Athlete First: 2012 Aries Merritt world record season</i>			
date	02-Sep-12	time	2.43	3.45	4.47	5.47	6.47	7.47	8.47	9.47	10.49	11.51	12.97	4 / 1			
reaction time	0.164	interval	7 steps	1.02	1.02	1.00	1.00	1.00	1.00	1.00	1.02	1.02	1.46		3.04	3.00	3.04
wind	1.2 m/s	velocity	5.65	8.96	8.96	9.14	9.14	9.14	9.14	9.14	8.96	8.96	9.60	8.48	9.02	9.14	9.02
FINAL - 2012 AVIVA Grand Prix (Birmingham, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>			
date	26-Aug-12	time	2.44	3.46	4.47	5.48	6.46	7.46	8.46	9.46	10.46	11.50	12.95	3 / 1			

reaction time	0.146	interval	7 steps	1.02	1.01	1.01	0.98	1.00	1.00	1.00	1.00	1.04	1.45		3.04	2.98	3.04
wind	-0.9 m/s	velocity	5.62	8.96	9.05	9.05	9.33	9.14	9.14	9.14	9.14	8.79	9.67	8.49	9.02	9.20	9.02
FINAL - 2012 Olympic Games (London, GBR) (TV Analysis)														<i>Graubner (2012) - http://www.fgs.uni-halle.de</i>			
date	08-Aug-12	time	2.54	3.55	4.55	5.54	6.53	7.52	8.53	9.53	10.55	11.57	12.92	6 / 1			
reaction time	0.143	interval	7 steps	1.01	1.00	0.99	0.99	0.99	1.01	1.00	1.02	1.02	1.35	PB	3.00	2.99	3.04
wind	-0.3 m/s	velocity	5.40	9.05	9.14	9.23	9.23	9.23	9.05	9.14	8.96	8.96	10.39	8.51	9.14	9.17	9.02
Semi-Final 2 - 2012 Olympic Games (London, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>			
date	08-Aug-12	time	2.48	3.50	4.52	5.50	6.50	7.48	8.46	9.46	10.48	11.50	12.94	7 / 1			
reaction time	0.147	interval	7 steps	1.02	1.02	0.98	1.00	0.98	0.98	1.00	1.02	1.02	1.44		3.02	2.96	3.04
wind	0.1 m/s	velocity	5.53	8.96	8.96	9.33	9.14	9.33	9.33	9.14	8.96	8.96	9.74	8.50	9.08	9.26	9.02
Heat 5 - 2012 Olympic Games (London, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>			
date	07-Aug-12	time	2.46	3.50	4.48	5.50	6.50	7.50	8.50	9.50	10.50	11.58	13.07	7 / 1			
reaction time	0.142	interval	7 steps	1.04	0.98	1.02	1.00	1.00	1.00	1.00	1.00	1.08	1.49		3.04	3.00	3.08
wind	0.7 m/s	velocity	5.58	8.79	9.33	8.96	9.14	9.14	9.14	9.14	9.14	8.46	9.41	8.42	9.02	9.14	8.90
FINAL - 2012 Herculis Meeting International D'Athlétisme (Monaco, MON) (TV Analysis)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>			
date	20-Jul-12	time	2.38	3.40	4.44	5.42	6.40	7.38	8.38	9.38	10.42	11.46	12.93	5 / 1			
reaction time	0.112	interval	7 steps	1.02	1.04	0.98	0.98	0.98	1.00	1.00	1.04	1.04	1.47	=PB	3.04	2.96	3.08
wind	0.0 m/s	velocity	5.76	8.96	8.79	9.33	9.33	9.33	9.14	9.14	8.79	8.79	9.54	8.51	9.02	9.26	8.90
FINAL - 2012 AVIVA London Grand Prix (London, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>			
date	13-Jul-12	time	2.46	3.46	4.48	5.46	6.44	7.42	8.42	9.42	10.46	11.46	12.93	4 / 1			
reaction time	0.137	interval	7 steps	1.00	1.02	0.98	0.98	0.98	1.00	1.00	1.04	1.00	1.47	=PB	3.00	2.96	3.04
wind	0.6 m/s	velocity	5.58	9.14	8.96	9.33	9.33	9.33	9.14	9.14	8.79	9.14	9.54	8.51	9.14	9.26	9.02
Heat 2 - 2012 AVIVA Grand Prix (Birmingham, GBR) (TV Analysis)														<i>Henson (2021) - Athlete First: 2012 Aries Merritt world record season</i>			
date	13-Jul-12	time	2.48	3.52	4.52	5.52	6.52	7.54	8.56	9.58	10.60	11.66	13.14	4 / 1			
reaction time	0.139	interval	7 steps	1.04	1.00	1.00	1.00	1.02	1.02	1.02	1.02	1.06	1.48		3.04	3.04	3.10
wind	-0.9 m/s	velocity	5.53	8.79	9.14	9.14	9.14	8.96	8.96	8.96	8.96	8.62	9.47	8.37	9.02	9.02	8.85
FINAL - 2012 USA Olympic Trials (Eugene, OR)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>			
date	30-Jun-12	time	2.37	3.40	4.40	5.39	6.37	7.36	8.34	9.34	10.36	11.37	12.93	5 / 1			
reaction time	0.138	interval	7 steps	1.03	1.00	0.99	0.98	0.99	0.98	1.00	1.02	1.01	1.56	PB	3.02	2.95	3.03
wind	1.2 m/s	velocity	5.79	8.87	9.14	9.23	9.33	9.23	9.33	9.14	8.96	9.05	8.99	8.51	9.08	9.29	9.05
FINAL - 2012 Prefontaine Classic (Eugene, OR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>			
date	02-Jun-12	time	2.52	3.54	4.56	5.58	6.56	7.56	8.56	9.54	10.54	11.58	12.96	3 / 2			
reaction time	0.151	interval	7 steps	1.02	1.02	1.02	0.98	1.00	1.00	0.98	1.00	1.04	1.38		3.06	2.98	3.02
wind	2.4 m/s	velocity	5.44	8.96	8.96	8.96	9.33	9.14	9.14	9.33	9.14	8.79	10.16	8.49	8.96	9.20	9.08
FINAL - 2012 Golden Grand Prix (Shanghai, CHN)														<i>Feng (2016) - Liu Xiang's seven-step starting: discussion on the key issues of 110m hurdles technical training</i>			
date	19-May-12	time	2.34	3.38	4.42	5.46	6.50	7.54	8.58	9.62	10.66	11.70	13.26	6 / 4			
reaction time	0.142	interval	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.56		3.12	3.12	3.12
wind	0.4 m/s	velocity	5.86	8.79	8.79	8.79	8.79	8.79	8.79	8.79	8.79	8.79	8.99	8.30	8.79	8.79	8.79
FINAL - 2012 Colorful Daegu Meeting (Daegu, KOR) (TV Analysis)														<i>Henson (2021) - Athlete First: 2012 Aries Merritt world record season</i>			
date	16-May-12	time	2.53	3.60	4.60	5.60	6.60	7.60	8.64	9.67			13.21	3 / 1			
reaction time	0.165	interval	7 steps	1.07	1.00	1.00	1.00	1.00	1.04	1.03					3.07	3.04	
wind	-0.4 m/s	velocity	5.42	8.54	9.14	9.14	9.14	9.14	8.79	8.87			8.33		8.93	9.02	
FINAL - 2012 Arkansas Twilight (Fayetteville, AR)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>			
date	04-May-12	time	2.50	3.53	4.55	5.57	6.57	7.54	8.54	9.54	10.54		13.03	5 / 1			
reaction time		interval	7 steps	1.03	1.02	1.02	1.00	0.97	1.00	1.00	1.00				3.07	2.97	
wind	1.0 m/s	velocity	5.49	8.87	8.96	8.96	9.14	9.42	9.14	9.14	9.14		8.44		8.93	9.23	
Heat 3 - 2012 Arkansas Twilight (Fayetteville, AR)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>			
date	04-May-12	time	2.50	3.53	4.53	5.53	6.52	7.51	8.50	9.51	10.52	11.54	12.99	5 / 1			
reaction time		interval	7 steps	1.03	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.02	1.45		3.03	2.97	3.04
wind	2.9 m/s	velocity	5.49	8.87	9.14	9.14	9.23	9.23	9.23	9.05	9.05	8.96	9.67	8.47	9.05	9.23	9.02
FINAL - 2012 IAAF World Indoor Championships (Istanbul, TUR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>			
date	11-Mar-12	time	2.48	3.48	4.50	5.50	6.50						7.44	4 / 1			
reaction time	0.135	interval	7 steps	1.00	1.02	1.00	1.00					0.94			3.02		
		velocity	5.53	9.14	8.96	9.14	9.14					10.34	8.06		9.08		
FINAL - 2012 USATF National Indoor Championships (Albuquerque, NM) (Altitude) (TV Analysis)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>			
date	26-Feb-12	time	2.50	3.52	4.56	5.54	6.54						7.43	6 / 1			
reaction time	0.138	interval	7 steps	1.02	1.04	0.98	1.00					0.89	PB		3.04		
		velocity	5.49	8.96	8.79	9.33	9.14					10.92	8.08		9.02		

FINAL - 2012 Leonard Hilton Memorial Invitational (Houston, TX)

date	13-Jan-12	time	2.53	3.53	4.53	5.52	6.52											
reaction time		interval	7 steps	1.00	1.00	0.99	1.00											
		velocity	5.42	9.14	9.14	9.23	9.14											

Henson (2020) - Athlete First: 2012 Aries Merritt world record season

FINAL - 2011 IAAF World Championships (Daegu, KOR) (TV Analysis)

date	29-Aug-11	time	2.50	3.54	4.57	5.57	6.61	7.71	8.79	9.88	10.94	12.01							
reaction time	0.140	interval		1.04	1.03	1.00	1.04	1.10	1.08	1.09	1.06	1.07	1.66				3.07	3.22	3.22
wind	-1.1 m/s	velocity	5.49	8.79	8.87	9.14	8.79	8.31	8.46	8.39	8.62	8.54	8.45	8.05			8.93	8.52	8.52

Henson (2021) - Athlete First: major championships report

FINAL - 2008 IAAF World Athletics Final (Stuttgart, GER)

date	14-Sep-08	time	2.66	3.72	4.77	5.80	6.83	7.87	8.91	9.96	11.02	12.10							
reaction time	0.156	interval		1.06	1.05	1.03	1.03	1.04	1.04	1.05	1.06	1.08	1.46				3.14	3.11	3.19
wind	-1.3 m/s	velocity	5.16	8.62	8.70	8.87	8.87	8.79	8.79	8.70	8.62	8.46	9.60	8.11			8.73	8.82	8.60

Graubner (2009) - http://www.fgs.uni-halle.de

FINAL - 2008 USA Olympic Trials (Eugene, OR)

date	06-Jul-08	time	2.59	3.65	4.70	5.74	6.74	7.76	8.79	9.83	10.84	11.89							
reaction time	0.136	interval		1.06	1.05	1.04	1.00	1.02	1.03	1.04	1.01	1.05	1.38				3.15	3.05	3.10
wind	3.5 m/s	velocity	5.30	8.62	8.70	8.79	9.14	8.96	8.87	8.79	9.05	8.70	10.16	8.29			8.70	8.99	8.85

USATF Hurdle Development (2008)

FINAL - 2007 USATF National Championships (Indianapolis, IN)

date	24-Jun-07	time	2.65	3.72	4.74	5.76	6.76	7.77	8.76	9.79	10.83	11.85							
reaction time		interval		1.07	1.02	1.02	1.00	1.01	0.99	1.03	1.04	1.02	1.39				3.11	3.00	3.09
wind	0.5 m/s	velocity	5.18	8.54	8.96	8.96	9.14	9.05	9.23	8.87	8.79	8.96	10.09	8.31			8.82	9.14	8.87

USATF Men's Hurdle Development (2007)

Semi-Final 1 - 2007 USATF National Championships (Indianapolis, IN)

date	24-Jun-07	time	2.62	3.69	4.70	5.76	6.79	7.79	8.83	9.88	10.89	11.95							
reaction time		interval		1.07	1.01	1.06	1.03	1.00	1.04	1.05	1.01	1.06	1.42				3.14	3.07	3.12
wind	-0.6 m/s	velocity	5.24	8.54	9.05	8.62	8.87	9.14	8.79	8.70	9.05	8.62	9.87	8.23			8.73	8.93	8.79

USATF Men's Hurdle Development (2007)

Heat 2 - 2007 USATF National Championships (Indianapolis, IN)

date	23-Jun-07	time	2.75	3.89	4.92	5.99	7.06	8.11	9.16	10.21	11.26	12.35							
reaction time		interval		1.14	1.03	1.07	1.07	1.05	1.05	1.05	1.05	1.09	1.33				3.24	3.17	3.19
wind	-1.9 m/s	velocity	4.99	8.02	8.87	8.54	8.54	8.70	8.70	8.70	8.70	8.39	10.54	8.04			8.46	8.65	8.60

USATF Men's Hurdle Development (2007)

FINAL - 2006 USATF National Championships (Indianapolis, IN)

date	25-Jun-06	time	2.67	3.75	4.81	5.84	6.86	7.86	8.89	9.93	10.98	12.03							
reaction time		interval		1.08	1.06	1.03	1.02	1.00	1.03	1.04	1.05	1.05	1.40				3.17	3.05	3.14
wind	-0.4 m/s	velocity	5.14	8.46	8.62	8.87	8.96	9.14	8.87	8.79	8.70	8.70	10.01	8.19			8.65	8.99	8.73

USATF Men's Hurdle Development (2006)

FINAL - 2005 USATF National Championships (Carson, CA)

date	24-Jun-05	time	2.66	3.74	4.81	5.81	6.84	7.88	8.93	9.91	10.97	12.03							
reaction time		interval		1.08	1.07	1.00	1.03	1.04	1.05	0.98	1.06	1.06	1.36				3.15	3.12	3.10
wind	0.2 m/s	velocity	5.16	8.46	8.54	9.14	8.87	8.79	8.70	9.33	8.62	8.62	10.31	8.22			8.70	8.79	8.85

USATF Women's Sprint Development (2005)

Mihailescu, Alexandru (ROU) (1982)

FINAL - 2010 European Team Championships, 1st League (Budapest, HUN)

date	20-Jun-10	time	2.51	3.64	4.69	5.75	6.80	7.86	8.93	10.00	11.11	12.22							
reaction time	0.150	interval		1.13	1.05	1.06	1.05	1.06	1.07	1.07	1.11	1.11	1.65				3.24	3.18	3.29
wind	1.1 m/s	velocity	5.47	8.09	8.70	8.62	8.70	8.62	8.54	8.54	8.23	8.23	8.50	7.93			8.46	8.62	8.33

Blomkvist (2010) - www.sub13.se

Milburn, Rodney (USA) (1950)

FINAL - 1972 Olympic Games (Munich, FRG)

date	07-Sep-72	time	2.5	3.5	4.5	5.6	6.6	7.6	8.6	9.6	10.6	11.7							
reaction time		interval		1.00	1.00	1.10	1.00	1.00	1.00	1.00	1.00	1.10	1.54				3.10	3.00	3.10
wind	0.3 m/s	velocity	5.49	9.14	9.14	8.31	9.14	9.14	9.14	9.14	9.14	8.31	9.10	8.31			8.85	9.14	8.85

Kay (1972) - BAAB Munich Technical Report

Mita, Kyohei (JPN) (1991)

Semi-Final 2 - 2013 Japanese National Championships (Chofu, JPN)

date

Heat 3 - 2013 Mikio Oda Memorial (Hiroshima, JPN)*Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13*

date	29-Apr-13	time	2.66	3.76	4.83	5.90	6.96	8.03	9.10	10.17	11.26	12.34	13.77	/ 1			
reaction time		interval		1.10	1.07	1.07	1.06	1.07	1.07	1.07	1.09	1.08	1.43		3.24	3.20	3.24
wind	2.4 m/s	velocity	5.16	8.31	8.54	8.54	8.62	8.54	8.54	8.54	8.39	8.46	9.80	7.99	8.46	8.57	8.46

FINAL - 2012 Japanese National Championships (Osaka, JPN)*Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13*

date	10-Jun-12	time	2.67	3.78	4.86	5.94	7.02	8.10	9.18	10.27	11.38	12.47	13.92	2 / 4			
reaction time		interval		1.11	1.08	1.08	1.08	1.08	1.08	1.09	1.11	1.09	1.45		3.27	3.24	3.29
wind	-0.6 m/s	velocity	5.14	8.23	8.46	8.46	8.46	8.46	8.46	8.39	8.23	8.39	9.67	7.90	8.39	8.46	8.33

Semi-Final 1 - 2012 Japanese National Championships (Osaka, JPN)*Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13*

date	10-Jun-12	time	2.68	3.78	4.87	5.95	7.01	8.09	9.16	10.23	11.31	12.38	13.79	3 / 4			
reaction time		interval		1.10	1.09	1.08	1.06	1.08	1.07	1.07	1.08	1.07	1.41		3.27	3.21	3.22
wind	2.4 m/s	velocity	5.12	8.31	8.39	8.46	8.62	8.46	8.54	8.54	8.46	8.54	9.94	7.98	8.39	8.54	8.52

Heat 3 - 2012 Japanese National Championships (Osaka, JPN)*Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13*

date	09-Jun-12	time	2.68	3.78	4.89	5.97	7.04	8.11	9.20	10.28	11.38	12.49	13.92	6 / 4			
reaction time		interval		1.10	1.11	1.08	1.07	1.07	1.09	1.08	1.10	1.11	1.43		3.29	3.23	3.29
wind	0.0 m/s	velocity	5.12	8.31	8.23	8.46	8.54	8.54	8.39	8.46	8.31	8.23	9.80	7.90	8.33	8.49	8.33

B FINAL - 2012 Mikio Oda Memorial (Hiroshima, JPN)*Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13*

date	29-Apr-12	time	2.69	3.78	4.86	5.94	7.03	8.10	9.19	10.28	11.37	12.46	13.87	6 / 3			
reaction time		interval		1.09	1.08	1.08	1.09	1.07	1.09	1.09	1.09	1.09	1.41	PB	3.25	3.25	3.27
wind	2.1 m/s	velocity	5.10	8.39	8.46	8.46	8.39	8.54	8.39	8.39	8.39	8.39	9.94	7.93	8.44	8.44	8.39

Mitchum, Eric (USA) (1984)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Heat 2 - 2007 USATF National Championships (Indianapolis, IN)***USATF Men's Hurdle Development (2007)*

date	23-Jun-07	time	2.74	3.79	4.87	5.91	6.95	8.02	9.09	10.18	11.28	12.40	13.82	5 / 5			
reaction time		interval		1.05	1.08	1.04	1.04	1.07	1.07	1.09	1.10	1.12	1.42		3.17	3.18	3.31
wind	-1.9 m/s	velocity	5.01	8.70	8.46	8.79	8.79	8.54	8.54	8.39	8.31	8.16	9.87	7.96	8.65	8.62	8.28

FINAL - 2003 USATF National Junior Championships (Palo Alto, CA) (99cm)*USATF Women's Sprint Development (2003)*

date	22-Jun-03	time	2.58	3.67	4.76	5.82	6.87	7.92	8.99	10.06	11.16	12.28	13.81	7 / 3			
reaction time		interval		1.09	1.09	1.06	1.05	1.05	1.07	1.07	1.10	1.12	1.53		3.24	3.17	3.29
wind	-0.4 m/s	velocity	5.32	8.39	8.39	8.62	8.70	8.70	8.54	8.54	8.31	8.16	9.16	7.97	8.46	8.65	8.33

Miura, Yoshiaki (JPN) (1995)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2017 Kansai Regional University Championships (Osaka, JPN)***(2017) - ifdata-store.com/2017/05/13/post-441/*

date	11-May-17	time	2.68	3.80	4.91	6.01	7.15	8.26	9.38	10.52	11.70	12.88	14.42	8 / 8			
reaction time		interval		1.12	1.11	1.10	1.14	1.11	1.12	1.14	1.18	1.18	1.54		3.33	3.37	3.50
wind	1.6 m/s	velocity	5.12	8.16	8.23	8.31	8.02	8.23	8.16	8.02	7.75	7.75	9.10	7.63	8.23	8.14	7.83

Miyata, Ryusei (JPN) (2004)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2022 Japanese National High School Championships (Naruto, JPN)***Kishima (2022) - national high school championships biomechanics data collection*

date	07-Aug-22	time	2.70	3.85	5.02	6.16	7.30	8.47	9.66	10.92	12.12	13.36	14.92	8 / 5			
reaction time	0.159	interval		1.15	1.17	1.14	1.14	1.17	1.19	1.26	1.20	1.24	1.56		3.46	3.50	3.70
wind	-3.8 m/s	velocity	5.08	7.95	7.81	8.02	8.02	7.81	7.68	7.25	7.62	7.37	8.99	7.37	7.92	7.83	7.41

Miyamoto, Koju (JPN)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2023 Japanese National High School Championships (Sapporo, JPN)***Takashima (2023) - national high school sports festival - biomechanics data*

date	06-May-23	time	2.74	3.86	4.95	6.08	7.17	8.29	9.39	10.57	11.74	12.94	14.41	7 / 7			
reaction time	0.197	interval		1.12	1.09	1.13	1.09	1.12	1.10	1.18	1.17	1.20	1.47		3.34	3.31	3.55
wind	0.8 m/s	velocity	5.01	8.16	8.39	8.09	8.39	8.16	8.31	7.75	7.81	7.62	9.54	7.63	8.21	8.28	7.72

Miyazaki, Takumi (JPN) (2001)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2023 Japanese National Championships (Osaka, JPN)***Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season*

date	04-Jun-23	time	2.61	3.69	4.76	5.82	6.88	7.96	9.05	10.15	11.27	12.40	13.88	2 / 6			
reaction time	0.157	interval		1.08	1.07	1.06	1.06	1.08	1.09	1.10	1.12	1.13	1.48		3.21	3.23	3.35
wind	-0.9 m/s	velocity	5.26	8.46	8.54	8.62	8.62	8.46	8.39	8.31	8.16	8.09	9.47	7.93	8.54	8.49	8.19

FINAL - 2022 Michitaka Kinami Memorial (Osaka, JPN)*Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season*

date	01-May-22	time	2.64	3.71	4.79	5.87	6.96	8.05	9.15	10.26	11.39	12.53	13.99	9 / 8			
reaction time	0.152	interval		1.07	1.08	1.08	1.09	1.09	1.10	1.11	1.13	1.14	1.46		3.23	3.28	3.38
wind	0.8 m/s	velocity	5.20	8.54	8.46	8.46	8.39	8.39	8.31	8.23	8.09	8.02	9.60	7.86	8.49	8.36	8.11

B FINAL - 2022 Mikio Oda Memorial (Hiroshima, JPN)*Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season*

date	29-Apr-22	time	2.65	3.76	4.84	5.95	7.06	8.17	9.29	10.42	11.58	12.74	14.24	2 / 7			
reaction time	0.161	interval		1.11	1.08	1.11	1.11	1.11	1.12	1.13	1.16	1.16	1.50		3.30	3.34	3.45
wind	-0.7 m/s	velocity	5.18	8.23	8.46	8.23	8.23	8.23	8.16	8.09	7.88	7.88	9.35	7.72	8.31	8.21	7.95

FINAL - 2019 National Sports Festival (Hitachinaka, JPN) (99cm)*Enomoto (2019) - research on athlete performance and technique- 2019 data book*

date	06-Oct-19	time	2.64	3.72	4.79	5.86	6.89	7.94	8.97	10.03	11.08	12.15	13.60	5 / 5			
reaction time	0.150	interval		1.08	1.07	1.07	1.03	1.05	1.03	1.06	1.05	1.07	1.45		3.22	3.11	3.18

wind	2.7 m/s	velocity	5.20	8.46	8.54	8.54	8.87	8.70	8.87	8.62	8.70	8.54	9.67	8.09	8.52	8.82	8.62	
Mohamed, Raphaël (FRA) (1998)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Semi-Final 1 - 2024 Olympic Games (Paris, FRA)														<i>Paris 2024 Olympc Games - Results Book (2024)</i>				
date	07-Aug-24	time	2.48	3.56	4.61	5.63	6.64	7.65	8.67	9.73	10.80	11.86		13.41	9 / 7			
reaction time	0.159	interval	7 steps	1.08	1.05	1.02	1.01	1.01	1.02	1.06	1.07	1.06	1.55			3.15	3.04	3.19
wind	0.1 m/s	velocity	5.53	8.46	8.70	8.96	9.05	9.05	8.96	8.62	8.54	8.62	9.05	8.20		8.70	9.02	8.60
Repechage 2 - 2024 Olympic Games (Paris, FRA)														<i>Paris 2024 Olympc Games - Results Book (2024)</i>				
date	06-Aug-24	time	2.52	3.61	4.66	5.70	6.74	7.77	8.81	9.86	10.92	11.99		13.54	7 / 2			
reaction time	0.195	interval	7 steps	1.09	1.05	1.04	1.04	1.03	1.04	1.05	1.06	1.07	1.55			3.18	3.11	3.18
wind	-0.5 m/s	velocity	5.44	8.39	8.70	8.79	8.79	8.87	8.79	8.70	8.62	8.54	9.05	8.12		8.62	8.82	8.62
Heat 1 - 2024 Olympic Games (Paris, FRA)														<i>Paris 2024 Olympc Games - Results Book (2024)</i>				
date	04-Aug-24	time	2.47	3.57	4.62	5.65	6.66	7.69	8.78	9.89	10.96	12.02		13.61	7 / 5			
reaction time	0.162	interval	7 steps	1.10	1.05	1.03	1.01	1.03	1.09	1.11	1.07	1.06	1.59			3.18	3.13	3.24
wind	0.1 m/s	velocity	5.55	8.31	8.70	8.87	9.05	8.87	8.39	8.23	8.54	8.62	8.82	8.08		8.62	8.76	8.46
Heat 1 - 2024 Meeting de Paris (Paris, FRA)														<i>Omega Timing (2024) - diamond league race analysis</i>				
date	07-Jul-24	time	2.52	3.61	4.66	5.70	6.76	7.80	8.83	9.86	10.88	11.93		13.45	8 / 7			
reaction time	0.155	interval	7 steps	1.09	1.05	1.04	1.06	1.04	1.03	1.03	1.02	1.05	1.52			3.18	3.13	3.10
wind	0.1 m/s	velocity	5.44	8.39	8.70	8.79	8.62	8.79	8.87	8.87	8.96	8.70	9.22	8.18		8.62	8.76	8.85
FINAL - 2024 European Athletics Championships (Roma, ITA) (TV Analysis)														<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>				
date	08-Jun-24	time	2.63	3.70	4.76	5.80	6.83	7.86	8.88	9.95	11.00	12.13		13.45	3 / =4			
reaction time	0.171	interval	7 steps	1.07	1.06	1.04	1.03	1.03	1.02	1.07	1.05	1.13	1.32			3.17	3.08	3.25
wind	0.6 m/s	velocity	5.22	8.54	8.62	8.79	8.87	8.87	8.96	8.54	8.70	8.09	10.62	8.18		8.65	8.90	8.44
Heat 1 - 2023 Meeting de Paris (Paris, FRA)														<i>Omega Timing (2023) - diamond league race analysis</i>				
date	09-Jun-23	time	2.48	3.56	4.62	5.66	6.70	7.75	8.82	9.89	10.97	12.05		13.65	1 / 6			
reaction time	0.165	interval	7 steps	1.08	1.06	1.04	1.04	1.05	1.07	1.07	1.08	1.08	1.60			3.18	3.16	3.23
wind	-2.0 m/s	velocity	5.53	8.46	8.62	8.79	8.79	8.70	8.54	8.54	8.46	8.46	8.76	8.06		8.62	8.68	8.49
FINAL - 2020 French National Championships (Albi, FRA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2020 year end hurdle report</i>				
date	13-Sep-20	time	2.70	3.75	4.79	5.84	6.89	8.00	9.05	10.13	11.14			dnf	7 / --			
reaction time	0.270	interval	7 steps	1.05	1.04	1.05	1.05	1.11	1.05	1.08	1.01					3.14	3.21	
wind	0.0 m/s	velocity	5.08	8.70	8.79	8.70	8.70	8.23	8.70	8.46	9.05					8.73	8.54	
Monachon, Raphal (SUI) (1973)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2004 Atletica (Genève, SUI)														<i>Weber (2004) - wettkampfauswertung 110m hürden</i>				
date	12-Jun-04	time	2.70	3.78	4.80	5.84	6.86	7.96	9.02	10.09	11.16	12.26		13.64	/ 3			
reaction time		interval		1.08	1.02	1.04	1.02	1.10	1.06	1.07	1.07	1.10	1.38			3.14	3.18	3.24
wind	1.0 m/s	velocity	5.08	8.46	8.96	8.79	8.96	8.31	8.62	8.54	8.54	8.31	10.16	8.06		8.73	8.62	8.46
Montesinos, Hipólito (ESP) (1976)														<i>Graubner (2007) - http://www.fgs.uni-halle.de</i>				
FINAL - 2001 European Cup (Bremen, GER)														<i>Graubner (2007) - http://www.fgs.uni-halle.de</i>				
date	24-Jun-01	time	2.66	3.72	4.78	5.84	6.91	8.00	9.08	10.18	11.28	12.42		13.88	2 / 6			
reaction time	0.144	interval		1.06	1.06	1.06	1.07	1.09	1.08	1.10	1.10	1.14	1.46			3.18	3.24	3.34
wind	1.3 m/s	velocity	5.16	8.62	8.62	8.62	8.54	8.39	8.46	8.31	8.31	8.02	9.60	7.93		8.62	8.46	8.21
Monzar, Daniel (CZE) (1997)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2015 Czech Republic National U20 Indoor Championships (Praha, CZE) (99cm)														<i>Feher (2015) - Final report U18 & U20 Czech Republic indoor national champs</i>				
date	14-Feb-15	time	2.77	3.91	5.03	6.15	7.28							8.23	7 / 3			
reaction time	0.182	interval		1.14	1.12	1.12	1.13						0.95	PB		3.38		
		velocity	4.95	8.02	8.16	8.16	8.09						10.23	7.29		8.11		
Moore, Anwar (USA) (1979)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2008 USA Olympic Trials (Eugene, OR)														<i>USATF Hurdle Development (2008)</i>				
date	06-Jul-08	time	2.52	3.58	4.59	5.59	6.57	7.57	8.57	9.59	10.60	11.73		16.64	2 / 8			
reaction time	0.171	interval		1.06	1.01	1.00	0.98	1.00	1.00	1.02	1.01	1.13	4.91			3.07	2.98	3.16
wind	3.5 m/s	velocity	5.44	8.62	9.05	9.14	9.33	9.14	9.14	8.96	9.05	8.09	2.86	6.61		8.93	9.20	8.68
FINAL - 2007 Seiko Super Grand Prix (Yokohama, JPN)														<i>Akirabun (2008) - 2007 speed analysis of the men's & women's 100m, 100m hurdles, & 110m hurdles</i>				
date	30-Sep-07	time	2.31	3.37	4.42	5.48	6.56	7.65	8.79	9.93	11.09	12.23		14.08	/ 6			
reaction time		interval		1.06	1.05	1.06	1.08	1.09	1.14	1.14	1.16	1.14	1.85			3.17	3.31	3.44
wind	-1.6 m/s	velocity	5.94	8.62	8.70	8.62	8.46	8.39	8.02	8.02	7.88	8.02	7.58	7.81		8.65	8.28	7.97
FINAL - 2007 IAAF World Athletics Final (Stuttgart, GER)														<i>Graubner (2007) - http://www.fgs.uni-halle.de</i>				
date	23-Sep-07	time	2.59	3.65	4.66	5.67	6.67	7.67	8.68	9.70	10.73	11.80		13.18	7 / 4			
reaction time	0.161	interval		1.06	1.01	1.01	1.00	1.00	1.01	1.02	1.03	1.07	1.38			3.08	3.01	3.12
wind	0.0 m/s	velocity	5.30	8.62	9.05	9.05	9.14	9.14	9.05	8.96	8.87	8.54	10.16	8.35		8.90	9.11	8.79
FINAL - 2007 USATF National Championships (Indianapolis, IN)														<i>USATF Men's Hurdle Development (2007)</i>				

date	24-Jun-07	time	2.62	3.67	4.70	5.72	6.72	7.71	8.70	9.74	10.78	11.85	13.23	8 / 5															
reaction time		interval		1.05	1.03	1.02	1.00	0.99	0.99	1.04	1.04	1.07	1.38		3.10	2.98	3.15												
wind	0.5 m/s	velocity	5.24	8.70	8.87	8.96	9.14	9.23	9.23	8.79	8.79	8.54	10.16	8.31	8.85	9.20	8.70												
Semi-Final 2 - 2007 USATF National Championships (Indianapolis, IN)														<i>USATF Men's Hurdle Development (2007)</i>															
date	24-Jun-07	time	2.62	3.67	4.69	5.72	6.77	7.81	8.86	9.88	10.92	11.98	13.35	5 / 4															
reaction time		interval		1.05	1.02	1.03	1.05	1.04	1.05	1.02	1.04	1.06	1.37		3.10	3.14	3.12												
wind	-0.9 m/s	velocity	5.24	8.70	8.96	8.87	8.70	8.79	8.70	8.96	8.79	8.62	10.23	8.24	8.85	8.73	8.79												
Heat 3 - 2007 USATF National Championships (Indianapolis, IN)														<i>USATF Men's Hurdle Development (2007)</i>															
date	23-Jun-07	time	2.60	3.67	4.69	5.76	6.79	7.87	8.93	10.00	11.06	12.15	13.62	3 / 1															
reaction time		interval		1.07	1.02	1.07	1.03	1.08	1.06	1.07	1.06	1.09	1.47		3.16	3.17	3.22												
wind	-3.2 m/s	velocity	5.28	8.54	8.96	8.54	8.87	8.46	8.62	8.54	8.62	8.39	9.54	8.08	8.68	8.65	8.52												
Moore, Isaiah (USA) (1996)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Semi-Final 1 - 2020 USA Olympic Trials (Eugene, OR) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>															
date	26-Jun-21	time	2.54	3.63	4.69	5.72	6.77	7.81	8.86	9.91	10.96	12.06	13.59	7 / 8															
reaction time	0.147	interval		1.09	1.06	1.03	1.05	1.04	1.05	1.05	1.05	1.10	1.53		3.18	3.14	3.20												
wind	1.8 m/s	velocity	5.40	8.39	8.62	8.87	8.70	8.79	8.70	8.70	8.70	8.31	9.16	8.09	8.62	8.73	8.57												
FINAL - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)														<i>CAA Hurdle Development (2020)</i>															
date	15-Feb-20	time	2.65	3.77	4.84	5.91	6.97						7.93	1 / 8															
reaction time	0.139	interval		1.12	1.07	1.07	1.06						0.96		3.26														
		velocity	5.18	8.16	8.54	8.54	8.62						10.13		8.41														
Semi-Final 2 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)														<i>CAA Hurdle Development (2020)</i>															
date	15-Feb-20	time	2.63	3.72	4.79	5.84	6.89						7.83	6 / 4															
reaction time	0.161	interval		1.09	1.07	1.05	1.05						0.94		3.21														
		velocity	5.22	8.39	8.54	8.70	8.70						10.34		8.54														
Heat 2 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)														<i>CAA Hurdle Development (2020)</i>															
date	14-Feb-20	time	2.64	3.74	4.79	5.82	6.89						7.82	1 / 3															
reaction time	0.154	interval		1.10	1.05	1.03	1.07						0.93		3.18														
		velocity	5.20	8.31	8.70	8.87	8.54						10.45		8.62														
FINAL - 2019 Müller Grand Prix (Birmingham, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>															
date	18-Aug-19	time	2.64	3.73	4.80	5.87	6.91	7.93	9.00	10.09	11.16	12.26	13.81	2 / 8															
reaction time	0.144	interval		1.09	1.07	1.07	1.04	1.02	1.07	1.09	1.07	1.10	1.55		3.23	3.13	3.26												
wind	-0.2 m/s	velocity	5.20	8.39	8.54	8.54	8.79	8.96	8.54	8.39	8.54	8.31	9.05	7.97	8.49	8.76	8.41												
FINAL - 2019 NCAA National Championships (Austin, TX) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>															
date	07-Jun-19	time	2.60	3.67	4.70	5.70	6.74	7.77	8.81	9.84	10.87	11.94	13.37	3 / 3															
reaction time	0.176	interval		1.07	1.03	1.00	1.04	1.03	1.04	1.03	1.03	1.07	1.43	PB	3.10	3.11	3.13												
wind	0.8 m/s	velocity	5.28	8.54	8.87	9.14	8.79	8.87	8.79	8.87	8.87	8.54	9.80	8.23	8.85	8.82	8.76												
FINAL - 2019 South Eastern Conference Championships (Fayetteville, AR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>															
date	11-May-19	time	2.66	3.75	4.80	5.84	6.86	7.86	8.90	9.93	10.96	12.03	13.42	6 / 3															
reaction time		interval		1.09	1.05	1.04	1.02	1.00	1.04	1.03	1.03	1.07	1.39		3.18	3.06	3.13												
wind	1.0 m/s	velocity	5.16	8.39	8.70	8.79	8.96	9.14	8.79	8.87	8.87	8.54	10.09	8.20	8.62	8.96	8.76												
Moore, Titus (USA) (1999)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Semi-Final 1 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)														<i>CAA Hurdle Development (2020)</i>															
date	15-Feb-20	time	2.66	3.77	4.84	5.90	6.97						7.87	7 / 5															
reaction time	0.179	interval		1.11	1.07	1.06	1.07						0.90		3.24														
		velocity	5.16	8.23	8.54	8.62	8.54						10.80		8.46														
Heat 2 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)														<i>CAA Hurdle Development (2020)</i>															
date	14-Feb-20	time	2.64	3.73	4.79	5.85	6.92						7.84	6 / 4															
reaction time	0.159	interval		1.09	1.06	1.06	1.07						0.92	PB	3.21														
		velocity	5.20	8.39	8.62	8.62	8.54						10.57		8.54														
Moracho, Javier (ESP) (1957)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 1989 IAAF World Cup (Barcelona, ESP)														<i>Gill (1990) - atletismo (I) carreras y marcha</i>															
date	10-Sep-89	time	2.60	3.67	4.73	5.78	6.86	7.92	9.02	10.12	11.23	12.39	13.83	6 / 5															
reaction time		interval	7 steps	1.07	1.06	1.05	1.08	1.06	1.10	1.10	1.11	1.16	1.44		3.18	3.24	3.37												
wind	2.6 m/s	velocity	5.28	8.54	8.62	8.70	8.46	8.62	8.31	8.31	8.23	7.88	9.74	7.95	8.62	8.46	8.14												
Mordi, Manuel (GER) (2003)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Repechage 2 - 2024 Olympic Games (Paris, FRA)														<i>Paris 2024 Olympic Games - Results Book (2024)</i>															
date	06-Aug-24	time	2.48	3.55	4.58	5.59	6.61	7.63	8.68	9.74	10.82	11.92	13.55	5 / 4															
reaction time	0.177	interval	7 steps	1.07	1.03	1.01	1.02	1.02	1.05	1.06	1.08	1.10	1.63		3.11	3.09	3.24												
wind	-0.5 m/s	velocity	5.53	8.54	8.87	9.05	8.96	8.96	8.70	8.62	8.46	8.31	8.60	8.12	8.82	8.87	8.46												

Heat 1 - 2024 Olympic Games (Paris, FRA)

Paris 2024 Olympic Games - Results Book (2024)

date	04-Aug-24	time	2.46	3.54	4.58	5.59	6.61	7.62	8.66	9.72	10.79	11.86	13.48	6 / 4			
reaction time	0.159	interval	7 steps	1.08	1.04	1.01	1.02	1.01	1.04	1.06	1.07	1.07	1.62		3.13	3.07	3.20
wind	0.1 m/s	velocity	5.58	8.46	8.79	9.05	8.96	9.05	8.79	8.62	8.54	8.54	8.65	8.16	8.76	8.93	8.57

Morimoto, Kimihito (JPN) (1993)**Decathlon - Heat 2 - 2018 Japanese National Multi-Event Championships (Nagano, JPN)** Matsubayashi (2018) - research on athlete performance and technique

date	17-Jun-18	time	2.70	3.89	5.07	6.23	7.39	8.55	9.76	10.95	12.13	13.35	14.91	5 / 1			
reaction time		interval		1.19	1.18	1.16	1.16	1.16	1.21	1.19	1.18	1.22	1.56		3.53	3.53	3.59
wind	0.5 m/s	velocity	5.08	7.68	7.75	7.88	7.88	7.55	7.68	7.75	7.49	8.99	7.38		7.77	7.77	7.64

Morita, Kanon (JPN) (2000)**U20 FINAL - 2018 National Sports Festival (Fukui, JPN) (99cm)** Joshi (2018) - research on athlete performance and technique- 2018 data book

date	07-Oct-18	time	2.59	3.67	4.72	5.79	6.83	7.90	8.97	10.04	11.11	12.20	13.60	6 / 3			
reaction time	0.126	interval		1.08	1.05	1.07	1.04	1.07	1.07	1.07	1.07	1.09	1.40		3.20	3.18	3.23
wind	1.5 m/s	velocity	5.30	8.46	8.70	8.54	8.79	8.54	8.54	8.54	8.39	10.01	8.09		8.57	8.62	8.49

Heat 3 - 2016 Japanese National Youth Championships (Mizuho, JPN) (91cm)(2016.11.07) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en

date	21-Oct-16	time	2.66	3.80	4.92	6.04	7.15	8.28	9.42	10.54	11.70	12.86	14.39	7 / 2			
reaction time		interval		1.14	1.12	1.12	1.11	1.13	1.14	1.12	1.16	1.16	1.53		3.38	3.38	3.44
wind	1.4 m/s	velocity	5.16	8.02	8.16	8.16	8.23	8.09	8.02	8.16	7.88	7.88	9.16	7.64	8.11	8.11	7.97

Morita, Shunichi (JPN) (1989)**FINAL - 2017 Fuse Sprint (Tottori, JPN)** (2017) - [tfdata-store.com/2017/06/04/post-848/](https://www.tfd-data-store.com/2017/06/04/post-848/)

date	04-Jun-17	time	2.76	3.83	4.95	6.05	7.14	8.24	9.37	10.50	11.63	12.78	14.24	2 / 7			
reaction time		interval		1.07	1.12	1.10	1.09	1.10	1.13	1.13	1.13	1.15	1.46		3.29	3.32	3.41
wind	3.2 m/s	velocity	4.97	8.54	8.16	8.31	8.39	8.31	8.09	8.09	8.09	7.95	9.60	7.72	8.33	8.26	8.04

FINAL - 2017 East Japan Business Athletics Championships (Yuma, JPN)(2017) - [tfdata-store.com/2017/05/20/post-579/](https://www.tfd-data-store.com/2017/05/20/post-579/)

date	20-May-17	time	2.77	3.90	5.01	6.11	7.23	8.35	9.48	10.63	11.80	12.98	14.62	9 / 8			
reaction time		interval		1.13	1.11	1.10	1.12	1.12	1.13	1.15	1.17	1.18	1.64		3.34	3.37	3.50
wind	1.1 m/s	velocity	4.95	8.09	8.23	8.31	8.16	8.16	8.09	7.95	7.81	7.75	8.55	7.52	8.21	8.14	7.83

Heat 2 - 2017 Mito Invitational (Mito, JPN)(2017) - [tfdata-store.com/2017/05/06/post-423/](https://www.tfd-data-store.com/2017/05/06/post-423/)

date	05-May-17	time	2.75	3.89	5.02	6.15	7.28	8.40	9.53	10.69	11.86	13.04	14.58	3 / 5			
reaction time		interval		1.14	1.13	1.13	1.13	1.12	1.13	1.16	1.17	1.18	1.54		3.40	3.38	3.51
wind	0.6 m/s	velocity	4.99	8.02	8.09	8.09	8.09	8.16	8.09	7.88	7.81	7.75	9.10	7.54	8.06	8.11	7.81

Morito, Nobuaki (JPN) (1999)**FINAL - 2017 Japanese National High School Championships (Yamagata, JPN) (99cm)** Kota (2017) - 70th high school championships: JAF scientific committee- biomechanics data

date	02-Aug-17	time	2.74	3.87	4.97	6.09	7.20	8.31	9.41	10.54	11.64	12.81	14.30	4 / 2			
reaction time	0.179	interval		1.13	1.10	1.12	1.11	1.11	1.10	1.13	1.10	1.17	1.49		3.35	3.32	3.40
wind	-0.7 m/s	velocity	5.01	8.09	8.31	8.16	8.23	8.23	8.31	8.09	8.31	7.81	9.41	7.69	8.19	8.26	8.06

Morris, Eli (USA) (2000)**Heat 4 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)** Henson (2024) - Athlete First: 2024 year end hurdle report

date	24-Jun-24	time	2.62	3.67	4.70	5.78	6.80	7.83	8.87	9.93	11.00	12.08	13.57	9 / 7			
reaction time		interval		1.05	1.03	1.08	1.02	1.03	1.04	1.06	1.07	1.08	1.49		3.16	3.09	3.21
wind	1.2 m/s	velocity	5.24	8.70	8.87	8.46	8.96	8.87	8.79	8.62	8.54	8.46	9.41	8.11	8.68	8.87	8.54

Moses, Yume (JPN) (1988)**FINAL - 2009 Seiko Super Grand Prix (Kawasaki, JPN)** Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdles

date	23-Sep-09	time	2.60	3.68	4.74	5.80	6.87	7.94	9.02	10.10	11.18	12.28	13.77	1 / 2			
reaction time		interval		1.08	1.06	1.06	1.07	1.07	1.08	1.08	1.08	1.10	1.49		3.20	3.22	3.26
wind	-1.3 m/s	velocity	5.28	8.46	8.62	8.62	8.54	8.54	8.46	8.46	8.46	8.31	9.41	7.99	8.57	8.52	8.41

FINAL - 2009 Japanese National Championships (Hiroshima, JPN)

Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdles

date	27-Jun-09	time	2.64	3.75	4.81	5.87	6.92	7.99	9.07	10.17	11.29	12.41	13.89	6 / 7			
reaction time		interval		1.11	1.06	1.06	1.05	1.07	1.08	1.10	1.12	1.12	1.48		3.23	3.20	3.34
wind	1.6 m/s	velocity	5.20	8.23	8.62	8.62	8.70	8.54	8.46	8.31	8.16	8.16	9.47	7.92	8.49	8.57	8.21

Moshiashvili, Anatoly (URS) (1950)**FINAL - 1975 International "Pravda" Sportfest (Sotschi, URS)** Artyshenko (1977) - zwischen den hürden geht es um die sekunde, teil 1

date	30-May-75	time	2.16	3.23	4.36	5.53	6.66	7.79	8.92	10.07	11.22		dnf	/ --			
reaction time		interval		1.07	1.13	1.17	1.13	1.13	1.13	1.15	1.15				3.37	3.39	
wind	-0.2 m/s	velocity	6.35	8.54	8.09	7.81	8.09	8.09	8.09	7.95	7.95				8.14	8.09	

Mui Ching Yeung (HKG) (1993)**FINAL - 2019 Asian Athletics Championships (Doha, QAT)** CAA Hurdle Development (2019)

date	24-Apr-19	time	2.63	3.71	4.78	5.84	6.92	7.97	9.10	10.22	11.36	12.51	13.96	8 / 8			
reaction time	0.151	interval		1.08	1.07	1.06	1.08	1.05	1.13	1.12	1.14	1.15	1.45		3.21	3.26	3.41
wind	1.7 m/s	velocity	5.22	8.46	8.54	8.62	8.46	8.70	8.09	8.16	8.02	7.95	9.67	7.88	8.54	8.41	8.04

FINAL - 2019 Chinese National Grand Prix 1 (Zhaoqing, CHN)

CAA Hurdle Development (2019)

date	09-Apr-19	time	2.68	3.79	4.88	6.00	7.10	8.20	9.27	10.41	11.52	12.66		14.11	1 / --			
reaction time	0.184	interval		1.11	1.09	1.12	1.10	1.10	1.07	1.14	1.11	1.14	1.45			3.32	3.27	3.39
wind	0.2 m/s	velocity	5.12	8.23	8.39	8.16	8.31	8.31	8.54	8.02	8.23	8.02	9.67	7.80		8.26	8.39	8.09

Heat 2 - 2019 Chinese National Grand Prix 1 (Zhaoqing, CHN)

CAA Hurdle Development (2019)

date	08-Apr-19	time	2.68	3.77	4.85	5.91	7.01	8.09	9.21	10.31	11.47	12.62		14.09	6 / --			
reaction time	0.172	interval		1.09	1.08	1.06	1.10	1.08	1.12	1.10	1.16	1.15	1.47			3.23	3.30	3.41
wind	-0.6 m/s	velocity	5.12	8.39	8.46	8.62	8.31	8.46	8.16	8.31	7.88	7.95	9.54	7.81		8.49	8.31	8.04

Müller, Norman (GER) (1985)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

Decathlon - Heat 1 - 2009 IAAF World Championships (Berlin, GER)

Graubner (2009) - biomechanical analyses at the 12th IAAF world championships

date	20-Aug-09	time	2.79	3.93	5.05	6.17	7.30	8.42	9.55	10.70	11.86	13.40		14.59	5 / 3			
reaction time	0.172	interval		1.14	1.12	1.12	1.13	1.12	1.13	1.15	1.16	1.54	1.19			3.38	3.38	3.85
wind	0.3 m/s	velocity	4.92	8.02	8.16	8.16	8.09	8.16	8.09	7.95	7.88	5.94	11.78	7.54		8.11	8.11	7.12

Mullings, Ken (BAH) (1997)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

Decathlon - Heat 3 - 2024 Olympic Games (Paris, FRA)

Paris 2024 Olympic Games - Results Book (2024)

date	03-Aug-24	time	2.44	3.53	4.59	5.64	6.68	7.74	8.79	9.85	10.95	12.05		13.70	8 / 2			
reaction time	0.154	interval	7 steps	1.09	1.06	1.05	1.04	1.06	1.05	1.06	1.10	1.10	1.65			3.20	3.15	3.26
wind	0.7 m/s	velocity	5.62	8.39	8.62	8.70	8.79	8.62	8.70	8.62	8.31	8.31	8.50	8.03		8.57	8.70	8.41

Munkelt, Thomas (GDR) (1952)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

FINAL - 1982 European Championships (Athens, GRE)

Heß (1985) - entwicklungsaspekte die leichtathletischen sprint-/hürdendisziplinen im olympiazzyklus 1981/84

date	11-Sep-82	time	2.58		4.70		6.77		8.84		11.98			13.41	1 / 1			
reaction time		interval			2.12		2.07		2.07		3.14		1.43					3.14
wind	-0.9 m/s	velocity	5.32		8.62		8.83		8.83		8.73		9.80	8.20				8.73

FINAL - 1981 USSR vs. GDR (Tbilisi, URS)

Chanon (1987) - analyse comparee des caracteristiques des courses de 100m haies et 110m haies

date	26-Jun-81	time	2.56	3.59	4.75	5.78	6.81	7.86	8.94	10.00	11.14	12.32		13.69	1 / 1			
reaction time		interval		1.03	1.16	1.03	1.03	1.05	1.08	1.06	1.14	1.18	1.37			3.22	3.16	3.38
wind	???	velocity	5.36	8.87	7.88	8.87	8.87	8.70	8.46	8.62	8.02	7.75	10.23	8.04		8.52	8.68	8.11

FINAL - 1976 Olympic Games (Montreal, CAN)

Tepper (1978) - Analyse der trainingsgestaltung und leistungsentwicklung in den sprintdisziplinen der M & F der DVfL der DDR 73/76

date	28-Jul-76	time	2.59	3.67	4.73	5.75	6.77	7.83	8.87	9.91	10.97	12.04		13.44	1 / 5			
reaction time		interval	7 steps	1.08	1.06	1.02	1.02	1.06	1.04	1.04	1.06	1.07	1.40	PB		3.16	3.12	3.17
wind	0.0 m/s	velocity	5.30	8.46	8.62	8.96	8.96	8.62	8.79	8.79	8.62	8.54	10.01	8.18		8.68	8.79	8.65

Heat 3 - 1976 Olympic Games (Montreal, CAN)

Lamare (1976) - les jeux de la XXI olympia, Montreal 1976

date	26-Jul-76	time	2.3		5.5	6.6								13.69	1 / 1			
reaction time		interval	7 steps		3.22	1.12										3.22		
wind	0.0 m/s	velocity	6.04		8.52	8.16								8.04		8.52		

Murakami, Masao (JPN)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

Heat 1 - 2017 Japanese National Championships (Osaka, JPN)

(2017) - tfdata-store.com/2017/07/13/post-1040/

date	24-Jun-17	time	2.64	3.74	4.83	5.92	7.00	8.09	9.19	10.32	11.46	12.64		14.14	3 / 8			
reaction time	0.167	interval		1.10	1.09	1.09	1.08	1.09	1.10	1.13	1.14	1.18	1.50			3.28	3.27	3.45
wind	1.3 m/s	velocity	5.20	8.31	8.39	8.39	8.46	8.39	8.31	8.09	8.02	7.75	9.35	7.78		8.36	8.39	7.95

Muratake, Rashiddo (JPN) (2002)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

FINAL - 2024 Weltklasse (Zürich, SUI)

Omega Timing (2024) - diamond league race analysis

date	05-Sep-24	time	2.43	3.48	4.49	5.49	6.49	7.51	8.53	9.57	10.61	11.66		13.20	3 / 6			
reaction time	0.161	interval	7 steps	1.05	1.01	1.00	1.00	1.02	1.02	1.04	1.04	1.05	1.54			3.06	3.04	3.13
wind	-0.3 m/s	velocity	5.65	8.70	9.05	9.14	9.14	8.96	8.96	8.79	8.79	8.70	9.10	8.33		8.96	9.02	8.76

FINAL - 2024 Olympic Games (Paris, FRA)

Paris 2024 Olympic Games - Results Book (2024)

date	08-Aug-24	time	2.39	3.44	4.47	5.47	6.48	7.50	8.51	9.55	10.58	11.64		13.21	9 / 5			
reaction time	0.161	interval	7 steps	1.05	1.03	1.00	1.01	1.02	1.01	1.04	1.03	1.06	1.57			3.08	3.04	3.13
wind	-0.1 m/s	velocity	5.74	8.70	8.87	9.14	9.05	8.96	9.05	8.79	8.87	8.62	8.93	8.33		8.90	9.02	8.76

Semi-Final 1 - 2024 Olympic Games (Paris, FRA)

Paris 2024 Olympic Games - Results Book (2024)

date	07-Aug-24	time	2.39	3.46	4.50	5.52	6.53	7.53	8.57	9.61	10.65	11.71		13.26	4 / 4			
reaction time	0.160	interval	7 steps	1.07	1.04	1.02	1.01	1.00	1.04	1.04	1.04	1.06	1.55			3.13	3.05	3.14
wind	0.1 m/s	velocity	5.74	8.54	8.79	8.96	9.05	9.14	8.79	8.79	8.79	8.62	9.05	8.30		8.76	8.99	8.73

Heat 1 - 2024 Olympic Games (Paris, FRA)

Paris 2024 Olympic Games - Results Book (2024)

date	04-Aug-24	time	2.37	3.44	4.45	5.46	6.47	7.47	8.51	9.55	10.59	11.66		13.22	8 / 1			
reaction time	0.139	interval	7 steps	1.07	1.01	1.01	1.01	1.00	1.04	1.04	1.04	1.07	1.56			3.09	3.05	3.15
wind	0.1 m/s	velocity	5.79	8.54	9.05	9.05	9.05	9.14	8.79	8.79	8.79	8.54	8.99	8.32		8.87	8.99	8.70

Heat 1 - 2024 Meeting de Paris (Paris, FRA)

Omega Timing (2024) - diamond league race analysis

date	07-Jul-24	time	2.41	3.46	4.47	5.48	6.48	7.49	8.51	9.54	10.59	11.64		13.15	6 / 1			
reaction time	0.149	interval	7 steps	1.05	1.01	1.01	1.00	1.01	1.02	1.03	1.05	1.05	1.51			3.07	3.03	3.13

wind	0.1 m/s	velocity	5.69	8.70	9.05	9.05	9.14	9.05	8.96	8.87	8.70	8.70	9.28	8.37		8.93	9.05	8.76
FINAL - 2023 Xiamen Diamond League (Xiamen, CHN)														<i>Omega Timing (2023) - diamond league race analysis</i>				
date	02-Sep-23	time	2.37	3.42	4.43	5.44	6.46	7.47	8.51	9.54	10.59	11.65		13.19	2 / 5			
reaction time	0.153	interval	7 steps	1.05	1.01	1.01	1.02	1.01	1.04	1.03	1.05	1.06	1.54			3.07	3.07	3.14
wind	0.0 m/s	velocity	5.79	8.70	9.05	9.05	8.96	9.05	8.79	8.87	8.70	8.62	9.10	8.34		8.93	8.93	8.73
Heat 4 - 2022 World Athletics Championships (Eugene, OR)														<i>Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season</i>				
date	16-Jul-22	time	2.67	3.78	4.83	5.86	6.92	7.98	9.03	10.09	11.16	12.30		13.73	8 / 6			
reaction time	0.182	interval	7 steps	1.11	1.05	1.03	1.06	1.06	1.05	1.06	1.07	1.14	1.43			3.19	3.17	3.27
wind	0.2 m/s	velocity	5.14	8.23	8.70	8.87	8.62	8.62	8.70	8.62	8.54	8.02	9.80	8.01		8.60	8.65	8.39
FINAL - 2022 Japanese National Championships (Osaka, JPN)														<i>Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season</i>				
date	12-Jun-22	time	2.62	3.65	4.67	5.68	6.70	7.72	8.73	9.78	10.83	11.89		13.31	7 / 2			
reaction time	0.174	interval	7 steps	1.03	1.02	1.01	1.02	1.02	1.01	1.05	1.05	1.06	1.42			3.06	3.05	3.16
wind	-1.2 m/s	velocity	5.24	8.87	8.96	9.05	8.96	8.96	9.05	8.70	8.70	8.62	9.87	8.26		8.96	8.99	8.68
FINAL - 2022 Seiko Golden Grand Prix (Tokyo, JPN)														<i>Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season</i>				
date	08-May-22	time	2.60	3.66	4.69	5.71	6.73	7.75	8.80	9.84	10.89	11.95		13.34	5 / 1			
reaction time	0.159	interval	7 steps	1.06	1.03	1.02	1.02	1.02	1.05	1.04	1.05	1.06	1.39			3.11	3.09	3.15
wind	0.1 m/s	velocity	5.28	8.62	8.87	8.96	8.96	8.96	8.70	8.79	8.70	8.62	10.09	8.25		8.82	8.87	8.70
FINAL - 2022 Mikio Oda Memorial (Hiroshima, JPN)														<i>Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season</i>				
date	29-Apr-22	time	2.66	3.73	4.78	5.80	6.84	7.88	8.92	9.97	11.03	12.12		13.55	6 / 1			
reaction time	0.159	interval	7 steps	1.07	1.05	1.02	1.04	1.04	1.04	1.05	1.06	1.09	1.43			3.14	3.12	3.20
wind	-1.5 m/s	velocity	5.16	8.54	8.70	8.96	8.79	8.79	8.79	8.70	8.62	8.39	9.80	8.12		8.73	8.79	8.57
FINAL - 2021 Michitaka Kinami Memorial (Osaka, JPN)														<i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>				
date	01-Jun-21	time	2.60	3.65	4.68	5.70	6.72	7.76	8.81	9.86	10.91	11.99		13.35	7 / 1			
reaction time	0.150	interval	7 steps	1.05	1.03	1.02	1.02	1.04	1.05	1.05	1.05	1.08	1.36	NJR PB		3.10	3.11	3.18
wind	0.3 m/s	velocity	5.28	8.70	8.87	8.96	8.96	8.79	8.70	8.70	8.70	8.46	10.31	8.24		8.85	8.82	8.62
FINAL - 2021 Ready Steady Tokyo (Tokyo, JPN)														<i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>				
date	09-May-21	time	2.56	3.63	4.66	5.72	6.77	7.81	8.85	9.93	11.01	12.11		13.51	9 / 4			
reaction time	0.119	interval	7 steps	1.07	1.03	1.06	1.05	1.04	1.04	1.08	1.08	1.10	1.40	PB		3.16	3.13	3.26
wind	-0.8 m/s	velocity	5.36	8.54	8.87	8.62	8.70	8.79	8.79	8.46	8.46	8.31	10.01	8.14		8.68	8.76	8.41
FINAL - 2021 Mikio Oda Memorial (Hiroshima, JPN)														<i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>				
date	29-Apr-21	time	2.63	3.68	4.72	5.75	6.79	7.84	8.91	9.98	11.04	12.11		13.53	6 / 4			
reaction time		interval	7 steps	1.05	1.04	1.03	1.04	1.05	1.07	1.07	1.06	1.07	1.42	PB		3.12	3.16	3.20
wind	1.7 m/s	velocity	5.22	8.70	8.79	8.87	8.79	8.70	8.54	8.54	8.62	8.54	9.87	8.13		8.79	8.68	8.57
Heat 2 - 2020 Japanese National Championships (Niigata, JPN)														<i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>				
date	02-Oct-20	time	2.63	3.69	4.74	5.80	6.85	7.90	8.98	10.05	11.12	12.20		13.61	5 / 4			
reaction time	0.168	interval		1.06	1.05	1.06	1.05	1.05	1.08	1.07	1.07	1.08	1.41	PB		3.17	3.18	3.22
wind	0.4 m/s	velocity	5.22	8.62	8.70	8.62	8.70	8.70	8.46	8.54	8.54	8.46	9.94	8.08		8.65	8.62	8.52
FINAL - 2020 Seiko Golden Grand Prix (Tokyo, JPN)														<i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>				
date	23-Aug-20	time	2.58	3.67	4.72	5.79	6.84	7.90	8.96	10.04	11.13	12.22		13.65	2 / 2			
reaction time	0.138	interval		1.09	1.05	1.07	1.05	1.06	1.06	1.08	1.09	1.09	1.43	PB		3.21	3.17	3.26
wind	-0.4 m/s	velocity	5.32	8.39	8.70	8.54	8.70	8.62	8.62	8.46	8.39	8.39	9.80	8.06		8.54	8.65	8.41
U20 FINAL - 2019 Japanese National U18/U20 Championships (Hiroshima, JPN) (99cm)														<i>Kijima (2019) - research on athlete performance and technique- 2019 data book</i>				
date	18-Oct-19	time	2.60	3.64	4.70	5.74	6.78	7.83	8.87	9.94	11.01	12.08		13.54	5 / 1			
reaction time	0.144	interval		1.04	1.06	1.04	1.04	1.05	1.04	1.07	1.07	1.07	1.46			3.14	3.13	3.21
wind	-0.6 m/s	velocity	5.28	8.79	8.62	8.79	8.79	8.70	8.79	8.54	8.54	8.54	9.60	8.12		8.73	8.76	8.54
FINAL - 2019 National Sports Festival (Hitachinaka, JPN) (99cm)														<i>Enomoto (2019) - research on athlete performance and technique- 2019 data book</i>				
date	06-Oct-19	time	2.60	3.66	4.69	5.73	6.75	7.79	8.83	9.88	10.92	11.97		13.37	4 / 1			
reaction time	0.160	interval		1.06	1.03	1.04	1.02	1.04	1.04	1.05	1.04	1.05	1.40			3.13	3.10	3.14
wind	2.7 m/s	velocity	5.28	8.62	8.87	8.79	8.96	8.79	8.79	8.70	8.79	8.70	10.01	8.23		8.76	8.85	8.73
FINAL - 2019 Japanese National High School Championships (Okinawa, JPN) (99cm)														<i>Kota (2019) - 72nd high school champs: JAF scientific committee - biomechanics data</i>				
date	08-Aug-19	time	2.64	3.73	4.83	5.92	7.02	8.13	9.25	10.37	11.49	12.63		14.04	6 / 1			
reaction time		interval		1.09	1.10	1.09	1.10	1.11	1.12	1.12	1.12	1.14	1.41	PB		3.28	3.33	3.38
wind	-3.0 m/s	velocity	5.20	8.39	8.31	8.39	8.31	8.23	8.16	8.16	8.16	8.02	9.94	7.83		8.36	8.23	8.11
FINAL - 2018 Japanese National High School Championships (Nagoya, JPN) (99cm)														<i>Kota (2018) - 71st high school championships: JAF scientific committee - biomechanics data collection</i>				
date	06-Aug-18	time	2.66	3.75	4.89	5.99	7.11	8.24	9.43	10.60	11.77	12.98		14.43	4 / 8			
reaction time		interval		1.09	1.14	1.10	1.12	1.13	1.19	1.17	1.17	1.21	1.45			3.33	3.44	3.55
wind	1.6 m/s	velocity	5.16	8.39	8.02	8.31	8.16	8.09	7.68	7.81	7.81	7.55	9.67	7.62		8.23	7.97	7.72

Murray, Cameron (USA) (1999) H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

FINAL - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)														<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>			
date	28-Jun-24	time	2.56	3.60	4.61	5.63	6.64	7.65	8.66	9.68	10.72	11.76	13.15	1 / 6			
reaction time		interval	7 steps	1.04	1.01	1.02	1.01	1.01	1.01	1.02	1.04	1.04	1.39	PB	3.07	3.03	3.10
wind	2.0 m/s	velocity	5.36	8.79	9.05	8.96	9.05	9.05	9.05	8.96	8.79	8.79	10.09	8.37	8.93	9.05	8.85

Semi-Final 1 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)														<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>			
date	27-Jun-24	time	2.57	3.60	4.64	5.67	6.69	7.72	8.75	9.79	10.81	11.88	13.27	8 / 3			
reaction time		interval	7 steps	1.03	1.04	1.03	1.02	1.03	1.03	1.04	1.02	1.07	1.39		3.10	3.08	3.13
wind	0.3 m/s	velocity	5.34	8.87	8.79	8.87	8.96	8.87	8.87	8.79	8.96	8.54	10.09	8.29	8.85	8.90	8.76

Heat 4 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)														<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>			
date	24-Jun-24	time	2.55	3.60	4.63	5.66	6.65	7.63	8.66	9.68	10.73	11.80	13.23	7 / 4			
reaction time		interval	7 steps	1.05	1.03	1.03	0.99	0.98	1.03	1.02	1.05	1.07	1.43		3.11	3.00	3.14
wind	1.2 m/s	velocity	5.38	8.70	8.87	8.87	9.23	9.33	8.87	8.96	8.70	8.54	9.80	8.31	8.82	9.14	8.73

FINAL - 2024 USATF National Indoor Championships (Albuquerque, NM) (Altitude) (TV Analysis)														<i>Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record</i>			
date	16-Feb-24	time	2.52	3.56	4.57	5.57	6.58						7.45	4 / 2			
reaction time	0.146	interval	7 steps	1.04	1.01	1.00	1.01						7.45	PB	3.05		
wind		velocity	5.44	8.79	9.05	9.14	9.05						1.88	8.05	8.99		

Heat 1 - 2024 USATF National Indoor Championships (Albuquerque, NM) (Altitude) (TV Analysis)														<i>Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record</i>			
date	16-Feb-24	time	2.55	3.59	4.61	5.61	6.62						7.51	1 / 2			
reaction time	0.143	interval	7 steps	1.04	1.02	1.00	1.01						7.51	PB	3.06		
wind		velocity	5.38	8.79	8.96	9.14	9.05						1.87	7.99	8.96		

FINAL - 2023 NCAA Championships (Austin, TX) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>			
date	09-Jun-23	time	2.67										dnf	4 / --			
reaction time		interval	7 steps														
wind	1.8 m/s	velocity	5.14														

Myasnikov, Viktor (URS) (1948)																	
FINAL - 1975 International "Pravda" Sportfest (Sotschi, URS)														<i>Artyshenko (1977) - zwischen den hürden geht es um die sekunde, teil 1</i>			
date	30-May-75	time	2.4	3.5	4.6	5.7	6.8	7.8	8.9	9.9	11.0	12.1	13.7	1 / 1			
reaction time		interval		1.06	1.10	1.16	1.04	1.04	1.10	1.04	1.04	1.10	1.62		3.32	3.18	3.18
wind	-0.2 m/s	velocity	5.72	8.62	8.31	7.88	8.79	8.79	8.31	8.79	8.79	8.31	8.65	8.03	8.26	8.62	8.62

Nádenicek, Lubomir (TCH) (1947)																	
FINAL - 1972 Olympic Games (Munich, GER)														<i>Letzelter (1977) - Hurdensprint: geschwindigkeitsverlauf und spezielle eigenschaften</i>			
date	07-Sep-72	time	2.5			5.7							13.76	2 / 7			
reaction time		interval				3.20									3.20		
wind	0.3 m/s	velocity	5.60			8.57							7.99		8.57		

Nagamatsu, Hiroya (JPN) (1999)																	
Semi-Final 2 - 2016 Japanese National Youth Championships (Mizuho, JPN) (91cm)														<i>(2016.11.08) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>			
date	21-Oct-16	time	2.65	3.76	4.89	5.99	7.07	8.20	9.31	10.42	11.53	12.65	14.06	4 / 2			
reaction time		interval		1.11	1.13	1.10	1.08	1.13	1.11	1.11	1.11	1.12	1.41		3.34	3.32	3.34
wind	1.6 m/s	velocity	5.18	8.23	8.09	8.31	8.46	8.09	8.23	8.23	8.23	8.16	9.94	7.82	8.21	8.26	8.21
Heat 2 - 2016 Japanese National Youth Championships (Mizuho, JPN) (91cm)														<i>(2016.11.07) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>			
date	21-Oct-16	time	2.67	3.77	4.86	6.00	7.10	8.22	9.33	10.45	11.59	12.72	14.19	8 / 2			
reaction time		interval		1.10	1.09	1.14	1.10	1.12	1.11	1.12	1.14	1.13	1.47		3.33	3.33	3.39
wind	2.3 m/s	velocity	5.14	8.31	8.39	8.02	8.31	8.16	8.23	8.16	8.02	8.09	9.54	7.75	8.23	8.23	8.09

Nakai, Shouta (JPN) (2004)																	
FINAL - 2021 Japanese U18 National Championships (Matsuyama, JPN) (99cm)														<i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>			
date	22-Oct-21	time	2.74	3.90	5.01	6.10	7.21	8.30	9.39	10.48	11.62	12.75	14.28	7 / 7			
reaction time	0.188	interval		1.16	1.11	1.09	1.11	1.09	1.09	1.09	1.14	1.13	1.53		3.36	3.29	3.36
wind	-0.6 m/s	velocity	5.01	7.88	8.23	8.39	8.23	8.39	8.39	8.39	8.02	8.09	9.16	7.70	8.16	8.33	8.16

Naito, Masato (JPN) (1980)																	
FINAL - 2009 Nambu Chuhei Memorial (Sapporo, JPN)														<i>Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdles</i>			
date	09-Jul-09	time	2.67	3.76	4.81	5.87	6.91	8.00	9.08	10.18	11.31	12.42	13.88	1 / 4			
reaction time		interval		1.09	1.05	1.06	1.04	1.09	1.08	1.10	1.13	1.11	1.46		3.20	3.21	3.34
wind	1.2 m/s	velocity	5.14	8.39	8.70	8.62	8.79	8.39	8.46	8.31	8.09	8.23	9.60	7.93	8.57	8.54	8.21

FINAL - 2009 Japanese National Championships (Hiroshima, JPN)														<i>Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdles</i>			
date	27-Jun-09	time	2.61	3.71	4.76	5.81	6.86	7.92	8.99	10.08	11.17	12.27	13.81	5 / 3			
reaction time		interval		1.10	1.05	1.05	1.05	1.06	1.07	1.09	1.09	1.10	1.54		3.20	3.18	3.28
wind	1.6 m/s	velocity	5.26	8.31	8.70	8.70	8.70	8.62	8.54	8.39	8.39	8.31	9.10	7.97	8.57	8.62	8.36

Semi-Final 1 - 2009 Japanese National Championships (Hiroshima, JPN)														<i>Akirabun (2010) - analysis of speed and stride on straight track events in the 2009 season</i>			
date	27-Jun-09	time	2.50	3.59	4.65	5.69	6.74	7.80	8.86	9.93	11.02	12.14	13.79	6 / 1			
reaction time		interval		1.09	1.06	1.04	1.05	1.06	1.06	1.07	1.09	1.12	1.65		3.19	3.17	3.28

wind	0.5 m/s	velocity	5.49	8.39	8.62	8.79	8.70	8.62	8.62	8.54	8.39	8.16	8.50	7.98		8.60	8.65	8.36
FINAL - 2008 Japanese National Championships (Kawasaki, JPN)			<i>Akirabun (2009) - race analysis of 2008 men's and women's 100m and 110m & 100m hurdles</i>															
date	28-Jun-08	time	2.41	3.49	4.53	5.57	6.60	7.64	8.69	9.75	10.85	11.96	13.66	/ 1		3.16	3.12	3.27
reaction time		interval		1.08	1.04	1.04	1.03	1.04	1.05	1.06	1.10	1.11	1.70					
wind	-0.2 m/s	velocity	5.69	8.46	8.79	8.79	8.87	8.79	8.70	8.62	8.31	8.23	8.25	8.05		8.68	8.79	8.39
FINAL - 2007 Seiko Super Grand Prix (Yokohama, JPN)			<i>Akirabun (2008) - 2007 speed analysis of the men's & women's 100m, 100m hurdles, & 110m hurdles</i>															
date	30-Sep-07	time	2.48	3.53	4.58	5.63	6.68	7.76	8.86	9.95	11.06	12.14	13.83	/ 3		3.15	3.23	3.28
reaction time		interval		1.05	1.05	1.05	1.05	1.08	1.10	1.09	1.11	1.08	1.69					
wind	-1.6 m/s	velocity	5.53	8.70	8.70	8.70	8.70	8.46	8.31	8.39	8.23	8.46	8.30	7.95		8.70	8.49	8.36
Heat 3 - 2007 IAAF World Championships (Osaka, JPN)			<i>Shibayama (2008) - analysis of racing patterns in the men's 110m & women's 100m sprint hurdles</i>															
date	29-Aug-07	time	2.62	3.68	4.70	5.73	6.73	7.77	8.83	9.90	10.98	12.08	13.54	9 / 3		3.11	3.10	3.25
reaction time	0.164	interval		1.06	1.02	1.03	1.00	1.04	1.06	1.07	1.08	1.10	1.46					
wind	0.6 m/s	velocity	5.24	8.62	8.96	8.87	9.14	8.79	8.62	8.54	8.46	8.31	9.60	8.12		8.82	8.85	8.44
FINAL - 2007 Osaka Grand Prix (Osaka, JPN)			<i>Akirabun (2008) - 2007 speed analysis of the men's & women's 100m, 100m hurdles, & 110m hurdles</i>															
date	05-May-07	time	2.43	3.51	4.55	5.58	6.62	7.66	8.71	9.78	10.87	11.96	13.60	/ 4		3.15	3.13	3.25
reaction time		interval		1.08	1.04	1.03	1.04	1.04	1.05	1.07	1.09	1.09	1.64					
wind	0.8 m/s	velocity	5.65	8.46	8.79	8.87	8.79	8.79	8.70	8.54	8.39	8.39	8.55	8.09		8.70	8.76	8.44
FINAL - 2007 Mikio Oda Memorial (Hiroshima, JPN)			<i>Akirabun (2008) - 2007 speed analysis of the men's & women's 100m, 100m hurdles, & 110m hurdles</i>															
date	29-Apr-07	time	2.42	3.50	4.55	5.59	6.64	7.69	8.75	9.82	10.90	12.01	13.64	/ 1		3.17	3.16	3.26
reaction time		interval		1.08	1.05	1.04	1.05	1.05	1.06	1.07	1.08	1.11	1.63					
wind	0.0 m/s	velocity	5.67	8.46	8.70	8.79	8.70	8.70	8.62	8.54	8.46	8.23	8.60	8.06		8.65	8.68	8.41
FINAL - 2006 Osaka Grand Prix (Osaka, JPN)			<i>Akirabun (2007) - speed analysis of the 100m and hurdles with a laser system</i>															
date	06-May-06	time	2.46	3.53	4.58	5.60	6.64	7.69	8.75	9.82	10.91	12.02	13.64	/ 3		3.14	3.15	3.27
reaction time		interval		1.07	1.05	1.02	1.04	1.05	1.06	1.07	1.09	1.11	1.62					
wind	1.2 m/s	velocity	5.58	8.54	8.70	8.96	8.79	8.70	8.62	8.54	8.39	8.23	8.65	8.06		8.73	8.70	8.39
Nakamura, Akihiko (JPN) (1990)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Decathlon - Heat 2 - 2023 Japanese Multi-Event National Championships (Akita, JPN)			<i>Matsubayashi (2024) - performance analysis of decathlon athletes in the 2023 season</i>															
date	11-Jun-23	time	2.81	3.97	5.13	6.27	7.40	8.54	9.70	10.86	12.04	13.22	14.73	9 / 4		3.46	3.43	3.52
reaction time		interval		1.16	1.16	1.14	1.13	1.14	1.16	1.16	1.18	1.18	1.51					
wind	-0.1 m/s	velocity	4.88	7.88	7.88	8.02	8.09	8.02	7.88	7.88	7.75	7.75	9.28	7.47		7.92	7.99	7.79
Decathlon - FINAL - 2022 Japanese Multi-Event National Championships (Akita, JPN)			<i>Takefu (2023) - performance analysis of decathlon athletes in the 2022 season</i>															
date	05-Jun-22	time	2.76	3.92	5.06	6.21	7.35	8.49	9.64	10.81	11.98	13.15	14.65	5 / 3		3.45	3.43	3.51
reaction time		interval		1.16	1.14	1.15	1.14	1.14	1.15	1.17	1.17	1.17	1.50					
wind	-2.3 m/s	velocity	4.97	7.88	8.02	7.95	8.02	8.02	7.95	7.81	7.81	7.81	9.35	7.51		7.95	7.99	7.81
Decathlon - Heat 1 - 2022 Michitaka Kinami Memorial (Osaka, JPN)			<i>Takefu (2023) - performance analysis of decathlon athletes in the 2022 season</i>															
date	01-May-22	time	2.79	3.95	5.09	6.22	7.36	8.50	9.63	10.78	11.94	13.11	14.64	9 / 2		3.43	3.41	3.48
reaction time	0.147	interval		1.16	1.14	1.13	1.14	1.14	1.13	1.15	1.16	1.17	1.53					
wind	0.0 m/s	velocity	4.92	7.88	8.02	8.09	8.02	8.02	8.09	7.95	7.88	7.81	9.16	7.51		7.99	8.04	7.88
Decathlon - Heat 3 - 2021 Japanese Multi-Event National Championships (Nagano, JPN)			<i>Matsubayashi (2021) - 110m hurdling race analysis of decathlon athletes in the 2021 season</i>															
date	13-Jun-21	time	2.73	3.85	4.97	6.09	7.21	8.32	9.45	10.58	11.72	12.85	14.34	2 / 2		3.36	3.36	3.40
reaction time	0.152	interval		1.12	1.12	1.12	1.12	1.11	1.13	1.13	1.14	1.13	1.49					
wind	-0.9 m/s	velocity	5.03	8.16	8.16	8.16	8.16	8.23	8.09	8.09	8.02	8.09	9.41	7.67		8.16	8.16	8.06
Decathlon - Heat 3 - 2020 Japanese Multi-Event National Championships (Nagano, JPN)			<i>Matsubayashi (2020) - research athlete performance technique- 2020 databook</i>															
date	27-Sep-20	time	2.71	3.85	4.94	6.05	7.15	8.26	9.37	10.49	11.60	12.73	14.21	4 / 2		3.34	3.32	3.36
reaction time		interval		1.14	1.09	1.11	1.10	1.11	1.11	1.12	1.11	1.13	1.48					
wind	0.7 m/s	velocity	5.06	8.02	8.39	8.23	8.31	8.23	8.23	8.16	8.23	8.09	9.47	7.74		8.21	8.26	8.16
Decathlon - Heat 2 - 2019 Japanese National Multi-Event Championships (Nagano, JPN)			<i>Matsubayashi (2019) - research on athlete performance and technique- 2019 data book</i>															
date	09-Jun-19	time	2.69	3.80	4.88	5.98	7.07	8.17	9.26	10.37	11.50	12.62	14.06	4 / 2		3.29	3.28	3.36
reaction time		interval		1.11	1.08	1.10	1.09	1.10	1.09	1.11	1.13	1.12	1.44					
wind	2.1 m/s	velocity	5.10	8.23	8.46	8.31	8.39	8.31	8.39	8.23	8.09	8.16	9.74	7.82		8.33	8.36	8.16
Decathlon - Heat 3 - 2018 Japanese National Multi-Event Championships (Nagano, JPN)			<i>Matsubayashi (2018) - research on athlete performance and technique</i>															
date	17-Jun-18	time	2.69	3.85	4.95	6.04	7.14	8.25	9.34	10.48	11.61	12.75	14.20	4 / 2		3.35	3.30	3.41
reaction time		interval		1.16	1.10	1.09	1.10	1.11	1.09	1.14	1.13	1.14	1.45					
wind	0.2 m/s	velocity	5.10	7.88	8.31	8.39	8.31	8.23	8.39	8.02	8.09	8.02	9.67	7.75		8.19	8.31	8.04
Decathlon - Heat 2 - 2018 Tokyo Combined Event Meeting (Tokyo, JPN)			<i>Matsubayashi (2018) - research on athlete performance and technique</i>															
date	22-Apr-18	time	2.73	3.85	4.96	6.06	7.16	8.26	9.36	10.49	11.62	12.76	14.22	5 / 1		3.33	3.30	3.40
reaction time		interval		1.12	1.11	1.10	1.10	1.10	1.10	1.13	1.13	1.14	1.46					
wind	1.1 m/s	velocity	5.03	8.16	8.23	8.31	8.31	8.31	8.31	8.09	8.09	8.02	9.60	7.74		8.23	8.31	8.06

Decathlon - Heat 2 - 2014 Asian Games (Incheon, KOR)*Takeo (2014) - decathletes sprint ability and relationship of individual performance*

date	01-Oct-14	time	2.74	3.86	4.97	6.09	7.21	8.33	9.47	10.59	11.73	12.89	14.33	/ 1			
reaction time	0.166	interval		1.12	1.11	1.12	1.12	1.12	1.14	1.12	1.14	1.16	1.44		3.35	3.38	3.42
wind	1.9 m/s	velocity	5.01	8.16	8.23	8.16	8.16	8.16	8.02	8.16	8.02	7.88	9.74	7.68	8.19	8.11	8.02

Decathlon - Heat 1 - 2014 Japanese Multi-Event National Championships (Nagano, JPN)*Takeo (2014) - decathletes sprint ability and relationship of individual performance*

date	01-Jun-14	time	2.68	3.79	4.93	6.04	7.14	8.27	9.40	10.52	11.64	12.77	14.21	5 / 2			
reaction time		interval		1.11	1.14	1.11	1.10	1.13	1.13	1.12	1.12	1.13	1.44		3.36	3.36	3.37
wind	0.1 m/s	velocity	5.12	8.23	8.02	8.23	8.31	8.09	8.09	8.16	8.16	8.09	9.74	7.74	8.16	8.16	8.14

Decathlon - Heat 1 - 2014 Nittai University Distance Meeting (Wakayama, JPN)*Takeo (2014) - decathletes sprint ability and relationship of individual performance*

date	27-Apr-14	time	2.71	3.84	4.97	6.09	7.21	8.32	9.43	10.54	11.67	12.80	14.23	4 / 1			
reaction time		interval		1.13	1.13	1.12	1.12	1.11	1.11	1.11	1.13	1.13	1.43		3.38	3.34	3.37
wind	1.0 m/s	velocity	5.06	8.09	8.09	8.16	8.16	8.23	8.23	8.23	8.09	8.09	9.80	7.73	8.11	8.21	8.14

Decathlon - Heat 1 - 2013 Japanese Multi-Event National Championships (Nagano, JPN)*Takeo (2014) - decathletes sprint ability and relationship of individual performance*

date	02-Jun-13	time	2.68	3.81	4.94	6.06	7.17	8.29	9.38	10.53	11.68	12.81	14.24	6 / 2			
reaction time		interval		1.13	1.13	1.12	1.11	1.12	1.09	1.15	1.15	1.13	1.43		3.38	3.32	3.43
wind	0.7 m/s	velocity	5.12	8.09	8.09	8.16	8.23	8.16	8.39	7.95	7.95	8.09	9.80	7.72	8.11	8.26	7.99

Decathlon - Heat 2 - 2013 Wakayama Athletics Meeting (Wakayama, JPN)*Takeo (2014) - decathletes sprint ability and relationship of individual performance*

date	28-Apr-13	time	2.69	3.81	4.91	6.03	7.12	8.23	9.34	10.46	11.58	12.72	14.16	6 / 2			
reaction time		interval		1.12	1.10	1.12	1.09	1.11	1.11	1.12	1.12	1.14	1.44		3.34	3.31	3.38
wind	1.5 m/s	velocity	5.10	8.16	8.31	8.16	8.39	8.23	8.23	8.16	8.16	8.02	9.74	7.77	8.21	8.28	8.11

Decathlon - Heat 1 - 2012 Japanese Multi-Event National Championships (Nagano, JPN)*Takeo (2014) - decathletes sprint ability and relationship of individual performance*

date	03-Jun-12	time	2.67	3.76	4.84	5.94	7.03	8.12	9.21	10.34	11.47	12.63	14.11	5 / 2			
reaction time		interval		1.09	1.08	1.10	1.09	1.09	1.09	1.13	1.13	1.16	1.48		3.27	3.27	3.42
wind	1.7 m/s	velocity	5.14	8.39	8.46	8.31	8.39	8.39	8.39	8.09	8.09	7.88	9.47	7.80	8.39	8.39	8.02

Decathlon - Heat ?? - 2012 Tokyo Athletics Championships (Chofu, JPN)*Takeo (2014) - decathletes sprint ability and relationship of individual performance*

date	22-Apr-12	time	2.71	3.83	4.94	6.05	7.15	8.26	9.35	10.46	11.59	12.72	14.15	???			
reaction time		interval		1.12	1.11	1.11	1.10	1.11	1.09	1.11	1.13	1.13	1.43		3.34	3.30	3.37
wind	-0.1 m/s	velocity	5.06	8.16	8.23	8.23	8.31	8.23	8.39	8.23	8.09	8.09	9.80	7.77	8.21	8.31	8.14

Decathlon - Heat 1 - 2011 Asian Championships (Kobe, JPN)*Takeo (2014) - decathletes sprint ability and relationship of individual performance*

date	08-Jul-11	time	2.70	3.83	4.95	6.07	7.21	8.34	9.48	10.66	11.82	13.00	14.50	/ 1			
reaction time		interval		1.13	1.12	1.12	1.14	1.13	1.14	1.18	1.16	1.18	1.50		3.37	3.41	3.52
wind	0.3 m/s	velocity	5.08	8.09	8.16	8.16	8.02	8.09	8.02	7.75	7.88	7.75	9.35	7.59	8.14	8.04	7.79

Decathlon - Heat ?? - 2011 Japanese Multi-Event National Championships (Kawasaki, JPN)*Takeo (2014) - decathletes sprint ability and relationship of individual performance*

date	05-Jun-11	time	2.70	3.83	4.95	6.06	7.17	8.28	9.40	10.52	11.65	12.79	14.25	???			
reaction time		interval		1.13	1.12	1.11	1.11	1.11	1.12	1.12	1.13	1.14	1.46		3.36	3.34	3.39
wind	1.4 m/s	velocity	5.08	8.09	8.16	8.23	8.23	8.23	8.16	8.16	8.09	8.02	9.60	7.72	8.16	8.21	8.09

Nakamura, Shyuunta (JPN)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2021 Japanese U16 National Championships (Matsuyama, JPN) (99cm)** *Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season*

date	24-Oct-21	time	2.70	3.84	5.00	6.16	7.32	8.51	9.68	10.84	12.01	13.23	14.81	/ 4			
reaction time		interval		1.14	1.16	1.16	1.16	1.19	1.17	1.16	1.17	1.22	1.58		3.46	3.52	3.55
wind	1.0 m/s	velocity	5.08	8.02	7.88	7.88	7.88	7.68	7.81	7.88	7.81	7.49	8.87	7.43	7.92	7.79	7.72

Nakao, Kengo (JPN)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2017 Nambu Memorial (Sapporo, JPN)** *(2017) - tfdata-store.com/2017/07/12/post-1025/*

date	09-Jul-17	time	2.82	4.01	5.19	6.34	7.49	8.62	9.80	10.96	12.13	13.31	14.84	3 / 8			
reaction time		interval		1.19	1.18	1.15	1.15	1.13	1.18	1.16	1.17	1.18	1.53		3.52	3.46	3.51
wind	2.7 m/s	velocity	4.87	7.68	7.75	7.95	7.95	8.09	7.75	7.88	7.81	7.75	9.16	7.41	7.79	7.92	7.81

Nakata, Hidetoshi (JPN) (1999)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2017 Japanese National High School Championships (Yamagata, JPN) (99cm)** *Kota (2017) - 70th high school championships: JAF scientific committee- biomechanics data*

date	02-Aug-17	time	2.69	3.81	4.94	6.05	7.17	8.27	9.41	10.56	11.73	12.91	14.44	5 / 4			
reaction time	0.130	interval		1.12	1.13	1.11	1.12	1.10	1.14	1.15	1.17	1.18	1.53		3.36	3.36	3.50
wind	-0.7 m/s	velocity	5.10	8.16	8.09	8.23	8.16	8.31	8.02	7.95	7.81	7.75	9.16	7.62	8.16	8.16	7.83

Namba, Niroschi (JPN) (1999)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Heat 5 - 2016 Japanese National Youth Championships (Mizuho, JPN) (91cm)** *(2016.11.08) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en*

date	21-Oct-16	time	2.77	3.92	5.05	6.18	7.30	8.41	9.53	10.68	11.81	12.95	14.42	4 / 2			
reaction time		interval		1.15	1.13	1.13	1.12	1.11	1.12	1.15	1.13	1.14	1.47		3.41	3.35	3.42
wind	1.3 m/s	velocity	4.95	7.95	8.09	8.09	8.16	8.23	8.16	7.95	8.09	8.02	9.54	7.63	8.04	8.19	8.02

Nardelli, Alexander (CZE) (1997)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2014 Czech Republic National U18 Championships (Trinec, CZE) (91cm)** *Fehér (2014) - Final report from the U18 & U20 Czech Republic national championships*

date	28-Jun-14	time	2.86	4.02	5.18	6.35	7.52	8.71	9.90	11.08	12.27	13.45	15.07	6 / 4			
reaction time	0.229	interval		1.16	1.16	1.17	1.17	1.19	1.19	1.18	1.19	1.18	1.62		3.49	3.55	3.55

wind -3.7 m/s velocity 4.80 7.88 7.88 7.81 7.81 7.68 7.68 7.75 7.68 7.75 8.65 7.30 7.86 7.72 7.72

Heat 1 - 2014 Czech Republic National U18 Championships (Trinec, CZE) (91cm) *Feher (2014) - Final report from the U18 & U20 Czech Republic national championships*
 date 28-Jun-14 time 2.87 4.04 5.21 6.37 7.50 8.65 9.79 10.96 12.12 13.34 14.93 8 / 2
 reaction time 0.372 interval 1.17 1.17 1.16 1.13 1.15 1.14 1.17 1.16 1.22 1.59 3.50 3.42 3.55
 wind -0.3 m/s velocity 4.78 7.81 7.81 7.88 8.09 7.95 8.02 7.81 7.88 7.49 8.82 7.37 7.83 8.02 7.72

Nehemiah, Renaldo (USA) (1959) H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10
FINAL - 1981 International Abendsportfest (Koblenz, FRG) *Heß (1985) - entwicklungsaspekte die leichtathletischen sprint-/hürdendisziplinen im olympiazklus 1981/84*
 date 26-Aug-81 time 2.50 4.53 6.54 8.54 11.63 13.04 / 1
 reaction time interval 2.03 2.01 2.00 3.09 1.41 3.09
 wind 0.0 m/s velocity 5.49 9.00 9.09 9.14 8.87 9.94 8.44 8.87

Nejedly, Adam (CZE) (1988) H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10
FINAL - 2013 Czech Republic National Championships (Tábor, CZE) *Feher (2013) - Final report from the men's & women's Czech Republic national championships*
 date 15-Jun-13 time 2.78 3.95 5.07 6.18 7.32 8.45 9.62 10.78 11.95 13.14 14.68 7 / 8
 reaction time 0.145 interval 1.17 1.12 1.11 1.14 1.13 1.17 1.16 1.17 1.19 1.54 3.40 3.44 3.52
 wind 0.4 m/s velocity 4.94 7.81 8.16 8.23 8.02 8.09 7.81 7.88 7.81 7.68 9.10 7.49 8.06 7.97 7.79

Heat 2 - 2013 Czech Republic National Championships (Tábor, CZE) *Feher (2013) - Final report from the men's & women's Czech Republic national championships*
 date 15-Jun-13 time 2.81 3.95 5.06 6.18 7.31 8.44 9.59 10.75 11.91 13.08 14.63 3 / 2
 reaction time 0.142 interval 1.14 1.11 1.12 1.13 1.13 1.15 1.16 1.16 1.17 1.55 3.37 3.41 3.49
 wind -0.6 m/s velocity 4.88 8.02 8.23 8.16 8.09 8.09 7.95 7.88 7.88 7.81 9.05 7.52 8.14 8.04 7.86

FINAL - 2012 Czech Republic National Indoor Championships (Praha, CZE) *Feher (2012) - Czech Republic indoor national championships - men's 60m hurdles*
 date 25-Feb-12 time 2.78 3.95 5.06 6.20 7.29 8.27 2 / 8
 reaction time 0.187 interval 1.17 1.11 1.14 1.09 0.98 3.42
 velocity 4.94 7.81 8.23 8.02 8.39 9.92 7.26 8.02

Heat 3 - 2012 Czech Republic National Indoor Championships (Praha, CZE) *Feher (2012) - Czech Republic indoor national championships - men's 60m hurdles*
 date 25-Feb-12 time 2.75 3.91 5.01 6.12 7.23 8.18 3 / 3
 reaction time 0.137 interval 1.16 1.10 1.11 1.11 0.95 3.37
 velocity 4.99 7.88 8.31 8.23 8.23 10.23 7.33 8.14

Nemec, Jan (CZE) (1997) H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10
FINAL - 2014 Czech Republic National U18 Championships (Trinec, CZE) (91cm) *Feher (2014) - Final report from the U18 & U20 Czech Republic national championships*
 date 28-Jun-14 time 2.91 4.09 5.26 6.46 7.70 8.91 10.11 11.33 12.52 13.75 15.43 7 / 7
 reaction time 0.231 interval 1.18 1.17 1.20 1.24 1.21 1.20 1.22 1.19 1.23 1.68 3.55 3.65 3.64
 wind -3.7 m/s velocity 4.71 7.75 7.81 7.62 7.37 7.55 7.62 7.49 7.68 7.43 8.35 7.13 7.72 7.51 7.53

Heat 1 - 2014 Czech Republic National U18 Championships (Trinec, CZE) (91cm) *Feher (2014) - Final report from the U18 & U20 Czech Republic national championships*
 date 28-Jun-14 time 2.89 4.09 5.30 6.44 7.60 8.76 9.94 11.11 12.28 13.47 15.05 4 / 3
 reaction time 0.236 interval 1.20 1.21 1.14 1.16 1.16 1.18 1.17 1.17 1.19 1.58 3.55 3.50 3.53
 wind -0.3 m/s velocity 4.75 7.62 7.55 8.02 7.88 7.88 7.75 7.81 7.81 7.68 8.87 7.31 7.72 7.83 7.77

Neugebauer, Leo (GER) (2000) H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10
Decathlon - Heat 2 - 2024 Olympic Games (Paris, FRA) *Paris 2024 Olympic Games - Results Book (2024)*
 date 03-Aug-24 time 2.53 3.68 4.81 5.91 7.06 8.18 9.32 10.45 11.61 12.78 14.51 2 / 5
 reaction time 0.134 interval 7 steps 1.15 1.13 1.10 1.15 1.12 1.14 1.13 1.16 1.17 1.73 3.38 3.41 3.46
 wind 0.2 m/s velocity 5.42 7.95 8.09 8.31 7.95 8.16 8.02 8.09 7.88 7.81 8.10 7.58 8.11 8.04 7.92

Ngo, Matteo (FRA) (1998) H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10
FINAL - 2020 French National Championships (Albi, FRA) (TV Analysis) *Henson (2020) - Athlete First: 2020 year end hurdle report*
 date 13-Sep-20 time 2.63 3.71 4.73 5.84 6.89 8.00 9.05 10.13 11.24 12.39 14.02 2 / 4
 reaction time 0.218 interval 1.08 1.02 1.11 1.05 1.11 1.05 1.08 1.11 1.15 1.63 3.21 3.21 3.34
 wind 0.0 m/s velocity 5.22 8.46 8.96 8.23 8.70 8.23 8.70 8.46 8.23 7.95 8.60 7.85 8.54 8.54 8.21

Ni Mengfan (CHN) (2003) H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10
U18 FINAL - 2019 Chinese National Youth Games (Taiyuan, CHN) (91cm) *CAA Hurdle Development (2019)*
 date 14-Aug-19 time 2.70 3.87 5.02 6.17 7.31 8.44 9.64 10.81 11.98 13.16 14.73 2 / 5
 reaction time 0.199 interval 1.17 1.15 1.15 1.14 1.13 1.20 1.17 1.17 1.18 1.57 3.47 3.47 3.52
 wind -0.1 m/s velocity 5.08 7.81 7.95 7.95 8.02 8.09 7.62 7.81 7.81 7.75 8.93 7.47 7.90 7.90 7.79

Nilsson, Nicklas (SWE) (1987) H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10
B FINAL - 2010 Folksam GP (Sollentuna, SWE) *Blomkvist (2010) - www.sub13.se*
 date 01-Jul-10 time 2.66 3.86 5.04 6.23 7.43 8.66 11.07 15.42 / 4
 reaction time interval 1.20 1.18 1.19 1.20 1.23 2.41 PB 3.57
 wind 0.8 m/s velocity 5.16 7.62 7.75 7.68 7.62 7.43 7.59 7.13 7.68

Ning Xiaohan (CHN) (2000) H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10
FINAL - 2021 Chinese National Championships (Chongqing, CHN) *CAA Hurdle Development (2021)*
 date 25-Jun-21 time 2.57 3.64 4.67 5.70 6.74 7.77 8.86 9.94 11.05 12.18 13.75 4 / 3
 reaction time 0.134 interval 1.07 1.03 1.03 1.04 1.03 1.09 1.08 1.11 1.13 1.57 3.13 3.16 3.32

														160 of 283	M110H athlete			
wind	1.6 m/s	velocity	5.34	8.54	8.87	8.87	8.79	8.87	8.39	8.46	8.23	8.09	8.93	8.00	8.76	8.68	8.26	
Heat 4 - 2021 Chinese National Championships (Chongqing, CHN)														<i>CAA Hurdle Development (2021)</i>				
date	25-Jun-21	time	2.65	3.72	4.80	5.87	6.92	7.99	9.08	10.16	11.28	12.41		13.96	3 / 1			
reaction time	0.149	interval		1.07	1.08	1.07	1.05	1.07	1.09	1.08	1.12	1.13	1.55			3.22	3.21	3.33
wind	-0.2 m/s	velocity	5.18	8.54	8.46	8.54	8.70	8.54	8.39	8.46	8.16	8.09	9.05	7.88		8.52	8.54	8.23
FINAL - 2020 Chinese Olympic Trials (Shaoxing, CHN)														<i>CAA Hurdle Development (2021)</i>				
date	12-Jun-21	time	2.62	3.68	4.72	5.76	6.81	7.86	8.91	9.98	11.09	12.19		13.69	3 / 1			
reaction time	0.143	interval		1.06	1.04	1.04	1.05	1.05	1.05	1.07	1.11	1.10	1.50			3.14	3.15	3.28
wind	0.9 m/s	velocity	5.24	8.62	8.79	8.79	8.70	8.70	8.70	8.54	8.23	8.31	9.35	8.04		8.73	8.70	8.36
Heat 1 - 2020 Chinese Olympic Trials (Shaoxing, CHN)														<i>CAA Hurdle Development (2021)</i>				
date	12-Jun-21	time	2.50	3.58	4.65	5.72	6.80	7.87	8.95	10.05	11.17	12.31		13.97	4 / 2			
reaction time	0.141	interval		1.08	1.07	1.07	1.08	1.07	1.08	1.10	1.12	1.14	1.66			3.22	3.23	3.36
wind	-0.4 m/s	velocity	5.49	8.46	8.54	8.54	8.46	8.54	8.46	8.31	8.16	8.02	8.45	7.87		8.52	8.49	8.16
FINAL - 2021 Philippe Cup Athletics Invitational (Wuhan, CHN)														<i>CAA Hurdle Development (2021)</i>				
date	19-May-21	time	2.60	3.67	4.70	5.74	6.79	7.82	8.89	9.98	11.08	12.20		13.70	3 / 1			
reaction time	0.158	interval		1.07	1.03	1.04	1.05	1.03	1.07	1.09	1.10	1.12	1.50			3.14	3.15	3.31
wind	1.9 m/s	velocity	5.28	8.54	8.87	8.79	8.70	8.87	8.54	8.39	8.31	8.16	9.35	8.03		8.73	8.70	8.28
FINAL - 2021 National Indoor Grand Prix (Jinan, CHN)														<i>CAA Hurdle Development (2021)</i>				
date	18-Mar-21	time	2.65	3.75	4.82	5.90	7.01							7.97	6 / 4			
reaction time	0.166	interval	7 steps	1.10	1.07	1.08	1.11						0.96			3.25		
		velocity	5.18	8.31	8.54	8.46	8.23						10.13	7.53		8.44		
FINAL - 2020 Chinese National Championships (Shaoxing, CHN)														<i>CAA Hurdle Development (2020)</i>				
date	16-Sep-20	time	2.60	3.69	4.76	5.81	6.86	7.90	8.95	10.01	11.07	12.15		13.60	7 / 3			
reaction time	0.144	interval	7 steps	1.09	1.07	1.05	1.05	1.04	1.05	1.06	1.06	1.08	1.45	PB		3.21	3.14	3.20
wind	0.4 m/s	velocity	5.28	8.39	8.54	8.70	8.70	8.79	8.70	8.62	8.62	8.46	9.67	8.09		8.54	8.73	8.57
Heat 1 - 2020 Chinese National Championships (Shaoxing, CHN)														<i>CAA Hurdle Development (2020)</i>				
date	16-Sep-20	time	2.60	3.67	4.72	5.77	6.82	7.87	8.94	10.01	11.08	12.18		13.63	2 / 1			
reaction time	0.142	interval	7 steps	1.07	1.05	1.05	1.05	1.05	1.07	1.07	1.07	1.10	1.45	PB		3.17	3.17	3.24
wind	0.3 m/s	velocity	5.28	8.54	8.70	8.70	8.70	8.70	8.54	8.54	8.54	8.31	9.67	8.07		8.65	8.65	8.46
U20 FINAL - 2019 Chinese National Youth Games (Taiyuan, CHN) (99cm)														<i>CAA Hurdle Development (2019)</i>				
date	14-Aug-19	time	2.57	3.62	4.65	5.67	6.69	7.71	8.74	9.78	10.83	11.91		13.39	4 / 1			
reaction time	0.134	interval		1.05	1.03	1.02	1.02	1.02	1.03	1.04	1.05	1.08	1.48	PB		3.10	3.07	3.17
wind	-0.3 m/s	velocity	5.34	8.70	8.87	8.96	8.96	8.96	8.87	8.79	8.70	8.46	9.47	8.22		8.85	8.93	8.65
U20 Heat 3 - 2019 Chinese National Youth Games (Taiyuan, CHN) (99cm)														<i>CAA Hurdle Development (2019)</i>				
date	14-Aug-19	time	2.58	3.62	4.64	5.67	6.69	7.71	8.74	9.80	10.88	12.04		13.59	6 / 1			
reaction time	0.135	interval		1.04	1.02	1.03	1.02	1.02	1.03	1.06	1.08	1.16	1.55			3.09	3.07	3.30
wind	0.6 m/s	velocity	5.32	8.79	8.96	8.87	8.96	8.96	8.87	8.62	8.46	7.88	9.05	8.09		8.87	8.93	8.31
Heat 1 - 2019 Chinese National Championships (Shenyang, CHN)														<i>CAA Hurdle Development (2019)</i>				
date	08-Jul-19	time	2.68	3.77	4.85	5.94	7.02	8.12	9.22	10.34	11.46	12.60		14.17	4 / 3			
reaction time	0.163	interval		1.09	1.08	1.09	1.08	1.10	1.10	1.12	1.12	1.14	1.57			3.26	3.28	3.38
wind	0.1 m/s	velocity	5.12	8.39	8.46	8.39	8.46	8.31	8.31	8.16	8.16	8.02	8.93	7.76		8.41	8.36	8.11
FINAL - 2019 Chinese National Grand Prix 2 (Huangshi, CHN)														<i>CAA Hurdle Development (2019)</i>				
date	13-Apr-19	time	2.68	3.80	4.86	5.96	7.02	8.14	9.24	10.38	11.52	12.67		14.19	5 / 5			
reaction time	0.163	interval		1.12	1.06	1.10	1.06	1.12	1.10	1.14	1.14	1.15	1.52			3.28	3.28	3.43
wind	-0.3 m/s	velocity	5.12	8.16	8.62	8.31	8.62	8.16	8.31	8.02	8.02	7.95	9.22	7.75		8.36	8.36	7.99
Heat 3 - 2019 Chinese National Grand Prix 2 (Huangshi, CHN)														<i>CAA Hurdle Development (2019)</i>				
date	13-Apr-19	time	2.68	3.78	4.86	5.94	7.02	8.10	9.22	10.32	11.45	12.60		14.15	5 / 2			
reaction time	0.145	interval		1.10	1.08	1.08	1.08	1.08	1.12	1.10	1.13	1.15	1.55			3.26	3.28	3.38
wind	0.0 m/s	velocity	5.12	8.31	8.46	8.46	8.46	8.46	8.16	8.31	8.09	7.95	9.05	7.77		8.41	8.36	8.11
FINAL - 2019 Chinese National Grand Prix 1 (Zhaoqing, CHN)														<i>CAA Hurdle Development (2019)</i>				
date	09-Apr-19	time	2.64	3.71	4.81	5.89	6.98	8.05	9.16	10.26	11.38	12.52		14.07	7 / 4			
reaction time	0.165	interval		1.07	1.10	1.08	1.09	1.07	1.11	1.10	1.12	1.14	1.55	PB		3.25	3.27	3.36
wind	0.2 m/s	velocity	5.20	8.54	8.31	8.46	8.39	8.54	8.23	8.31	8.16	8.02	9.05	7.82		8.44	8.39	8.16
Heat 4 - 2019 Chinese National Grand Prix 1 (Zhaoqing, CHN)														<i>CAA Hurdle Development (2019)</i>				
date	08-Apr-19	time	2.62	3.72	4.80	5.88	6.95	8.05	9.14	10.26	11.40	12.58		14.17	4 / 1			
reaction time	0.158	interval		1.10	1.08	1.08	1.07	1.10	1.09	1.12	1.14	1.18	1.59	PB		3.26	3.26	3.44
wind	-0.8 m/s	velocity	5.24	8.31	8.46	8.46	8.54	8.31	8.39	8.16	8.02	7.75	8.82	7.76		8.41	8.41	7.97
A-FINAL - 2019 Chinese Indoor National Grand Prix Final (Hangzhou, CHN)														<i>CAA Hurdle Development (2019)</i>				

WR=World Rec. AR=Area Rec. OR=Olympic Rec. CR=Championship Rec. NR=National Rec. PB=Personal Best DQ=Disqualified DV=Drug Violation

date	20-Mar-19	time	2.64	3.71	4.79	5.82	6.91								7.85	4 / 3			
reaction time		interval		1.07	1.08	1.03	1.09								0.94				3.18
		velocity	5.20	8.54	8.46	8.87	8.39								10.34	7.64			8.62
A-FINAL - 2019 Chinese Indoor National Grand Prix 4 (Xi'an, CHN)																			
date	4-Mar-19	time	2.64	3.72	4.78	5.82	6.88								7.82	4 / 2			
reaction time		interval		1.08	1.06	1.04	1.06								0.94	PB			3.18
		velocity	5.20	8.46	8.62	8.79	8.62								10.34	7.67			8.62
FINAL - 2018 Chinese National U20 Championships (Nanchang, CHN) (99.1cm) Zhang (2019) - comparative analysis characteristics Chinese elite 110m hurdles in different age																			
date	13-May-18	time	2.63	3.69	4.74	5.79	6.84	7.89	8.93	10.00	11.07	12.17			13.40	1 / 1			
reaction time		interval		1.06	1.05	1.05	1.05	1.05	1.04	1.07	1.07	1.10	1.23						3.16 3.14 3.24
wind	1.0 m/s	velocity	5.22	8.62	8.70	8.70	8.70	8.70	8.79	8.54	8.54	8.31	11.40	8.21					8.68 8.73 8.46
Nishi, Kyohei (JPN) (1995)																			
			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2023 Fuse Sprint (Tottori, JPN) Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season																			
date	25-Jun-23	time	2.66	3.77	4.85	5.95	7.03	8.11	9.20	10.31	11.40	12.49			13.98	2 / 6			
reaction time	0.179	interval		1.11	1.08	1.10	1.08	1.08	1.09	1.11	1.09	1.09	1.49						3.29 3.25 3.29
wind	1.1 m/s	velocity	5.16	8.23	8.46	8.31	8.46	8.46	8.39	8.23	8.39	8.39	9.41	7.87					8.33 8.44 8.33
FINAL - 2016 Kyushu Championships (Kita-Kyushu, JPN) (2016.08.30) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en																			
date	27-Aug-16	time	2.70	3.81	4.95	6.05	7.15	8.28	9.39	10.51	11.65	12.81			14.32	4 / 1			
reaction time		interval		1.11	1.14	1.10	1.10	1.13	1.11	1.12	1.14	1.16	1.51						3.35 3.34 3.42
wind	-2.1 m/s	velocity	5.08	8.23	8.02	8.31	8.31	8.09	8.23	8.16	8.02	7.88	9.28	7.68					8.19 8.21 8.02
Nishi, Tetsuro (JPN) (2004)																			
			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2021 Japanese U18 National Championships (Matsuyama, JPN) (99cm) Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season																			
date	22-Oct-21	time	2.61	3.68	4.72	5.75	6.77	7.80	8.83	9.87	10.92	11.98			13.48	5 / 1			
reaction time	0.131	interval	7 steps	1.07	1.04	1.03	1.02	1.03	1.03	1.04	1.05	1.06	1.50						3.14 3.08 3.15
wind	-0.6 m/s	velocity	5.26	8.54	8.79	8.87	8.96	8.87	8.87	8.79	8.70	8.62	9.35	8.16					8.73 8.90 8.70
FINAL - 2021 Japanese High School National Championships (Fukui, JPN) Shibayama (2021) - national high school and U20 national championships																			
date	01-Aug-21	time	2.65	3.74	4.79	5.85	6.89	7.95	9.00	10.07	11.14	12.23			13.69	3 / 1			
reaction time	0.128	interval	7 steps	1.09	1.05	1.06	1.04	1.06	1.05	1.07	1.07	1.09	1.46	PB					3.20 3.15 3.23
wind	1.4 m/s	velocity	5.18	8.39	8.70	8.62	8.79	8.62	8.70	8.54	8.54	8.39	9.60	8.04					8.57 8.70 8.49
Nishizawa, Masanori (JPN) (1987)																			
			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2017 Nambu Memorial (Sapporo, JPN) (2017) - tfdata-store.com/2017/07/12/post-1025/																			
date	09-Jul-17	time	2.71	3.81	4.91	6.02	7.11	8.20	9.30	10.41	11.56	12.72			14.25	9 / 5			
reaction time		interval		1.10	1.10	1.11	1.09	1.09	1.10	1.11	1.15	1.16	1.53						3.31 3.28 3.42
wind	2.7 m/s	velocity	5.06	8.31	8.31	8.23	8.39	8.39	8.31	8.23	7.95	7.88	9.16	7.72					8.28 8.36 8.02
Semi-Final 1 - 2017 Japanese National Championships (Osaka, JPN) (2017) - tfdata-store.com/2017/07/13/post-1040/																			
date	24-Jun-17	time	2.66	3.75	4.82	5.91	6.97	8.03	9.11	10.20	11.32	12.41			13.87	3 / 7			
reaction time	0.133	interval		1.09	1.07	1.09	1.06	1.06	1.08	1.09	1.12	1.09	1.46						3.25 3.20 3.30
wind	0.6 m/s	velocity	5.16	8.39	8.54	8.39	8.62	8.62	8.46	8.39	8.16	8.39	9.60	7.93					8.44 8.57 8.31
Heat 2 - 2017 Japanese National Championships (Osaka, JPN) (2017) - tfdata-store.com/2017/07/13/post-1040/																			
date	24-Jun-17	time	2.63	3.71	4.79	5.86	6.93	8.01	9.08	10.18	11.28	12.39			13.83	4 / 4			
reaction time	0.138	interval		1.08	1.08	1.07	1.07	1.08	1.07	1.10	1.10	1.11	1.44						3.23 3.22 3.31
wind	0.0 m/s	velocity	5.22	8.46	8.46	8.54	8.54	8.46	8.54	8.31	8.31	8.23	9.74	7.95					8.49 8.52 8.28
FINAL - 2015 Japanese National Championships (Niigata, JPN) Takashima (2015) - race analysis of 110m & 100m hurdles in Japan- results 2015 competitions																			
date	28-Jun-15	time	2.66	3.76	4.85	5.94	7.02	8.10	9.19	10.29	11.40	12.51			13.93	2 / 7			
reaction time	0.121	interval		1.10	1.09	1.09	1.08	1.08	1.09	1.10	1.11	1.11	1.42						3.28 3.25 3.32
wind	-1.4 m/s	velocity	5.16	8.31	8.39	8.39	8.46	8.46	8.39	8.31	8.23	8.23	9.87	7.90					8.36 8.44 8.26
Niwa, Hayato (JPN) (1999)																			
			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Semi-Final 1 - 2016 Japanese National Youth Championships (Mizuho, JPN) (91cm) (2016.11.08) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en																			
date	21-Oct-16	time	2.71	3.81	4.89	5.97	7.04	8.11	9.17	10.24	11.33	12.50			14.01	3 / 2			
reaction time		interval		1.10	1.08	1.08	1.07	1.07	1.06	1.07	1.09	1.17	1.51						3.26 3.20 3.33
wind	1.0 m/s	velocity	5.06	8.31	8.46	8.46	8.54	8.54	8.62	8.54	8.39	7.81	9.28	7.85					8.41 8.57 8.23
Heat 2 - 2016 Japanese National Youth Championships (Mizuho, JPN) (91cm) (2016.11.07) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en																			
date	21-Oct-16	time	2.69	3.81	4.91	5.98	7.04	8.10	9.18	10.28	11.38	12.50			14.00	5 / 1			
reaction time		interval		1.12	1.10	1.07	1.06	1.06	1.08	1.10	1.10	1.12	1.50						3.29 3.20 3.32
wind	2.3 m/s	velocity	5.10	8.16	8.31	8.54	8.62	8.62	8.46	8.31	8.31	8.16	9.35	7.86					8.33 8.57 8.26
Noga, Artur (POL) (1988)																			
			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2017 Golden Spike (Ostrava, CZE) (TV Analysis) Henson (2020) - Athlete First: 2017 year end hurdle report																			
date	28-Jun-17	time	2.56	3.64	4.70	5.72	6.76	7.80	8.84	9.90	10.98	12.10			13.62	1 / 8			
reaction time	0.164	interval	7 steps	1.08	1.06	1.02	1.04	1.04	1.04	1.06	1.08	1.12	1.52						3.16 3.12 3.26
wind	0.6 m/s	velocity	5.36	8.46	8.62	8.96	8.79	8.79	8.79	8.62	8.46	8.16	9.22	8.08					8.68 8.79 8.41

FINAL - 2012 IAAF World Indoor Championships (Istanbul, TUR) (TV Analysis)

date	11-Mar-12	time	2.60	3.68	4.68	5.70	6.76												
reaction time	0.157	interval		1.08	1.00	1.02	1.06												
		velocity	5.28	8.46	9.14	8.96	8.62												

Henson (2020) - Athlete First: 2012 Aries Merritt world record season

Semi-Final 1 - 2009 IAAF World Championships (Berlin, GER)

date	20-Aug-09	time	2.67	3.73	4.77	5.78	6.79	7.91	8.84	9.89	10.93	12.01	13.43	7 / 4					
reaction time	0.174	interval		1.06	1.04	1.01	1.01	1.12	0.93	1.05	1.04	1.08	1.42						
wind	0.9 m/s	velocity	5.14	8.62	8.79	9.05	9.05	8.16	9.83	8.70	8.79	8.46	9.87	8.19					

*Graubner (2009) - biomechanical analyses at the 12th IAAF world championships***Heat 3 - 2009 IAAF World Championships (Berlin, GER)**

date	19-Aug-09	time	2.70	3.77	4.83	5.87	6.90	7.93	8.97	10.02	11.07	12.14	13.56	3 / 3					
reaction time	0.176	interval		1.07	1.06	1.04	1.03	1.03	1.04	1.05	1.05	1.07	1.42						
wind	0.2 m/s	velocity	5.08	8.54	8.62	8.79	8.87	8.87	8.79	8.70	8.70	8.54	9.87	8.11					

*Graubner (2009) - biomechanical analyses at the 12th IAAF world championships***FINAL - 2008 Olympic Games (Beijing, CHN)**

date	21-Aug-08	time	2.66	3.70	4.74	5.77	6.78	7.81	8.84	9.87	10.94	12.00	13.36	4 / 5					
reaction time	0.169	interval		1.04	1.04	1.03	1.01	1.03	1.03	1.03	1.07	1.06	1.36						
wind	0.1 m/s	velocity	5.16	8.79	8.79	8.87	9.05	8.87	8.87	8.87	8.54	8.62	10.31	8.23					

*Tsiokanos (2018) - race pattern of men's 110m hurdles- time analysis of olympic hurdle performance***Nomoto, Hideki (JPN) (1984)****FINAL - 2009 Osaka Grand Prix (Osaka, JPN)**

date	09-May-09	time	2.61	3.69	4.77	5.83	6.90	7.97	9.05	10.15	11.25	12.37	13.94	/ 5					
reaction time		interval		1.08	1.08	1.06	1.07	1.07	1.08	1.10	1.10	1.12	1.57						
wind	0.2 m/s	velocity	5.26	8.46	8.46	8.62	8.54	8.54	8.46	8.31	8.31	8.16	8.93	7.89					

*Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdles***FINAL - 2009 Mikio Oda Memorial (Hiroshima, JPN)**

date	29-Apr-09	time	2.66	3.74	4.82	5.88	6.93	8.00	9.08	10.16	11.27	12.40	13.99	/ 8					
reaction time		interval		1.08	1.08	1.06	1.05	1.07	1.08	1.08	1.11	1.13	1.59						
wind	1.9 m/s	velocity	5.16	8.46	8.46	8.62	8.70	8.54	8.46	8.46	8.23	8.09	8.82	7.86					

*Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdles***Heat 1 - 2008 Mikio Oda Memorial (Hiroshima, JPN)**

date	29-Apr-08	time	2.49	3.60	4.67	5.73	6.81	7.90	8.99	10.10	11.22	12.35	14.04	/ 4					
reaction time		interval		1.11	1.07	1.06	1.08	1.09	1.09	1.11	1.12	1.13	1.69						
wind	0.1 m/s	velocity	5.51	8.23	8.54	8.62	8.46	8.39	8.39	8.23	8.16	8.09	8.30	7.83					

*Akirabun (2009) - race analysis of 2008 men's and women's 100m and 110m & 100m hurdles***Nomoto, Syuusei (JPN) (1995)****FINAL - 2023 Fuse Sprint (Tottori, JPN)**

date	25-Jun-23	time	2.53	3.58	4.64	5.66	6.69	7.71	8.76	9.80	10.84	11.90	13.28	7 / 1					
reaction time	0.148	interval	7 steps	1.05	1.06	1.02	1.03	1.02	1.05	1.04	1.04	1.06	1.38	PB					
wind	1.1 m/s	velocity	5.42	8.70	8.62	8.96	8.87	8.96	8.70	8.79	8.79	8.62	10.16	8.28					

*Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season***FINAL - 2022 Seiko Golden Grand Prix (Tokyo, JPN)**

date	08-May-22	time	2.57	3.70	4.79	5.83	6.88	7.91	8.97	10.05	11.14	12.23	13.68	3 / 4					
reaction time	0.156	interval	7 steps	1.13	1.09	1.04	1.05	1.03	1.06	1.08	1.09	1.09	1.45						
wind	0.1 m/s	velocity	5.34	8.09	8.39	8.79	8.70	8.87	8.62	8.46	8.39	8.39	9.67	8.04					

*Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season***FINAL - 2022 Mikio Oda Memorial (Hiroshima, JPN)**

date	29-Apr-22	time	2.59	3.66	4.73	5.79	6.86	7.92	8.98	10.08	11.18	12.31	13.83	3 / 3					
reaction time	0.157	interval	7 steps	1.07	1.07	1.06	1.07	1.06	1.06	1.10	1.10	1.13	1.52						
wind	-1.5 m/s	velocity	5.30	8.54	8.54	8.62	8.54	8.62	8.62	8.31	8.31	8.09	9.22	7.95					

*Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season***Semi-Final 1 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)**

date	20-Mar-22	time	2.40	3.46	4.50	5.55	6.60												
reaction time	0.127	interval	7 steps	1.06	1.04	1.05	1.05												
		velocity	5.72	8.62	8.79	8.70	8.70												

Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record

FINAL - 2021 Japanese National Championships (Osaka, JPN)

date	27-Jun-21	time	2.54	3.60	4.65	5.68	6.71	7.75	8.79	9.85	10.90	11.97	13.38	4 / 4					
reaction time	0.154	interval	7 steps	1.06	1.05	1.03	1.03	1.04	1.04	1.06	1.05	1.07	1.41	PB					
wind	1.2 m/s	velocity	5.40	8.62	8.70	8.87	8.87	8.79	8.79	8.62	8.70	8.54	9.94	8.22					

*Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season***FINAL - 2021 Fuse Sprint (Tottori, JPN)**

date	06-Jun-21	time	2.57	3.62	4.68	5.75	6.80	7.85	8.93	10.00	11.11	12.22	13.66	8 / 4					
reaction time	0.144	interval	7 steps	1.05	1.06	1.07	1.05	1.05	1.08	1.07	1.11	1.11	1.44						
wind	1.8 m/s	velocity	5.34	8.70	8.62	8.54	8.70	8.70	8.46	8.54	8.23	8.23	9.74	8.05					

*Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season***FINAL - 2020 Michitaka Kinami Memorial (Osaka, JPN)**

date	24-Oct-20	time	2.53	3.59	4.65	5.69	6.75	7.81	8.88	9.95	11.03	12.12	13.55	4 / 2					
reaction time		interval	7 steps	1.06	1.06	1.04	1.06	1.06	1.07	1.07	1.08	1.09	1.43						
wind	0.6 m/s	velocity	5.42	8.62	8.62	8.79	8.62	8.62	8.54	8.54	8.46	8.39	9.80	8.12					

Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season

FINAL - 2020 Japanese National Championships (Niigata, JPN)

date	03-Oct-20	time	2.54	3.63	4.68	5.73	6.78	7.83	8.90	9.97	11.05	12.13	13.55	8 / 4			
reaction time	0.145	interval	7 steps	1.09	1.05	1.05	1.05	1.05	1.07	1.07	1.08	1.08	1.42		3.19	3.17	3.23
wind	-0.1 m/s	velocity	5.40	8.39	8.70	8.70	8.70	8.70	8.54	8.54	8.46	8.46	9.87	8.12	8.60	8.65	8.49

Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season

FINAL - 2020 Athlete Night Games (Fukui, JPN)

date	29-Aug-20	time	2.55	3.62	4.68	5.71	6.75	7.80	8.84	9.91	10.99	12.06	13.45	7 / 4				
reaction time		interval	7 steps	1.07	1.06	1.03	1.04	1.05	1.04	1.07	1.08	1.07	1.39		PB	3.16	3.13	3.22
wind	1.4 m/s	velocity	5.38	8.54	8.62	8.87	8.79	8.70	8.79	8.54	8.46	8.54	10.09	8.18		8.68	8.76	8.52

Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season

FINAL - 2017 Nambu Memorial (Sapporo, JPN)

date	09-Jul-17	time	2.61	3.70	4.75	5.79	6.84	7.91	8.96	10.04	11.11	12.22	13.59	7 / 1				
reaction time		interval	7 steps	1.09	1.05	1.04	1.05	1.07	1.05	1.08	1.07	1.11	1.37			3.18	3.17	3.26
wind	2.7 m/s	velocity	5.26	8.39	8.70	8.79	8.70	8.54	8.70	8.46	8.54	8.23	10.23	8.09		8.62	8.65	8.41

(2017) - tfdata-store.com/2017/07/12/post-1025/

Semi-Final 1 - 2017 Japanese National Championships (Osaka, JPN)

date	24-Jun-17	time	2.64	3.72	4.81	5.86	6.91	7.98	9.04	10.12	11.21	12.32	13.70	9 / 5				
reaction time	0.156	interval	7 steps	1.08	1.09	1.05	1.05	1.07	1.06	1.08	1.09	1.11	1.38			3.22	3.18	3.28
wind	0.6 m/s	velocity	5.20	8.46	8.39	8.70	8.70	8.54	8.62	8.46	8.39	8.23	10.16	8.03		8.52	8.62	8.36

(2017) - tfdata-store.com/2017/07/13/post-1040/

Heat 2 - 2017 Japanese National Championships (Osaka, JPN)

date	24-Jun-17	time	2.59	3.71	4.77	5.85	6.93	8.02	9.10	10.18	11.30	12.40	13.81	2 / 3				
reaction time	0.154	interval	7 steps	1.12	1.06	1.08	1.08	1.09	1.08	1.08	1.12	1.10	1.41			3.26	3.25	3.30
wind	0.0 m/s	velocity	5.30	8.16	8.62	8.46	8.46	8.39	8.46	8.46	8.16	8.31	9.94	7.97		8.41	8.44	8.31

(2017) - tfdata-store.com/2017/07/13/post-1040/

FINAL - 2017 Mikio Oda Memorial (Hiroshima, JPN)

date	29-Apr-17	time	2.61	3.67	4.75	5.80	6.85	7.93	8.99	10.07	11.13	12.20	22.95	1 / 8				
reaction time		interval	7 steps	1.06	1.08	1.05	1.05	1.08	1.06	1.08	1.06	1.07	10.75			3.19	3.19	3.21
wind	1.5 m/s	velocity	5.26	8.62	8.46	8.70	8.70	8.46	8.62	8.46	8.62	8.54	1.30	4.79		8.60	8.60	8.54

(2017) - tfdata-store.com/2017/05/01/458/

FINAL - 2017 Tokyo Six School Meeting (Tokyo, JPN)

date	08-Apr-17	time	2.60	3.70	4.76	5.86	6.94	8.02	9.10	10.18	11.28	12.39	13.80	4 / 3				
reaction time		interval	7 steps	1.10	1.06	1.10	1.08	1.08	1.08	1.10	1.11	1.41	PB			3.26	3.24	3.29
wind	0.5 m/s	velocity	5.28	8.31	8.62	8.31	8.46	8.46	8.46	8.46	8.31	8.23	9.94	7.97		8.41	8.46	8.33

(2017) - tfdata-store.com/2017/04/10/post-342/

Heat 2 - 2017 Tokyo Six School Meeting (Tokyo, JPN)

date	08-Apr-17	time	2.63	3.72	4.80	5.89	6.97	8.05	9.14	10.22	11.35	12.47	13.91	5 / 2					
reaction time		interval	7 steps	1.09	1.08	1.09	1.08	1.08	1.09	1.08	1.13	1.12	1.44			PB	3.26	3.25	3.33
wind	0.8 m/s	velocity	5.22	8.39	8.46	8.39	8.46	8.46	8.39	8.46	8.09	8.16	9.74	7.91		8.41	8.44	8.23	

(2017) - tfdata-store.com/2017/04/10/post-342/

Nosmy, Philip (SWE) (1982)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

FINAL - 2013 Windsprint (Sundsvall, SWE)

date	28-Jul-13	time	2.62	3.68	4.73	5.78	6.81	7.86	8.91	9.96	11.02	12.08	13.49	3 / 1				
reaction time		interval		1.06	1.05	1.05	1.03	1.05	1.05	1.05	1.06	1.06	1.41			3.16	3.13	3.17
wind	1.7 m/s	velocity	5.24	8.62	8.70	8.70	8.87	8.70	8.70	8.70	8.62	8.62	9.94	8.15		8.68	8.76	8.65

(2013) - www.ssg.se/windsprint/Splittider/

Semi-Final 1 - 2013 European Indoor Championships (Göteborg, SWE)

date	01-Mar-13	time	2.62	3.71	4.77	5.82	6.86						7.78	2 / 6			
reaction time	0.153	interval		1.09	1.06	1.05	1.04						0.92			3.20	
		velocity	5.24	8.39	8.62	8.70	8.79						10.57	7.71		8.57	

Blomkvist (2013) - www.elitlandslag.se/SprintHäck/KortHäck.aspx

Heat 2 - 2013 European Indoor Championships (Göteborg, SWE)

date	01-Mar-13	time	2.63	3.73	4.80	5.84	6.89						7.76	1 / 4			
reaction time	0.162	interval		1.10	1.07	1.04	1.05						0.87			3.21	
		velocity	5.22	8.31	8.54	8.79	8.70						11.17	7.73		8.54	

Blomkvist (2013) - www.elitlandslag.se/SprintHäck/KortHäck.aspx

FINAL - 2012 Windsprint (Sundsvall, SWE)

date	17-Jun-12	time	2.65	3.74	4.76	5.81	6.84	7.88	8.94	9.99	11.04	12.13	13.56	5 / 2				
reaction time		interval		1.09	1.02	1.05	1.03	1.04	1.06	1.05	1.05	1.09	1.43			3.16	3.13	3.19
wind	1.1 m/s	velocity	5.18	8.39	8.96	8.70	8.87	8.79	8.62	8.70	8.70	8.39	9.80	8.11		8.68	8.76	8.60

Blomkvist (2012) - www.sub13.se

Race 1 - 2011 European Team Championships (Stockholm, SWE)

date	19-Jun-11	time	2.60	3.68	4.72	5.80	6.84	7.92	8.98	10.06	11.16	12.24	13.73	5 / 2				
reaction time	0.174	interval		1.08	1.04	1.08	1.04	1.08	1.06	1.08	1.10	1.08	1.49			3.20	3.18	3.26
wind	-0.8 m/s	velocity	5.28	8.46	8.79	8.46	8.79	8.46	8.62	8.46	8.31	8.46	9.41	8.01		8.57	8.62	8.41

Blomkvist (2011) - www.sub13.se

FINAL - 2011 Folksam GP (Göteborg, SWE)

date	11-Jun-11	time	2.52	3.60	4.68	5.72	6.78	7.82	8.88	9.94	11.00	12.10	13.71	1 / 4				
reaction time		interval		1.08	1.08	1.04	1.06	1.04	1.06	1.06	1.06	1.10	1.61			3.20	3.16	3.22
wind	0.6 m/s	velocity	5.44	8.46	8.46	8.79	8.62	8.79	8.62	8.62	8.62	8.31	8.71	8.02		8.57	8.68	8.52

Blomkvist (2011) - www.sub13.se

FINAL - 2011 Swedish National Indoor Championships (Sätra, SWE)

date	28-Feb-11	time	2.66	3.71	4.77	5.80	6.83						7.73	1 / 1			
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Blomkvist (2011) - www.sub13.se

reaction time	0.134	interval	1.05	1.05	1.04	1.01	1.03	1.03	1.09	1.05	1.09	1.47			3.14	3.07	3.23	
wind	0.0 m/s	velocity	5.36	8.70	8.70	8.79	9.05	8.87	8.87	8.39	8.70	8.39	9.54	8.17	8.73	8.93	8.49	
FINAL - 1998 European Championships (Budapest, HUN)													<i>Sanchez (1998) - Budapest '98: análisis de la carreras con villas</i>					
date	22-Aug-98	time	2.62	3.66	4.71	5.76	6.81	7.83	8.87	9.94	11.02	12.12	13.54	1 / 8				
reaction time		interval	1.04	1.05	1.05	1.05	1.02	1.04	1.07	1.08	1.10	1.42			3.14	3.11	3.25	
wind	1.5 m/s	velocity	5.24	8.79	8.70	8.70	8.70	8.96	8.79	8.54	8.46	8.31	9.87	8.12	8.73	8.82	8.44	
Nunley, Booker (USA) (1990)																		
FINAL - 2007 USATF National Junior Championships (Indianapolis, IN) (99cm)													<i>USATF Men's Hurdle Development (2007)</i>					
date	21-Jun-07	time	2.69	3.77	4.85	5.95	7.01	8.14	9.26	10.39	11.51	12.68	14.28	/ 8				
reaction time		interval	1.08	1.08	1.10	1.06	1.13	1.12	1.13	1.12	1.12	1.17	1.60		3.26	3.31	3.42	
wind	2.7 m/s	velocity	5.10	8.46	8.46	8.31	8.62	8.09	8.16	8.09	8.16	7.81	8.76	7.70	8.41	8.28	8.02	
Obasuyi, Michael (BEL) (1999)																		
FINAL - 2024 Memorial van damme (Brussels, BEL)													<i>Omega Timing (2024) - diamond league race analysis</i>					
date	13-Sep-24	time	2.44	3.51	4.53	5.54	6.56	7.56	8.61	9.65	10.70	11.75	13.31	8 / 5				
reaction time	0.160	interval	7 steps	1.07	1.02	1.01	1.02	1.00	1.05	1.04	1.05	1.05	1.56		3.10	3.07	3.14	
wind	0.4 m/s	velocity	5.62	8.54	8.96	9.05	8.96	9.14	8.70	8.79	8.70	8.70	8.99	8.26	8.85	8.93	8.73	
Semi-Final 1 - 2024 Olympic Games (Paris, FRA)													<i>Paris 2024 Olympc Games - Results Book (2024)</i>					
date	07-Aug-24	time	2.42	3.50	4.55	5.58	6.60	7.63	8.66	9.70	10.75	11.80	13.36	8 / 5				
reaction time	0.149	interval	7 steps	1.08	1.05	1.03	1.02	1.03	1.03	1.04	1.05	1.05	1.56		3.16	3.08	3.14	
wind	0.1 m/s	velocity	5.67	8.46	8.70	8.87	8.96	8.87	8.87	8.79	8.70	8.70	8.99	8.23	8.68	8.90	8.73	
Heat 2 - 2024 Olympic Games (Paris, FRA)													<i>Paris 2024 Olympc Games - Results Book (2024)</i>					
date	04-Aug-24	time	2.40	3.47	4.52	5.56	6.59	7.62	8.67	9.70	10.75	11.81	13.41	6 / 3				
reaction time	0.151	interval	7 steps	1.07	1.05	1.04	1.03	1.03	1.05	1.03	1.05	1.06	1.60		3.16	3.11	3.14	
wind	1.2 m/s	velocity	5.72	8.54	8.70	8.79	8.87	8.87	8.70	8.87	8.70	8.62	8.76	8.20	8.68	8.82	8.73	
FINAL - 2024 Meeting de Paris (Paris, FRA)													<i>Omega Timing (2024) - diamond league race analysis</i>					
date	07-Jul-24	time	2.41	3.47	4.49	5.50	6.51	7.54	8.56	9.59	10.64	11.70	13.29	7 / 6				
reaction time	0.151	interval	7 steps	1.06	1.02	1.01	1.01	1.03	1.02	1.03	1.05	1.06	1.59		3.09	3.06	3.14	
wind	-0.6 m/s	velocity	5.69	8.62	8.96	9.05	9.05	8.87	8.96	8.87	8.70	8.62	8.82	8.28	8.87	8.96	8.73	
Heat 1 - 2024 Meeting de Paris (Paris, FRA)													<i>Omega Timing (2024) - diamond league race analysis</i>					
date	07-Jul-24	time	2.43	3.50	4.53	5.53	6.54	7.56	8.58	9.60	10.64	11.68	13.22	7 / 3				
reaction time	0.129	interval	7 steps	1.07	1.03	1.00	1.01	1.02	1.02	1.02	1.04	1.04	1.54		3.10	3.05	3.10	
wind	0.1 m/s	velocity	5.65	8.54	8.87	9.14	9.05	8.96	8.96	8.96	8.79	8.79	9.10	8.32	8.85	8.99	8.85	
FINAL - 2024 European Athletics Championships (Roma, ITA) (TV Analysis)													<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>					
date	08-Jun-24	time	2.60	3.73	4.78	5.80	6.83	7.83	8.85	9.88	10.93	12.00	13.46	8 / 6				
reaction time	0.170	interval	7 steps	1.13	1.05	1.02	1.03	1.00	1.02	1.03	1.05	1.07	1.46		3.20	3.05	3.15	
wind	0.6 m/s	velocity	5.28	8.09	8.70	8.96	8.87	9.14	8.96	8.87	8.70	8.54	9.60	8.17	8.57	8.99	8.70	
FINAL - 2024 World Athletics Indoor Championships (Glasgow, GBR) (TV Analysis)													<i>Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record</i>					
date	02-Mar-24	time	2.57	3.61	4.64	5.66	6.65						7.55	8 / 7				
reaction time	0.144	interval	7 steps	1.04	1.03	1.02	0.99						7.55		3.09			
		velocity	5.34	8.79	8.87	8.96	9.23						1.86	7.95	8.87			
FINAL - 2024 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)													<i>Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record</i>					
date	10-Feb-24	time	2.50	3.52	4.52	5.56	6.58						7.61	1 / 5				
reaction time	0.159	interval	7 steps	1.02	1.00	1.04	1.02						7.61		3.06			
		velocity	5.49	8.96	9.14	8.79	8.96						1.84	7.88	8.96			
Semi-Final 3 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)													<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>					
date	20-Mar-22	time	2.56	3.60	4.63	5.63	6.66						7.58	5 / 4				
reaction time	0.130	interval	7 steps	1.04	1.03	1.00	1.03						0.92	PB	3.07			
		velocity	5.36	8.79	8.87	9.14	8.87						10.57	7.92	8.93			
Heat 2 - 2022 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)													<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>					
date	17-Feb-22	time	2.48	3.57	4.60	5.62	6.60						7.65	2 / 5				
reaction time	0.150	interval	7 steps	1.09	1.03	1.02	0.98						1.05		3.14			
		velocity	5.53	8.39	8.87	8.96	9.33						9.26	7.84	8.73			
FINAL - 2021 Villa de Madrid (Madrid, ESP) (TV Analysis)													<i>Henson (2021) - men's 60m hurdles world record season - Grant Holloway</i>					
date	24-Feb-21	time	2.45	3.50	4.54	5.58	6.61						7.69	8 / 5				
reaction time		interval	7 steps	1.05	1.04	1.04	1.03						1.08		3.13			
		velocity	5.60	8.70	8.79	8.79	8.87						9.00	7.80	8.76			
Heat 2 - 2021 Villa de Madrid (Madrid, ESP) (TV Analysis)													<i>Henson (2021) - men's 60m hurdles world record season - Grant Holloway</i>					
date	24-Feb-21	time	2.60	3.66	4.73	5.75	6.78						7.74	3 / 3				
reaction time	0.172	interval	7 steps	1.06	1.07	1.02	1.03						0.96		3.15			

reaction time	0.161	interval	1.06	1.06	1.03	1.05	1.07	1.06	1.07	1.08	1.10	1.47	=PB	3.15	3.18	3.25		
wind	1.2 m/s	velocity	5.28	8.62	8.62	8.87	8.70	8.54	8.62	8.54	8.46	8.31	9.54	8.06	8.70	8.62	8.44	
FINAL - 2018 Japanese National Championships (Yamaguchi, JPN)														<i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>				
date	24-Jun-18	time	2.62	3.69	4.75	5.78	6.86	7.85	9.03	10.11	11.20	12.32	13.80	9 / 5				
reaction time	0.183	interval	7 steps	1.07	1.06	1.03	1.08	0.99	1.18	1.08	1.09	1.12	1.48		3.16	3.25	3.29	
wind	0.7 m/s	velocity	5.24	8.54	8.62	8.87	8.46	9.23	7.75	8.46	8.39	8.16	9.47	7.97	8.68	8.44	8.33	
FINAL - 2018 Fuse Sprint (Tottori, JPN)														<i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>				
date	03-Jun-18	time	2.58	3.64	4.69	5.73	6.77	7.82	8.89	9.98	11.07	12.18	13.71	/ 3				
reaction time		interval		1.06	1.05	1.04	1.04	1.05	1.07	1.09	1.09	1.11	1.53		3.15	3.16	3.29	
wind	0.5 m/s	velocity	5.32	8.62	8.70	8.79	8.79	8.70	8.54	8.39	8.39	8.23	9.16	8.02	8.70	8.68	8.33	
Heat 3 - 2017 Japanese National Championships (Osaka, JPN)														<i>(2017) - tfdata-store.com/2017/07/13/post-1040/</i>				
date	24-Jun-17	time	2.68	3.77	4.83	5.90	6.95	8.04	9.15	10.27	11.39	12.51	14.03	6 / 4				
reaction time	0.155	interval	7 steps	1.09	1.06	1.07	1.05	1.09	1.11	1.12	1.12	1.12	1.52		3.22	3.25	3.36	
wind	0.5 m/s	velocity	5.12	8.39	8.62	8.54	8.70	8.39	8.23	8.16	8.16	8.16	9.22	7.84	8.52	8.44	8.16	
FINAL - 2017 East Japan Business Athletics Championships (Yuma, JPN)														<i>(2017) - tfdata-store.com/2017/05/20/post-579/</i>				
date	20-May-17	time	2.59	3.66	4.73	5.83	6.88	7.96	9.05	10.16	11.30	12.43	13.95	5 / 4				
reaction time		interval	7 steps	1.07	1.07	1.10	1.05	1.08	1.09	1.11	1.14	1.13	1.52		3.24	3.22	3.38	
wind	1.1 m/s	velocity	5.30	8.54	8.54	8.31	8.70	8.46	8.39	8.23	8.02	8.09	9.22	7.89	8.46	8.52	8.11	
B FINAL - 2017 Mikio Oda Memorial (Hiroshima, JPN)														<i>(2017) - tfdata-store.com/2017/05/01/458/</i>				
date	29-Apr-17	time	2.64	3.74	4.83	5.90	6.98	8.07	9.16	10.25	11.39	12.52	14.04	8 / 1				
reaction time		interval	7 steps	1.10	1.09	1.07	1.08	1.09	1.09	1.09	1.14	1.13	1.52		3.26	3.26	3.36	
wind	-1.5 m/s	velocity	5.20	8.31	8.39	8.54	8.46	8.39	8.39	8.39	8.02	8.09	9.22	7.83	8.41	8.41	8.16	
Oguchi, Aoba (JPN) (2006)																		
			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2024 Japanese National High School Championships (Fukuoka, JPN)														<i>Takashima (2024) - national high school sports festival - biomechanics data</i>				
date	01-Aug-24	time	2.70	3.82	4.89	5.98	7.05	8.14	9.23	10.34	11.47	12.59	14.07	8 / 4				
reaction time	0.134	interval		1.12	1.07	1.09	1.07	1.09	1.09	1.11	1.13	1.12	1.48	PB		3.28	3.25	3.36
wind	-0.7 m/s	velocity	5.08	8.16	8.54	8.39	8.54	8.39	8.39	8.23	8.09	8.16	9.47	7.82		8.36	8.44	8.16
Ohashi, Yuji (JPN) (1983)																		
			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2009 Nambu Chuhei Memorial (Sapporo, JPN)														<i>Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdles</i>				
date	09-Jul-09	time	2.63	3.70	4.76	5.81	6.85	7.91	8.97	10.04	11.14	12.25	13.72	/ 2				
reaction time		interval		1.07	1.06	1.05	1.04	1.06	1.06	1.07	1.10	1.11	1.47			3.18	3.16	3.28
wind	1.2 m/s	velocity	5.22	8.54	8.62	8.70	8.79	8.62	8.62	8.54	8.31	8.23	9.54	8.02		8.62	8.68	8.36
FINAL - 2009 Japanese National Championships (Hiroshima, JPN)														<i>Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdles</i>				
date	27-Jun-09	time	2.66	3.73	4.76	5.81	6.86	7.90	8.99	10.07	11.17	12.28	13.81	7 / 3				
reaction time		interval		1.07	1.03	1.05	1.05	1.04	1.09	1.08	1.10	1.11	1.53			3.15	3.18	3.29
wind	1.6 m/s	velocity	5.16	8.54	8.87	8.70	8.70	8.79	8.39	8.46	8.31	8.23	9.16	7.97		8.70	8.62	8.33
Heat 3 - 2009 Japanese National Championships (Hiroshima, JPN)														<i>Akirabun (2010) - analysis of speed and stride on straight track events in the 2009 season</i>				
date	26-Jun-09	time	2.46	3.55	4.61	5.65	6.70	7.76	8.83	9.90	11.00	12.12	13.78	3 / 1				
reaction time		interval		1.09	1.06	1.04	1.05	1.06	1.07	1.07	1.10	1.12	1.66			3.19	3.18	3.29
wind	0.6 m/s	velocity	5.58	8.39	8.62	8.79	8.70	8.62	8.54	8.54	8.31	8.16	8.45	7.98		8.60	8.62	8.33
FINAL - 2009 Mikio Oda Memorial (Hiroshima, JPN)														<i>Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdles</i>				
date	29-Apr-09	time	2.62	3.71	4.75	5.83	6.87	7.95	9.01	10.08	11.18	12.29	13.76	/ 3				
reaction time		interval		1.09	1.04	1.08	1.04	1.08	1.06	1.07	1.10	1.11	1.47			3.21	3.18	3.28
wind	1.9 m/s	velocity	5.24	8.39	8.79	8.46	8.79	8.46	8.62	8.54	8.31	8.23	9.54	7.99		8.54	8.62	8.36
FINAL - 2008 Nambu Chuhei Memorial (Harodate, JPN)														<i>Akirabun (2009) - race analysis of 2008 men's and women's 100m and 110m & 100m hurdles</i>				
date	06-Jul-08	time	2.47	3.55	4.60	5.64	6.70	7.74	8.80	9.86	10.96	12.07	13.73	/ 2				
reaction time		interval		1.08	1.05	1.04	1.06	1.04	1.06	1.06	1.10	1.11	1.66			3.17	3.16	3.27
wind	0.5 m/s	velocity	5.55	8.46	8.70	8.79	8.62	8.79	8.62	8.62	8.31	8.23	8.45	8.01		8.65	8.68	8.39
Heat 2 - 2008 Nambu Chuhei Memorial (Harodate, JPN)														<i>Akirabun (2009) - race analysis of 2008 men's and women's 100m and 110m & 100m hurdles</i>				
date	06-Jul-08	time	2.44	3.51	4.55	5.57	6.63	7.72	8.78	9.84	10.92	12.03	13.67	/ 1				
reaction time		interval		1.07	1.04	1.02	1.06	1.09	1.06	1.06	1.08	1.11	1.64			3.13	3.21	3.25
wind	2.0 m/s	velocity	5.62	8.54	8.79	8.96	8.62	8.39	8.62	8.62	8.46	8.23	8.55	8.05		8.76	8.54	8.44
FINAL - 2008 Japanese National Championships (Kawasaki, JPN)														<i>Akirabun (2009) - race analysis of 2008 men's and women's 100m and 110m & 100m hurdles</i>				
date	28-Jun-08	time	2.42	3.51	4.57	5.65	6.71	7.77	8.84	9.92	11.01	12.12	13.83	/ 3				
reaction time		interval		1.09	1.06	1.08	1.06	1.06	1.07	1.08	1.09	1.11	1.71			3.23	3.19	3.28
wind	-0.2 m/s	velocity	5.67	8.39	8.62	8.46	8.62	8.62	8.54	8.46	8.39	8.23	8.20	7.95		8.49	8.60	8.36
FINAL - 2008 Mikio Oda Memorial (Hiroshima, JPN)														<i>Akirabun (2009) - race analysis of 2008 men's and women's 100m and 110m & 100m hurdles</i>				
date	29-Apr-08	time	2.45	3.53	4.59	5.64	6.69	7.74	8.80	9.89	10.98	12.09	13.73	/ 4				
reaction time		interval		1.08	1.06	1.05	1.05	1.05	1.06	1.09	1.09	1.11	1.64			3.19	3.16	3.29

wind	1.6 m/s	velocity	5.60	8.46	8.62	8.70	8.70	8.70	8.62	8.39	8.39	8.23	8.55	8.01	8.60	8.68	8.33
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Heat 1 - 2008 Mikio Oda Memorial (Hiroshima, JPN)*Akirabun (2009) - race analysis of 2008 men's and women's 100m and 110m & 100m hurdles*

date	29-Apr-08	time	2.48	3.57	4.62	5.67	6.72	7.76	8.85	9.95	11.04	12.14	13.81	/ 2	3.19	3.18	3.29
reaction time	0.141	interval	1.09	1.05	1.05	1.05	1.04	1.09	1.10	1.09	1.10	1.67	7.97	8.60	8.62	8.33	
wind	0.1 m/s	velocity	5.53	8.39	8.70	8.70	8.70	8.79	8.39	8.31	8.39	8.31	8.40	7.97	8.60	8.62	8.33

Øiglane, Janek (EST) (1994)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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Decathlon - Heat 1 - 2024 Olympic Games (Paris, FRA)*Paris 2024 Olympc Games - Results Book (2024)*

date	03-Aug-24	time	2.53	3.69	4.81	5.93	7.05	8.16	9.31	10.42	11.58	12.75	14.45	5 / 2	3.40	3.38	3.44
reaction time	0.162	interval	1.16	1.12	1.12	1.12	1.11	1.15	1.11	1.16	1.17	1.70	7.61	8.06	8.11	7.97	
wind	0.2 m/s	velocity	5.42	7.88	8.16	8.16	8.16	8.23	7.95	8.23	7.88	7.81	8.25	7.61	8.06	8.11	7.97

Ojora, Tade (GBR) (1999)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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Semi-Final 2 - 2024 Olympic Games (Paris, FRA)*Paris 2024 Olympc Games - Results Book (2024)*

date	07-Aug-24	time	2.35	3.45	4.52	5.56	6.60	7.64	8.70	9.75	10.81	11.88	13.47	3 / 7	3.21	3.14	3.18
reaction time	0.141	interval	7 steps	1.10	1.07	1.04	1.04	1.06	1.05	1.06	1.07	1.59	8.17	8.54	8.73	8.62	
wind	-0.1 m/s	velocity	5.84	8.31	8.54	8.79	8.79	8.79	8.62	8.70	8.62	8.54	8.82	8.17	8.54	8.73	8.62

Heat 4 - 2024 Olympic Games (Paris, FRA)*Paris 2024 Olympc Games - Results Book (2024)*

date	04-Aug-24	time	2.35	3.44	4.50	5.51	6.52	7.54	8.59	9.65	10.70	11.76	13.35	5 / 4	3.16	3.08	3.17
reaction time	0.138	interval	7 steps	1.09	1.06	1.01	1.01	1.02	1.05	1.06	1.05	1.06	1.59	8.24	8.68	8.90	8.65
wind	0.3 m/s	velocity	5.84	8.39	8.62	9.05	9.05	8.96	8.70	8.62	8.70	8.62	8.82	8.24	8.68	8.90	8.65

Semi-Final 1 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)*Henson (2023) - Athlete First: 2023 year end hurdle report*

date	21-Aug-23	time	2.58	3.63	4.67	5.70	6.72	7.78	8.80	9.83	10.87	11.93	13.43	7 / 5	3.12	3.10	3.13
reaction time	0.144	interval	7 steps	1.05	1.04	1.03	1.02	1.06	1.02	1.03	1.04	1.06	1.50	8.19	8.79	8.85	8.76
wind	-0.2 m/s	velocity	5.32	8.70	8.79	8.87	8.96	8.62	8.96	8.87	8.79	8.62	9.35	8.19	8.79	8.85	8.76

Heat 5 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)*Henson (2023) - Athlete First: 2023 year end hurdle report*

date	20-Aug-23	time	2.58	3.62	4.68	5.70	6.72	7.74	8.77	9.82	10.88	11.92	13.32	2 / 1	3.12	3.07	3.15
reaction time	0.148	interval	7 steps	1.04	1.06	1.02	1.02	1.02	1.03	1.05	1.06	1.04	1.40	8.26	8.79	8.93	8.70
wind	-0.9 m/s	velocity	5.32	8.79	8.62	8.96	8.96	8.96	8.87	8.70	8.62	8.79	10.01	8.26	8.79	8.93	8.70

FINAL - 2023 London Athletics Meet (London, GBR)*Omega Timing (2023) - diamond league race analysis*

date	23-Jul-23	time	2.42	3.51	4.54	5.54	6.54	7.55	8.57	9.61	10.66	11.70	13.27	8 / 5	3.12	3.03	3.13
reaction time	0.148	interval	7 steps	1.09	1.03	1.00	1.00	1.01	1.02	1.04	1.05	1.04	1.57	8.29	8.79	9.05	8.76
wind	1.3 m/s	velocity	5.67	8.39	8.87	9.14	9.14	9.05	8.96	8.79	8.70	8.79	8.93	8.29	8.79	9.05	8.76

FINAL - 2023 NCAA Championships (Austin, TX) (TV Analysis)*Henson (2023) - Athlete First: 2023 year end hurdle report*

date	09-Jun-23	time	2.57	3.63	4.65	5.67	6.69	7.71	8.74	9.77	10.80	11.86	13.29	3 / 4	3.10	3.07	3.12
reaction time		interval	7 steps	1.06	1.02	1.02	1.02	1.02	1.03	1.03	1.03	1.06	1.43	PB	8.85	8.93	8.79
wind	1.8 m/s	velocity	5.34	8.62	8.96	8.96	8.96	8.96	8.87	8.87	8.87	8.62	9.80	8.28	8.85	8.93	8.79

FINAL - 2023 Trackwired Arkansas Grand Prix (Fayetteville, AR) (TV Analysis)*Henson (2023) - Athlete First: 2023 year end hurdle report*

date	23-May-23	time	2.58	3.65	4.67	5.69	6.69	7.69	8.67	9.70	10.76	11.82	13.26	6 / 2	3.11	2.98	3.15
reaction time		interval	7 steps	1.07	1.02	1.02	1.00	1.00	0.98	1.03	1.06	1.06	1.44	PB	8.82	9.20	8.70
wind	1.3 m/s	velocity	5.32	8.54	8.96	8.96	9.14	9.14	9.33	8.87	8.62	8.62	9.74	8.30	8.82	9.20	8.70

FINAL - 2022 NCAA Championships (Eugene, OR) (TV Analysis)*Henson (2022) - Athlete First: 2022 year end hurdle report*

date	10-Jun-22	time	2.53	3.60	4.67	5.70	6.74	7.81	8.86	9.93	10.98	12.05	13.58	2 / 8	3.17	3.16	3.19
reaction time		interval	7 steps	1.07	1.07	1.03	1.04	1.07	1.05	1.07	1.05	1.07	1.53	8.10	8.65	8.68	8.60
wind	0.0 m/s	velocity	5.42	8.54	8.54	8.87	8.79	8.54	8.70	8.54	8.70	8.54	9.16	8.10	8.65	8.68	8.60

FINAL - 2021 Müller British Grand Prix (Gateshead, GBR) (TV Analysis)*Henson (2021) - Athlete First: 2021 year end hurdle report*

date	13-Jul-21	time	2.64	3.72	4.80	5.84	6.92	8.00	9.04	10.18	11.28	12.40	13.87	7 / 6	3.20	3.20	3.36
reaction time	0.151	interval	1.08	1.08	1.04	1.08	1.08	1.04	1.04	1.14	1.10	1.12	1.47	7.93	8.57	8.57	8.16
wind	0.8 m/s	velocity	5.20	8.46	8.46	8.79	8.46	8.46	8.79	8.02	8.31	8.16	9.54	7.93	8.57	8.57	8.16

FINAL - 2021 NCAA Championships (Eugene, OR) (TV Analysis)*Henson (2021) - Athlete First: 2021 year end hurdle report*

date	11-Jun-21	time	2.63	3.70	4.77	5.83	6.85	7.87	8.93	9.97	11.07	12.13	13.57	9 / 6	3.20	3.10	3.20
reaction time	0.224	interval	1.07	1.07	1.06	1.02	1.02	1.06	1.04	1.10	1.06	1.44	PB	8.11	8.57	8.85	8.57
wind	-0.6 m/s	velocity	5.22	8.54	8.54	8.62	8.96	8.96	8.62	8.79	8.31	8.62	9.74	8.11	8.57	8.85	8.57

Okazaki, Masaki (JPN) (1994)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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Heat 2 - 2017 Japanese National Championships (Osaka, JPN)*(2017) - tfdata-store.com/2017/07/13/post-1040/*

date	24-Jun-17	time	2.65	3.79	4.90	6.00	7.11	8.23	9.35	10.48	11.62	12.76	14.21	7 / 8	3.35	3.35	3.41
reaction time	0.142	interval	7 steps	1.14	1.11	1.10	1.11	1.12	1.12	1.13	1.14	1.14	1.45	7.74	8.19	8.19	8.04
wind	0.0 m/s	velocity	5.18	8.02	8.23	8.31	8.23	8.16	8.16	8.09	8.02	8.02	9.67	7.74	8.19	8.19	8.04

FINAL - 2017 East Japan Business Athletics Championships (Yuma, JPN)*(2017) - tfdata-store.com/2017/05/20/post-579/*

date	20-May-17	time	2.64	3.74	4.83	5.94	7.02	8.16	9.28	10.40	11.55	12.70	14.20	8 / 7	3.30	3.34	3.42
reaction time		interval	1.10	1.09	1.11	1.08	1.14	1.12	1.12	1.15	1.15	1.50	7.74	8.19	8.19	8.04	

wind	1.1 m/s	velocity	5.20	8.31	8.39	8.23	8.46	8.02	8.16	8.16	7.95	7.95	9.35	7.75		8.31	8.21	8.02
Semi-Final 2 - 2016 Japanese University Championships (Kumagaya, JPN)			(2016.09.05) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en															
date	04-Sep-16	time	2.65	3.77	4.85	5.94	7.05	8.14	9.23	10.35	11.49	12.63	14.10	2 / 5				
reaction time	1.530	interval	1.12	1.08	1.09	1.11	1.09	1.09	1.12	1.14	1.14	1.47			3.29	3.29	3.40	
wind	0.7 m/s	velocity	5.18	8.16	8.46	8.39	8.23	8.39	8.39	8.16	8.02	8.02	9.54	7.80	8.33	8.33	8.06	
FINAL - 2016 Six College Meeting (Sagamihara, JPN)			(2016.07.18) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en															
date	17-Jul-16	time	2.64	3.72	4.81	5.91	6.98	8.06	9.16	10.26	11.37	12.48	13.90	6 / 1				
reaction time		interval	1.08	1.09	1.10	1.07	1.08	1.10	1.10	1.11	1.11	1.42	PB		3.27	3.25	3.32	
wind	0.3 m/s	velocity	5.20	8.46	8.39	8.31	8.54	8.46	8.31	8.31	8.23	8.23	9.87	7.91	8.39	8.44	8.26	
Okuda, Keisuke (JPN) (1996)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Decathlon - FINAL - 2022 Japanese Multi-Event National Championships (Akita, JPN)			Takefu (2023) - performance analysis of decathlon athletes in the 2022 season															
date	05-Jun-22	time	2.75	3.90	5.05	6.20	7.35	8.50	9.66	10.82	12.00	13.21	14.71	9 / 4				
reaction time		interval	1.15	1.15	1.15	1.15	1.15	1.16	1.16	1.18	1.21	1.50			3.45	3.46	3.55	
wind	-2.3 m/s	velocity	4.99	7.95	7.95	7.95	7.95	7.95	7.88	7.88	7.75	7.55	9.35	7.48	7.95	7.92	7.72	
Decathlon - Heat 2 - 2022 Michitaka Kinami Memorial (Osaka, JPN)			Takefu (2023) - performance analysis of decathlon athletes in the 2022 season															
date	01-May-22	time	2.79	3.96	5.13	6.30	7.47	8.65	9.84	11.03	12.23	13.44	14.95	5 / 3				
reaction time	0.132	interval	1.17	1.17	1.17	1.17	1.18	1.19	1.19	1.20	1.21	1.51			3.51	3.54	3.60	
wind	1.2 m/s	velocity	4.92	7.81	7.81	7.81	7.81	7.75	7.68	7.68	7.62	7.55	9.28	7.36	7.81	7.75	7.62	
Decathlon - Heat 2 - 2021 Japanese Multi-Event National Championships (Nagano, JPN)			Matsubayashi (2021) - 110m hurdling race analysis of decathlon athletes in the 2021 season															
date	13-Jun-21	time	2.74	3.88	5.02	6.15	7.26	8.41	9.56	10.71	11.86	13.06	14.54	2 / 1				
reaction time	0.151	interval	1.14	1.14	1.13	1.11	1.15	1.15	1.15	1.15	1.15	1.20	1.48		3.41	3.41	3.50	
wind	-0.9 m/s	velocity	5.01	8.02	8.02	8.09	8.23	7.95	7.95	7.95	7.95	7.62	9.47	7.57	8.04	8.04	7.83	
Olijar, Stanislav (LAT) (1979)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Heat 4 - 2009 IAAF World Championships (Berlin, GER)			Graubner (2009) - biomechanical analyses at the 12th IAAF world championships															
date	19-Aug-09	time	2.72	3.79	4.83	5.85	6.87	7.91	8.96	10.00	11.07	12.15	13.59	8 / 4				
reaction time	0.160	interval	1.07	1.04	1.02	1.02	1.04	1.05	1.04	1.07	1.08	1.44			3.13	3.11	3.19	
wind	0.5 m/s	velocity	5.04	8.54	8.79	8.96	8.96	8.79	8.70	8.79	8.54	8.46	9.74	8.09	8.76	8.82	8.60	
FINAL - 2009 ISTAF (Berlin, GER)			Graubner (2009) - http://www.fgs.uni-halle.de															
date	14-Jun-09	time	2.69	3.77	4.81	5.82	6.86	7.91	8.97	10.03	11.13	12.23	13.66	2 / 6				
reaction time	0.172	interval	1.08	1.04	1.01	1.04	1.05	1.06	1.06	1.10	1.10	1.43			3.13	3.15	3.26	
wind	0.7 m/s	velocity	5.10	8.46	8.79	9.05	8.79	8.70	8.62	8.62	8.31	8.31	9.80	8.05	8.76	8.70	8.41	
FINAL - 2006 European Championships (Göteborg, SWE) (TV Analysis)			Graubner (2009) - http://www.fgs.uni-halle.de															
date	12-Aug-06	time	2.64	3.68	4.70	5.71	6.69	7.68	8.70	9.72	10.76	11.84	13.24	1 / 1				
reaction time	0.151	interval	1.04	1.02	1.01	0.98	0.99	1.02	1.02	1.04	1.08	1.40			3.07	2.99	3.14	
wind	-1.0 m/s	velocity	5.20	8.79	8.96	9.05	9.33	9.23	8.96	8.96	8.79	8.46	10.01	8.31	8.93	9.17	8.73	
FINAL - 2004 Olympic Games (Athens, GRE)			Ruiz (2004) - las carreras con vallas de juegos olimpicos de atenas '04															
date	27-Aug-04	time	2.49	3.52	4.54	5.55	6.56	7.56	8.57	9.61	10.67	11.74	13.21	2 / 5				
reaction time	0.174	interval	1.03	1.02	1.01	1.01	1.00	1.01	1.04	1.06	1.07	1.47			3.06	3.02	3.17	
wind	0.3 m/s	velocity	5.51	8.87	8.96	9.05	9.05	9.14	9.05	8.79	8.62	8.54	9.54	8.33	8.96	9.08	8.65	
FINAL - 2003 Athletissima Meeting (Lausanne, SUI)			Zhang (2005) - technical characteristics analysis of 110m hurdles race of Liu Xiang															
date	01-Jul-03	time	2.58	3.60	4.60	5.60	6.58	7.58	8.60	9.60	10.64	11.70	13.08	1 / 2				
reaction time		interval	1.02	1.00	1.00	0.98	1.00	1.02	1.00	1.04	1.06	1.38	NR PB		3.02	3.00	3.10	
wind	0.0 m/s	velocity	5.32	8.96	9.14	9.14	9.33	9.14	8.96	9.14	8.79	8.62	10.16	8.41	9.08	9.14	8.85	
FINAL - 2002 IAAF World Cup (Madrid, ESP)			Sanchez (2002) - copa del mundo de Madrid '02: análisis de la carreras con villas															
date	21-Sep-02	time	2.52	3.54	4.57	5.60	6.64	7.70	8.76	9.83	10.90	11.97	13.58	3 / 3				
reaction time	0.151	interval	1.02	1.03	1.03	1.04	1.06	1.06	1.07	1.07	1.07	1.61			3.08	3.16	3.21	
wind	-2.2 m/s	velocity	5.44	8.96	8.87	8.87	8.79	8.62	8.62	8.54	8.54	8.54	8.71	8.10	8.90	8.68	8.54	
FINAL - 2002 European Championships (Munich, GER)			Graubner (2009) - http://www.fgs.uni-halle.de															
date	10-Aug-02	time	2.59	3.61	4.63	5.62	6.63	7.63	8.65	9.67	10.73	11.78	13.22	1 / 2				
reaction time	0.157	interval	1.02	1.02	0.99	1.01	1.00	1.02	1.02	1.06	1.05	1.44			3.03	3.03	3.13	
wind	0.4 m/s	velocity	5.30	8.96	8.96	9.23	9.05	9.14	8.96	8.96	8.62	8.70	9.74	8.32	9.05	9.05	8.76	
Semi-Final 1 - 2002 European Championships (Munich, GER)			Graubner (2009) - http://www.fgs.uni-halle.de															
date	10-Aug-02	time	2.60	3.63	4.65	5.67	6.68	7.71	8.75	9.79	10.85	11.94	13.34	1 / 1				
reaction time	0.143	interval	1.03	1.02	1.02	1.01	1.03	1.04	1.04	1.06	1.09	1.40			3.07	3.08	3.19	
wind	-0.5 m/s	velocity	5.28	8.87	8.96	8.96	9.05	8.87	8.79	8.79	8.62	8.39	10.01	8.25	8.93	8.90	8.60	
Heat 4 - 2002 European Championships (Munich, GER)			Graubner (2009) - http://www.fgs.uni-halle.de															
date	09-Aug-02	time	2.69	3.71	4.73	5.76	6.79	7.81	8.87	9.93	10.99	12.07	13.50	1 / 1				
reaction time	0.157	interval	1.02	1.02	1.03	1.03	1.02	1.06	1.06	1.06	1.08	1.43			3.07	3.11	3.20	
wind	-0.1 m/s	velocity	5.10	8.96	8.96	8.87	8.87	8.96	8.62	8.62	8.62	8.46	9.80	8.15	8.93	8.82	8.57	

Semi-Final 2 - 1999 IAAF World Championships (Sevilla, ESP)*Sanchez (1999) - Sevilla '99: análisis de la carreras con villas*

date	24-Aug-99	time	2.59	3.64	4.67	5.67	6.68	7.70	8.73	9.81	10.95	12.09	13.70	3 / 6				
reaction time	0.137	interval		1.05	1.03	1.00	1.01	1.02	1.03	1.08	1.14	1.14	1.61		3.08	3.06	3.36	
wind	0.0 m/s	velocity	5.30	8.70	8.87	9.14	9.05	8.96	8.87	8.46	8.02	8.02	8.71	8.03	8.90	8.96	8.16	

Oliver, David (USA) (1982)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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FINAL - 2017 Golden Gala Pietro Mennea (Rome, ITA) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date	08-Jun-17	time	2.50	3.54	4.58	5.62	6.62	7.62	8.66	9.74	10.82	11.92	13.46	3 / 6				
reaction time	0.141	interval	7 steps	1.04	1.04	1.04	1.00	1.00	1.04	1.08	1.08	1.10	1.54		3.12	3.04	3.26	
wind	-0.3 m/s	velocity	5.49	8.79	8.79	8.79	9.14	9.14	8.79	8.46	8.46	8.31	9.10	8.17	8.79	9.02	8.41	

FINAL - 2017 Prefontaine Classic (Eugene, OR) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date	27-May-17	time	2.48	3.56	4.58	5.60	6.62	7.64	8.68	9.72	10.78	11.86	13.40	7 / 7				
reaction time	0.172	interval	7 steps	1.08	1.02	1.02	1.02	1.02	1.04	1.04	1.06	1.08	1.54		3.12	3.08	3.18	
wind	0.9 m/s	velocity	5.53	8.46	8.96	8.96	8.96	8.96	8.79	8.79	8.62	8.46	9.10	8.21	8.79	8.90	8.62	

FINAL - 2017 Shanghai Diamond League (Shanghai, CHN) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date	13-May-17	time	2.54	3.62	4.64	5.68	6.72	7.76	8.84	9.90	10.98	12.06	13.62	8 / 8				
reaction time	0.156	interval	7 steps	1.08	1.02	1.04	1.04	1.04	1.08	1.06	1.08	1.08	1.56		3.14	3.16	3.22	
wind	0.5 m/s	velocity	5.40	8.46	8.96	8.79	8.79	8.79	8.46	8.62	8.46	8.46	8.99	8.08	8.73	8.68	8.52	

FINAL - 2016 Athletissima (Lausanne, SU) (TV Analysis)*Henson (2020) - Athlete First: 2016 year end hurdle report*

date	25-Aug-16	time	2.52	3.56	4.58	5.60	6.60	7.64	8.68	9.72	10.78	11.84	13.40	3 / 7				
reaction time	0.146	interval	7 steps	1.04	1.02	1.02	1.00	1.04	1.04	1.04	1.06	1.06	1.56		3.08	3.08	3.16	
wind	0.5 m/s	velocity	5.44	8.79	8.96	8.96	9.14	8.79	8.79	8.79	8.62	8.62	8.99	8.21	8.90	8.90	8.68	

FINAL - 2016 Racers Grand Prix (Kingston, JAM) (TV Analysis)*Henson (2020) - Athlete First: 2016 year end hurdle report*

date	11-Jun-16	time	2.43	3.46	4.46	5.46	6.46	7.43	8.46	9.50	10.50	11.56	13.09	4 / 1				
reaction time		interval	7 steps	1.03	1.00	1.00	1.00	0.97	1.03	1.04	1.00	1.06	1.53		3.03	3.00	3.10	
wind	0.2 m/s	velocity	5.65	8.87	9.14	9.14	9.14	9.42	8.87	8.79	9.14	8.62	9.16	8.40	9.05	9.14	8.85	

FINAL - 2016 Prefontaine Classic (Eugene, OR) (TV Analysis)*Henson (2021) - Athlete First: 2016 year end hurdle report*

date	28-May-16	time	2.44	3.52	4.56	5.58	6.60	7.62	8.64	9.70	10.78	11.82	13.38	6 / 2				
reaction time		interval	7 steps	1.08	1.04	1.02	1.02	1.02	1.02	1.06	1.08	1.04	1.56		3.14	3.06	3.18	
wind	0.7 m/s	velocity	5.62	8.46	8.79	8.96	8.96	8.96	8.96	8.62	8.46	8.79	8.99	8.22	8.73	8.96	8.62	

FINAL - 2016 Meeting International Mohammed VI D'Athlétisme (Rabat, MAR) (TV Analysis)*Henson (2020) - Athlete First: 2016 year end hurdle report*

date	22-May-16	time	2.46	3.48	4.48	5.50	6.50	7.52	8.54	9.54	10.58	11.62	13.12	7 / 1				
reaction time	0.152	interval	7 steps	1.02	1.00	1.02	1.00	1.02	1.02	1.00	1.04	1.04	1.50		3.04	3.04	3.08	
wind	1.4 m/s	velocity	5.58	8.96	9.14	8.96	9.14	8.96	8.96	9.14	8.79	8.79	9.35	8.38	9.02	9.02	8.90	

FINAL - 2016 Shanghai Golden Grand Prix (Shanghai, CHN)*Henson (2021) - Athlete First: 2016 year end hurdle report*

date	14-May-16	time	2.48	3.54	4.56	5.60	6.64	7.66	8.70	9.76	10.84	11.90	13.38	7 / 5				
reaction time	0.141	interval	7 steps	1.06	1.02	1.04	1.04	1.02	1.04	1.06	1.08	1.06	1.48		3.12	3.10	3.20	
wind	1.2 m/s	velocity	5.53	8.62	8.96	8.79	8.79	8.96	8.79	8.62	8.46	8.62	9.47	8.22	8.79	8.85	8.57	

FINAL - 2016 Doha Diamond League (Doha, QAT) (TV Analysis)*Henson (2020) - Athlete First: 2016 year end hurdle report*

date	06-May-16	time	2.52	3.56	4.56	5.56	6.58	7.60	8.62	9.64	10.68	11.76	13.16	3 / 4				
reaction time	0.140	interval	7 steps	1.04	1.00	1.00	1.02	1.02	1.02	1.04	1.08	1.40		3.04	3.06	3.14		
wind	1.4 m/s	velocity	5.44	8.79	9.14	9.14	8.96	8.96	8.96	8.96	8.79	8.46	10.01	8.36	9.02	8.96	8.73	

FINAL - 2015 IAAF World Championships (Beijing, CHN) (TV Analysis)*Henson (2021) - Athlete First: major championships report*

date	28-Aug-15	time	2.44	3.54	4.58	5.62	6.64	7.66	8.70	9.74	10.78	11.86	13.33	9 / 7				
reaction time	0.157	interval	7 steps	1.10	1.04	1.04	1.02	1.02	1.04	1.04	1.04	1.08	1.47		3.18	3.08	3.16	
wind	0.2 m/s	velocity	5.62	8.31	8.79	8.79	8.96	8.96	8.79	8.79	8.79	8.46	9.54	8.25	8.62	8.90	8.68	

FINAL - 2013 IAAF World Championships (Moscow, RUS) (TV Analysis)*Henson (2021) - Athlete First: major championships report*

date	12-Aug-13	time	2.44	3.48	4.48	5.46	6.46	7.44	8.44	9.46	10.48	11.52	13.00	4 / 1				
reaction time	0.147	interval	7 steps	1.04	1.00	0.98	1.00	0.98	1.00	1.02	1.02	1.04	1.48		3.02	2.98	3.08	
wind	0.3 m/s	velocity	5.62	8.79	9.14	9.33	9.14	9.33	9.14	8.96	8.96	8.79	9.47	8.46	9.08	9.20	8.90	

FINAL - 2012 Memorial Van Damme (Brussels, BEL) (TV Analysis)*Henson (2020) - Athlete First: 2012 Aries Merritt world record season*

date	07-Sep-12	time	2.52	3.56	4.58	5.56	6.56	7.58	8.58	9.60	10.62	11.72	13.21	2 / 5				
reaction time	0.171	interval	7 steps	1.04	1.02	0.98	1.00	1.02	1.00	1.02	1.02	1.10	1.49		3.04	3.02	3.14	
wind	0.3 m/s	velocity	5.44	8.79	8.96	9.33	9.14	8.96	9.14	8.96	8.96	8.31	9.41	8.33	9.02	9.08	8.73	

FINAL - 2012 AVIVA Grand Prix (Birmingham, GBR) (TV Analysis)*Henson (2020) - Athlete First: 2012 Aries Merritt world record season*

date	26-Aug-12	time	2.50	3.53	4.56	5.59	6.59	7.62	8.64	9.68	10.74	11.78	13.28	4 / 3				
reaction time	0.154	interval	7 steps	1.03	1.03	1.03	1.00	1.03	1.02	1.04	1.06	1.04	1.50		3.09	3.05	3.14	
wind	-0.9 m/s	velocity	5.49	8.87	8.87	8.87	9.14	8.87	8.96	8.79	8.62	8.79	9.35	8.28	8.87	8.99	8.73	

FINAL - 2012 Herculis Meeting International D'Athlétisme (Monaco, MON) (TV Analysis)*Henson (2020) - Athlete First: 2012 Aries Merritt world record season*

date	20-Jul-12	time	2.46	3.50	4.52	5.54	6.52	7.52	8.54	9.54	10.58	11.64	13.14	6 / 4			
reaction time	0.154	interval	7 steps	1.04	1.02	1.02	0.98	1.00	1.02	1.00	1.04	1.06	1.50		3.08	3.00	3.10
wind	0.0 m/s	velocity	5.58	8.79	8.96	8.96	9.33	9.14	8.96	9.14	8.79	8.62	9.35	8.37	8.90	9.14	8.85
FINAL - 2012 USA Olympic Trials (Eugene, OR)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>			
date	30-Jun-12	time	2.43	3.45	4.47	5.47	6.45	7.44	8.44	9.45	10.51	11.58	13.17	3 / 5			
reaction time	0.165	interval	7 steps	1.02	1.02	1.00	0.98	0.99	1.00	1.01	1.06	1.07	1.59		3.04	2.97	3.14
wind	1.2 m/s	velocity	5.65	8.96	8.96	9.14	9.33	9.23	9.14	9.05	8.62	8.54	8.82	8.35	9.02	9.23	8.73
FINAL - 2012 Prefontaine Classic (Eugene, OR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>			
date	02-Jun-12	time	2.52	3.56	4.56	5.56	6.54	7.56	8.60	9.60	10.64	11.72	13.13	6 / 5			
reaction time	0.171	interval	7 steps	1.04	1.00	1.00	0.98	1.02	1.04	1.00	1.04	1.08	1.41		3.04	3.04	3.12
wind	2.4 m/s	velocity	5.44	8.79	9.14	9.14	9.33	8.96	8.79	9.14	8.79	8.46	9.94	8.38	9.02	9.02	8.79
FINAL - 2012 Golden Grand Prix (Shanghai, CHN) (TV Analysis)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>			
date	19-May-12	time	2.50	3.52	4.50	5.50	6.50	7.48	8.50	9.52	10.56	11.62	13.13	7 / 2			
reaction time	0.192	interval	7 steps	1.02	0.98	1.00	1.00	0.98	1.02	1.02	1.04	1.06	1.51		3.00	3.00	3.12
wind	0.4 m/s	velocity	5.49	8.96	9.33	9.14	9.14	9.33	8.96	8.96	8.79	8.62	9.28	8.38	9.14	9.14	8.79
FINAL - 2012 Colorful Daegu Meeting (Daegu, KOR) (TV Analysis)														<i>Henson (2021) - Athlete First: 2012 Aries Merritt world record season</i>			
date	16-May-12	time	2.56	3.60	4.60	5.60	6.60	7.60	8.64	9.67	10.71		13.22	5 / 2			
reaction time	0.180	interval	7 steps	1.04	1.00	1.00	1.00	1.00	1.04	1.03	1.04				3.04	3.04	
wind	-0.4 m/s	velocity	5.36	8.79	9.14	9.14	9.14	9.14	8.79	8.87	8.79		8.32		9.02	9.02	
FINAL - 2011 IAAF World Championships (Daegu, KOR) (TV Analysis)														<i>Henson (2021) - Athlete First: major championships report</i>			
date	29-Aug-11	time	2.48	3.50	4.58	5.62	6.67	7.71	8.77	9.80	10.84	11.91	13.44	4 / 5 4			
reaction time	0.171	interval	7 steps	1.02	1.08	1.04	1.05	1.04	1.06	1.03	1.04	1.07	1.53		3.14	3.15	3.14
wind	-1.1 m/s	velocity	5.53	8.96	8.46	8.79	8.70	8.79	8.62	8.87	8.79	8.54	9.16	8.18	8.73	8.70	8.73
FINAL - 2010 Areva Meeting (Saint-Denis, FRA)														<i>Wang (2013) - research upon time characters of Liu Xiang's 110m hurdles</i>			
date	16-Jul-10	time	2.53	3.53	4.56	5.56	6.53	7.50	8.50	9.50	10.50	11.50	12.87	1 / 1			
reaction time	0.161	interval	7 steps	1.00	1.03	1.00	0.97	0.97	1.00	1.00	1.00	1.00	1.37	AR PB	3.03	2.94	3.00
wind	0.5 m/s	velocity	5.42	9.14	8.87	9.14	9.42	9.42	9.14	9.14	9.14	9.14	10.23	8.55	9.05	9.33	9.14
FINAL - 2010 Colorful Daegu Meeting (Daegu, KOR)														<i>Hong (2018) - performance of men's 110m hurdles using rhythmic units</i>			
date	19-May-10	time	2.61	3.66	4.68	5.66	6.66	7.64	8.64	9.66	10.68	11.75	13.11	1 / 1			
reaction time	0.170	interval	7 steps	1.05	1.02	0.98	1.00	0.98	1.00	1.02	1.02	1.07	1.36		3.05	2.98	3.11
wind	-0.2 m/s	velocity	5.26	8.70	8.96	9.33	9.14	9.33	9.14	8.96	8.96	8.54	10.31	8.39	8.99	9.20	8.82
FINAL - 2010 IAAF World Indoor Championships (Doha, QAT)														<i>Kuitunen (2010) - biomechanical analysis of the 14th IAAF World Indoor championships</i>			
date	14-Mar-10	time	2.53	3.56	4.56	5.56	6.56						7.44	8 / 3			
reaction time	0.149	interval	7 steps	1.03	1.00	1.00	1.00					0.88	PB		3.03		
		velocity	5.42	8.87	9.14	9.14	9.14					11.05	8.06		9.05		
Heat 2 - 2010 Samsung Galan (Göteborg, SWE)														<i>Blomkvist (2010) - www.sub13.se</i>			
date	02-Feb-10	time	2.45	3.52	4.53	5.54	6.58						7.57	1 / 1			
reaction time		interval	7 steps	1.07	1.01	1.01	1.04					0.99			3.09		
		velocity	5.60	8.54	9.05	9.05	8.79					9.82	7.93		8.87		
FINAL - 2008 IAAF World Athletics Final (Stuttgart, GER)														<i>Graubner (2009) - http://www.fgs.uni-halle.de</i>			
date	14-Sep-08	time	2.65	3.66	4.67	5.68	6.69	7.69	8.71	9.74	10.79	11.84	13.22	6 / 1			
reaction time	0.181	interval		1.01	1.01	1.01	1.01	1.00	1.02	1.03	1.05	1.05	1.38		3.03	3.03	3.13
wind	-1.3 m/s	velocity	5.18	9.05	9.05	9.05	9.05	9.14	8.96	8.87	8.70	8.70	10.16	8.32	9.05	9.05	8.76
FINAL - 2008 Olympic Games (Beijing, CHN)														<i>Tsiokanos (2018) - race pattern of men's 110m hurdles- time analysis of olympic hurdle performance</i>			
date	21-Aug-08	time	2.58	3.64	4.67	5.66	6.68	7.68	8.67	9.73	10.76	11.80	13.18	7 / 3			
reaction time	0.158	interval		1.06	1.03	0.99	1.02	1.00	0.99	1.06	1.03	1.04	1.38		3.08	3.01	3.13
wind	0.1 m/s	velocity	5.32	8.62	8.87	9.23	8.96	9.14	9.23	8.62	8.87	8.79	10.16	8.35	8.90	9.11	8.76
FINAL - 2008 USA Olympic Trials (Eugene, OR)														<i>USATF Hurdle Development (2008)</i>			
date	06-Jul-08	time	2.57	3.59	4.60	5.59	6.57	7.56	8.55	9.54	10.53	11.57	12.95	4 / 1			
reaction time	0.191	interval		1.02	1.01	0.99	0.98	0.99	0.99	0.99	0.99	1.04	1.38		3.02	2.96	3.02
wind	3.5 m/s	velocity	5.34	8.96	9.05	9.23	9.33	9.23	9.23	9.23	9.23	8.79	10.16	8.49	9.08	9.26	9.08
FINAL - 2007 USATF National Championships (Indianapolis, IN)														<i>USATF Men's Hurdle Development (2007)</i>			
date	24-Jun-07	time	2.65	3.67	4.72	5.72	6.72	7.72	8.74	9.73	10.76	11.78	13.18	6 / 3			
reaction time		interval		1.02	1.05	1.00	1.00	1.00	1.02	0.99	1.03	1.02	1.40		3.07	3.02	3.04
wind	0.5 m/s	velocity	5.18	8.96	8.70	9.14	9.14	9.14	8.96	9.23	8.87	8.96	10.01	8.35	8.93	9.08	9.02
Semi-Final 2 - 2007 USATF National Championships (Indianapolis, IN)														<i>USATF Men's Hurdle Development (2007)</i>			
date	24-Jun-07	time	2.65	3.70	4.74	5.74	6.76	7.76	8.79	9.81	10.88	11.93	13.29	4 / 2			
reaction time		interval		1.05	1.04	1.00	1.02	1.00	1.03	1.02	1.07	1.05	1.36		3.09	3.05	3.14
wind	-0.9 m/s	velocity	5.18	8.70	8.79	9.14	8.96	9.14	8.87	8.96	8.54	8.70	10.31	8.28	8.87	8.99	8.73

Heat 4 - 2007 USATF National Championships (Indianapolis, IN)

USATF Men's Hurdle Development (2007)

date	23-Jun-07	time	2.64	3.69	4.77	5.81	6.84	7.91	8.96	10.01	11.08	12.15	13.56	7 / 1				
reaction time		interval		1.05	1.08	1.04	1.03	1.07	1.05	1.05	1.07	1.07	1.41			3.17	3.15	3.19
wind	-2.8 m/s	velocity	5.20	8.70	8.46	8.79	8.87	8.54	8.70	8.70	8.54	8.54	9.94	8.11		8.65	8.70	8.60

FINAL - 2005 USATF National Championships (Carson, CA)

USATF Women's Sprint Development (2005)

date	24-Jun-05	time	2.66	3.71	4.76	5.76	6.76	7.81	8.83	9.86	10.92	11.97	13.46	3 / 8				
reaction time		interval		1.05	1.05	1.00	1.00	1.05	1.02	1.03	1.06	1.05	1.49			3.10	3.07	3.14
wind	0.2 m/s	velocity	5.16	8.70	8.70	9.14	9.14	8.70	8.96	8.87	8.62	8.70	9.41	8.17		8.85	8.93	8.73

Olsen, Derrick (USA) (1998)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

Heat 3 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)

Henson (2024) - Athlete First: 2024 year end hurdle report

date	24-Jun-24	time	2.56	3.62	4.66	5.70	6.73	7.80	8.86	9.87	11.16	12.35	13.97	5 / 8				
reaction time		interval		1.06	1.04	1.04	1.03	1.07	1.06	1.01	1.29	1.19	1.62			3.14	3.16	3.49
wind	1.8 m/s	velocity	5.36	8.62	8.79	8.79	8.87	8.54	8.62	9.05	7.09	7.68	8.65	7.87		8.73	8.68	7.86

Olson, Petter (SWE) (1991)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

Heptathlon - Heat 1 - 2013 European Indoor Championships (Göteborg, SWE)

Blomkvist (2013) - www.elitlandslag.se/SprintHäck/KortHäck.aspx

date	03-Mar-13	time	2.70	3.85	4.95	6.05	7.16							8.11	4 / 2			
reaction time	0.150	interval		1.15	1.10	1.10	1.11						0.95					3.35
		velocity	5.08	7.95	8.31	8.31	8.23						10.23	7.40				8.19

Olsson, Carl-Johan (SWE) (1980)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

FINAL - 2007 Windsprint (Sundsvall, SWE)

(2007) - www.ssg.se/en/Windsprint/Split-times/

date	24-Jul-07	time		3.95		7.48			11.07					15.33	/ 8			
reaction time		interval				3.53			3.59				4.26					
wind	1.3 m/s	velocity		5.79		7.77			7.64				7.58	7.18				

Omorgie, David (GBR) (1995)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

FINAL - 2017 Müller's Anniversary Games (London, GBR) (TV Analysis)

Henson (2020) - Athlete First: 2017 year end hurdle report

date	09-Jul-17	time	2.52	3.64	4.74	5.80	6.84	7.88	8.92	9.98	11.06	12.16	13.70	7 / 8				
reaction time	0.127	interval		1.12	1.10	1.06	1.04	1.04	1.04	1.06	1.08	1.10	1.54			3.28	3.12	3.24
wind	0.0 m/s	velocity	5.44	8.16	8.31	8.62	8.79	8.79	8.79	8.62	8.46	8.31	9.10	8.03		8.36	8.79	8.46

FINAL - 2016 Memorial van Damme (Brussels, BEL) (TV Analysis)

Henson (2020) - Athlete First: 2016 year end hurdle report

date	09-Sep-16	time	2.53	3.57	4.60	5.62	6.64	7.67	8.72	9.77	10.84	11.94	13.43	3 / 5				
reaction time	0.153	interval		1.04	1.03	1.02	1.02	1.03	1.05	1.05	1.07	1.10	1.49			3.09	3.10	3.22
wind	0.2 m/s	velocity	5.42	8.79	8.87	8.96	8.96	8.87	8.70	8.70	8.54	8.31	9.41	8.19		8.87	8.85	8.52

FINAL - 2016 London Anniversary Games (London, GBR) (TV Analysis)

Henson (2021) - Athlete First: 2016 year end hurdle report

date	23-Jul-16	time	2.50	3.60	4.63	5.70	6.78	7.83	8.90	10.02	11.08	12.16	13.64	4 / 5				
reaction time	0.153	interval		1.10	1.03	1.07	1.08	1.05	1.07	1.12	1.06	1.08	1.48			3.20	3.20	3.26
wind	-1.0 m/s	velocity	5.49	8.31	8.87	8.54	8.46	8.70	8.54	8.16	8.62	8.46	9.47	8.06		8.57	8.57	8.41

Omuro, Hideki (JPN) (1990)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

B FINAL - 2022 Mikio Oda Memorial (Hiroshima, JPN)

Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season

date	29-Apr-22	time	2.68	3.78	4.87	5.95	7.02	8.12	9.23	10.35	11.46	12.58	14.04	7 / 5				
reaction time	0.124	interval		1.10	1.09	1.08	1.07	1.10	1.11	1.12	1.11	1.12	1.46			3.27	3.28	3.35
wind	-0.7 m/s	velocity	5.12	8.31	8.39	8.46	8.54	8.31	8.23	8.16	8.23	8.16	9.60	7.83		8.39	8.36	8.19

FINAL - 2021 Fuse Sprint (Tottori, JPN)

Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season

date	06-Jun-21	time	2.60	3.68	4.74	5.81	6.87	7.95	9.02	10.10	11.19	12.30	13.80	2 / 7				
reaction time	0.150	interval		1.08	1.06	1.07	1.06	1.08	1.07	1.08	1.09	1.11	1.50			3.21	3.21	3.28
wind	1.8 m/s	velocity	5.28	8.46	8.62	8.54	8.62	8.46	8.54	8.46	8.39	8.23	9.35	7.97		8.54	8.54	8.36

FINAL - 2021 Michitaka Kinami Memorial (Osaka, JPN)

Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season

date	01-Jun-21	time	2.65	3.78	4.88	6.00	7.13	8.25	9.42	10.56	11.75	12.95	14.65	5 / 8				
reaction time	0.165	interval		1.13	1.10	1.12	1.13	1.12	1.17	1.14	1.19	1.20	1.70			3.35	3.42	3.53
wind	0.3 m/s	velocity	5.18	8.09	8.31	8.16	8.09	8.16	7.81	8.02	7.68	7.62	8.25	7.51		8.19	8.02	7.77

FINAL - 2021 Ready Steady Tokyo (Tokyo, JPN)

Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season

date	09-May-21	time	2.59	3.66	4.74	5.81	6.90	7.99	9.09	10.21	11.33	12.73	14.46	1 / 9				
reaction time	0.153	interval		1.07	1.08	1.07	1.09	1.09	1.10	1.12	1.12	1.40	1.73			3.22	3.28	3.64
wind	-0.8 m/s	velocity	5.30	8.54	8.46	8.54	8.39	8.39	8.31	8.16	8.16	6.53	8.10	7.61		8.52	8.36	7.53

FINAL - 2021 Mikio Oda Memorial (Hiroshima, JPN)

Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season

date	29-Apr-21	time	2.60	3.66	4.72	5.76	6.82	7.88	8.96	10.03	11.14	12.25	13.75	7 / 7				
reaction time		interval		1.06	1.06	1.04	1.06	1.06	1.08	1.07	1.11	1.11	1.50			3.16	3.20	3.29
wind	1.7 m/s	velocity	5.28	8.62	8.62	8.79	8.62	8.62	8.46	8.54	8.23	8.23	9.35	8.00		8.68	8.57	8.33

FINAL - 2020 Michitaka Kinami Memorial (Osaka, JPN)

Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season

date	24-Oct-20	time	2.61	3.69	4.78	5.88	6.97	8.04	9.14	10.24	11.33	12.44	13.94	8 / 8				
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reaction time	interval	1.08	1.09	1.10	1.09	1.07	1.10	1.10	1.09	1.11	1.50		3.27	3.26	3.30		
wind	0.6 m/s	velocity	5.26	8.46	8.39	8.31	8.39	8.54	8.31	8.31	8.39	8.23	9.35	7.89	8.39	8.41	8.31
FINAL - 2020 All Japan Corporate Championships (Kumagaya, JPN)													<i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>				
date	20-Sep-20	time	2.60	3.68	4.74	5.82	6.89	7.98	9.07	10.18	11.30	12.44	13.92	8 / 4			
reaction time	0.142	interval	1.08	1.06	1.08	1.07	1.09	1.09	1.09	1.11	1.12	1.14	1.48		3.22	3.25	3.37
wind	0.1 m/s	velocity	5.28	8.46	8.62	8.46	8.54	8.39	8.39	8.23	8.16	8.02	9.47	7.90	8.52	8.44	8.14
FINAL - 2019 Seiko Golden Grand Prix (Osaka, JPN)													<i>Shibayama (2019) - race analysis of men's 110m hurdles in the 2019 season</i>				
date	19-May-19	time	2.59	3.70	4.77	5.86	6.95	8.03	9.08	10.16	11.24	12.33	13.76	1 / 8			
reaction time	0.143	interval	1.11	1.07	1.09	1.09	1.08	1.08	1.05	1.08	1.08	1.09	1.43		3.27	3.22	3.25
wind	2.9 m/s	velocity	5.30	8.23	8.54	8.39	8.39	8.46	8.70	8.46	8.46	8.39	9.80	7.99	8.39	8.52	8.44
A FINAL - 2019 Mikio Oda Memorial (Hiroshima, JPN)													<i>Kobayashi (2019) - research on athlete performance and technique- 2019 data book</i>				
date	28-Apr-19	time	2.64	3.73	4.79	5.83	6.89	7.95	9.04	10.12	11.23	12.35	13.78	2 / 3			
reaction time		interval	1.09	1.06	1.04	1.06	1.06	1.06	1.09	1.08	1.11	1.12	1.43		3.19	3.21	3.31
wind	0.6 m/s	velocity	5.20	8.39	8.62	8.79	8.62	8.62	8.39	8.46	8.23	8.16	9.80	7.98	8.60	8.54	8.28
FINAL - 2018 Mikio Oda Memorial (Hiroshima, JPN)													<i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>				
date	29-Apr-18	time	2.61	3.69	4.74	5.78	6.83	7.89	8.94	10.00	11.07	12.17	13.57	3 / 3			
reaction time		interval	1.08	1.05	1.04	1.05	1.06	1.05	1.06	1.07	1.10	1.40		3.17	3.16	3.23	
wind	2.6 m/s	velocity	5.26	8.46	8.70	8.79	8.70	8.62	8.70	8.62	8.54	8.31	10.01	8.11	8.65	8.68	8.49
Semi-Final 1 - 2017 Japanese National Championships (Osaka, JPN)													<i>(2017) - tfdata-store.com/2017/07/13/post-1040/</i>				
date	24-Jun-17	time	2.64	3.71	4.78	5.86	6.94	8.00	9.08	10.17	11.26	12.35	13.75	7 / 6			
reaction time	0.147	interval	7 steps	1.07	1.07	1.08	1.08	1.06	1.08	1.09	1.09	1.09	1.40		3.22	3.22	3.27
wind	0.6 m/s	velocity	5.20	8.54	8.54	8.46	8.46	8.62	8.46	8.39	8.39	8.39	10.01	8.00	8.52	8.52	8.39
Heat 1 - 2017 Japanese National Championships (Osaka, JPN)													<i>(2017) - tfdata-store.com/2017/07/13/post-1040/</i>				
date	24-Jun-17	time	2.63	3.70	4.76	5.83	6.88	7.92	8.98	10.05	11.13	12.22	13.63	7 / 1			
reaction time	0.161	interval	7 steps	1.07	1.06	1.07	1.05	1.04	1.06	1.07	1.08	1.09	1.41		3.20	3.15	3.24
wind	1.3 m/s	velocity	5.22	8.54	8.62	8.54	8.70	8.79	8.62	8.54	8.46	8.39	9.94	8.07	8.57	8.70	8.46
Heat 5 - 2017 Fuse Sprint (Tottori, JPN)													<i>(2017) - tfdata-store.com/2017/06/04/post-848/</i>				
date	04-Jun-17	time	2.58	3.65	4.69	5.74	6.79	7.84	8.88	9.94	11.03	12.12	13.54	4 / 1			
reaction time		interval	1.07	1.04	1.05	1.05	1.05	1.05	1.04	1.06	1.09	1.09	1.42		3.16	3.14	3.24
wind	1.5 m/s	velocity	5.32	8.54	8.79	8.70	8.70	8.70	8.79	8.62	8.39	8.39	9.87	8.12	8.68	8.73	8.46
FINAL - 2017 Seiko Golden Grand Prix (Kawasaki, JPN)													<i>(2017) - tfdata-store.com/2017/05/22/post-599/</i>				
date	21-May-17	time	2.59	3.65	4.69	5.74	6.81	7.87	8.92	9.99	11.06	12.14	13.59	7 / 3			
reaction time	0.141	interval	1.06	1.04	1.05	1.07	1.06	1.05	1.07	1.07	1.08	1.45		3.15	3.18	3.22	
wind	-1.8 m/s	velocity	5.30	8.62	8.79	8.70	8.54	8.62	8.70	8.54	8.54	8.46	9.67	8.09	8.70	8.62	8.52
FINAL - 2017 Michitaka Memorial (Osaka, JPN)													<i>(2017) - tfdata-store.com/2017/05/08/post-413/</i>				
date	07-May-17	time	2.63	3.69	4.75	5.80	6.86	7.90	8.96	10.01	11.08	12.17	13.57	7 / 1			
reaction time		interval	1.06	1.06	1.05	1.06	1.04	1.06	1.05	1.07	1.09	1.40		3.17	3.16	3.21	
wind	-0.8 m/s	velocity	5.22	8.62	8.62	8.70	8.62	8.79	8.62	8.70	8.54	8.39	10.01	8.11	8.65	8.68	8.54
FINAL - 2017 Mikio Oda Memorial (Hiroshima, JPN)													<i>(2017) - tfdata-store.com/2017/05/01/458/</i>				
date	29-Apr-17	time	2.61	3.67	4.73	5.77	6.82	7.87	8.92	9.98	11.07	12.13	13.52	5 / 1			
reaction time		interval	1.06	1.06	1.04	1.05	1.05	1.05	1.06	1.09	1.06	1.39		3.16	3.15	3.21	
wind	1.5 m/s	velocity	5.26	8.62	8.62	8.79	8.70	8.70	8.70	8.62	8.39	8.62	10.09	8.14	8.68	8.70	8.54
FINAL - 2017 Tokushima Athletics Carnival (Naruto, JPN)													<i>(2017) - tfdata-store.com/2017/04/09/post-285/</i>				
date	08-Apr-17	time	2.65	3.74	4.79	5.86	6.91	7.96	9.03	10.10	11.16	12.23	13.63	6 / 1			
reaction time		interval	1.09	1.05	1.07	1.05	1.05	1.05	1.07	1.07	1.06	1.07	1.40		3.21	3.17	3.20
wind	0.7 m/s	velocity	5.18	8.39	8.70	8.54	8.70	8.70	8.54	8.54	8.62	8.54	10.01	8.07	8.54	8.65	8.57
FINAL - 2016 West Japan Carnival (Kita-Kyushu, JPN)													<i>(2016.11.07) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>				
date	03-Nov-16	time	2.62	3.69	4.74	5.79	6.84	7.91	8.98	10.05	11.13	12.24	13.68	5 / 1			
reaction time		interval	1.07	1.05	1.05	1.05	1.07	1.07	1.07	1.08	1.11	1.44		3.17	3.19	3.26	
wind	1.1 m/s	velocity	5.24	8.54	8.70	8.70	8.70	8.54	8.54	8.46	8.23	9.74	8.04	8.65	8.60	8.41	
Heat 5 - 2016 West Japan Carnival (Kita-Kyushu, JPN)													<i>(2016.11.07) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>				
date	03-Nov-16	time	2.63	3.69	4.75	5.81	6.86	7.91	8.98	10.06	11.16	12.25	13.70	3 / 1			
reaction time		interval	1.06	1.06	1.06	1.05	1.05	1.07	1.08	1.10	1.09	1.45		3.18	3.17	3.27	
wind	1.5 m/s	velocity	5.22	8.62	8.62	8.62	8.70	8.70	8.54	8.46	8.31	8.39	9.67	8.03	8.62	8.65	8.39
FINAL - 2016 Tashima Memorial (Yamaguchi, JPN)													<i>(2016.10.26) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>				
date	23-Oct-16	time	2.62	3.68	4.73	5.78	6.83	7.89	8.96	10.05	11.16	12.26	13.69	4 / 1			
reaction time		interval	1.06	1.05	1.05	1.05	1.06	1.07	1.09	1.11	1.10	1.43		3.16	3.18	3.30	
wind	0.2 m/s	velocity	5.24	8.62	8.70	8.70	8.70	8.62	8.54	8.39	8.23	8.31	9.80	8.04	8.68	8.62	8.31

FINAL - 2016 All-Star Night Athletics (Hiratsuka, JPN)															<i>(2016.07.23) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>		
date	23-Jul-16	time	2.62	3.68	4.73	5.78	6.83	7.89	8.96	10.05	11.16	12.26	13.69	4 / 1			
reaction time	0.144	interval		1.06	1.05	1.05	1.05	1.06	1.07	1.09	1.11	1.10	1.43		3.16	3.18	3.30
wind	0.5 m/s	velocity	5.24	8.62	8.70	8.70	8.70	8.62	8.54	8.39	8.23	8.31	9.80	8.04	8.68	8.62	8.31
FINAL - 2016 Japanese National Championships (Nagoya, JPN)															<i>Kota (2016) - race analysis of japanese top-ranked men 110m and women 100m hurdlers</i>		
date	26-Jun-16	time	2.60	3.68	4.74	5.80	6.86	7.92	8.98	10.06	11.14	12.23	13.66	6 / 4			
reaction time	0.144	interval		1.08	1.06	1.06	1.06	1.06	1.06	1.08	1.08	1.09	1.43		3.20	3.18	3.25
wind	2.4 m/s	velocity	5.28	8.46	8.62	8.62	8.62	8.62	8.62	8.46	8.46	8.39	9.80	8.05	8.57	8.62	8.44
FINAL - 2016 Fuse Sprint (Tottori, JPN)															<i>Kota (2016) - race analysis of japanese top-ranked men 110m and women 100m hurdlers</i>		
date	05-Jun-16	time	2.62	3.68	4.72	5.77	6.81	7.86	8.95	10.03	11.13	12.21	13.65	7 / 3			
reaction time		interval		1.06	1.04	1.05	1.04	1.05	1.09	1.08	1.10	1.08	1.44		3.15	3.18	3.26
wind	1.4 m/s	velocity	5.24	8.62	8.79	8.70	8.79	8.70	8.39	8.46	8.31	8.46	9.74	8.06	8.70	8.62	8.41
FINAL - 2016 Kansai Corporate Championships (Nagai, JPN)															<i>(2016.05.22) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>		
date	22-May-16	time	2.62	3.66	4.71	5.75	6.79	7.84	8.89	9.97	11.05	12.13	13.54	3 / 1			
reaction time		interval		1.04	1.05	1.04	1.04	1.05	1.05	1.08	1.08	1.08	1.41	=PB	3.13	3.14	3.24
wind	0.3 m/s	velocity	5.24	8.79	8.70	8.79	8.79	8.70	8.70	8.46	8.46	8.46	9.94	8.12	8.76	8.73	8.46
FINAL - 2016 Seiko Golden Grand Prix (Kawasaki, JPN)															<i>Kota (2016) - race analysis of japanese top-ranked men 110m and women 100m hurdlers</i>		
date	08-May-16	time	2.58	3.64	4.67	5.72	6.78	7.84	8.92	10.00	11.09	12.19	13.61	4 / 3			
reaction time	0.123	interval		1.06	1.03	1.05	1.06	1.06	1.08	1.08	1.09	1.10	1.42		3.14	3.20	3.27
wind	-0.6 m/s	velocity	5.32	8.62	8.87	8.70	8.62	8.62	8.46	8.46	8.39	8.31	9.87	8.08	8.73	8.57	8.39
FINAL - 2016 Mikio Oda Memorial (Hiroshima, JPN)															<i>Kota (2016) - race analysis of japanese top-ranked men 110m and women 100m hurdlers</i>		
date	29-Apr-16	time	2.63	3.69	4.73	5.80	6.85	7.95	9.02	10.11	11.25	12.39	13.98	/ 6			
reaction time		interval		1.06	1.04	1.07	1.05	1.10	1.07	1.09	1.14	1.14	1.59		3.17	3.22	3.37
wind	-0.5 m/s	velocity	5.22	8.62	8.79	8.54	8.70	8.31	8.54	8.39	8.02	8.02	8.82	7.87	8.65	8.52	8.14
FINAL - 2015 Japanese National Championships (Niigata, JPN)															<i>Takashima (2015) - race analysis of 110m & 100m hurdles in Japan- results 2015 competitions</i>		
date	28-Jun-15	time	2.62	3.70	4.77	5.84	6.94	8.01	9.10	10.21	11.31	12.42	13.90	8 / 6			
reaction time	0.133	interval		1.08	1.07	1.07	1.10	1.07	1.09	1.11	1.10	1.11	1.48		3.22	3.26	3.32
wind	-1.4 m/s	velocity	5.24	8.46	8.54	8.54	8.31	8.54	8.39	8.23	8.31	8.23	9.47	7.91	8.52	8.41	8.26
FINAL - 2015 Shizuoka International Athletics Meeting (Fukuroi, JPN)															<i>Takashima (2015) - race analysis of 110m & 100m hurdles in Japan- results 2015 competitions</i>		
date	03-May-15	time	2.66	3.76	4.85	5.95	7.03	8.12	9.23	10.33	11.46	12.61	14.09	/ 6			
reaction time		interval		1.10	1.09	1.10	1.08	1.09	1.11	1.10	1.13	1.15	1.48		3.29	3.28	3.38
wind	-0.8 m/s	velocity	5.16	8.31	8.39	8.31	8.46	8.39	8.23	8.31	8.09	7.95	9.47	7.81	8.33	8.36	8.11
FINAL - 2013 Japanese National Championships (Chofu, JPN)															<i>Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13</i>		
date	09-Jun-13	time	2.58	3.64	4.70	5.76	6.82	7.87	8.97	10.05	11.13	12.22	13.67	5 / 4			
reaction time		interval		1.06	1.06	1.06	1.06	1.05	1.10	1.08	1.08	1.09	1.45		3.18	3.21	3.25
wind	1.3 m/s	velocity	5.32	8.62	8.62	8.62	8.62	8.70	8.31	8.46	8.46	8.39	9.67	8.05	8.62	8.54	8.44
Semi-Final 1 - 2013 Japanese National Championships (Chofu, JPN)															<i>Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13</i>		
date	09-Jun-13	time	2.61	3.66	4.71	5.75	6.80	7.86	8.93	10.01	11.07	12.16	13.58	7 / 1			
reaction time		interval		1.05	1.05	1.04	1.05	1.06	1.07	1.08	1.06	1.09	1.42		3.14	3.18	3.23
wind	1.5 m/s	velocity	5.26	8.70	8.70	8.79	8.70	8.62	8.54	8.46	8.62	8.39	9.87	8.10	8.73	8.62	8.49
Heat 2 - 2013 Japanese National Championships (Chofu, JPN)															<i>Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13</i>		
date	08-Jun-13	time	2.62	3.70	4.76	5.83	6.91	8.00	9.08	10.19	11.29	12.42	13.85	6 / 1			
reaction time		interval		1.08	1.06	1.07	1.08	1.09	1.08	1.11	1.10	1.13	1.43		3.21	3.25	3.34
wind	0.1 m/s	velocity	5.24	8.46	8.62	8.54	8.46	8.39	8.46	8.23	8.31	8.09	9.80	7.94	8.54	8.44	8.21
FINAL - 2013 Seiko Golden Grand Prix (Tokyo, JPN)															<i>Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13</i>		
date	05-May-13	time	2.66	3.75	4.83	5.93	7.01	8.08	9.17	10.28	11.37	12.50	13.94	3 / 5			
reaction time		interval		1.09	1.08	1.10	1.08	1.07	1.09	1.11	1.09	1.13	1.44		3.27	3.24	3.33
wind	-1.4 m/s	velocity	5.16	8.39	8.46	8.31	8.46	8.54	8.39	8.23	8.39	8.09	9.74	7.89	8.39	8.46	8.23
FINAL - 2013 Mikio Oda Memorial (Hiroshima, JPN)															<i>Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13</i>		
date	29-Apr-13	time	2.63	3.71	4.76	5.82	6.87	7.94	9.01	10.11	11.19	12.27	13.70	/ 1			
reaction time		interval		1.08	1.05	1.06	1.05	1.07	1.07	1.10	1.08	1.08	1.43		3.19	3.19	3.26
wind	0.7 m/s	velocity	5.22	8.46	8.70	8.62	8.70	8.54	8.54	8.31	8.46	8.46	9.80	8.03	8.60	8.60	8.41
Heat 1 - 2013 Mikio Oda Memorial (Hiroshima, JPN)															<i>Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13</i>		
date	29-Apr-13	time	2.64	3.69	4.76	5.81	6.87	7.93	9.01	10.09	11.20	12.31	13.76	/ 1			
reaction time		interval		1.05	1.07	1.05	1.06	1.06	1.08	1.08	1.11	1.11	1.45		3.17	3.20	3.30
wind	1.5 m/s	velocity	5.20	8.70	8.54	8.70	8.62	8.62	8.46	8.46	8.23	8.23	9.67	7.99	8.65	8.57	8.31
FINAL - 2012 Kanto (Tokyo, JPN)															<i>Karube (2013) - the analysis of hurdle clearance and interval sprint in men's 110m sprint hurdle</i>		
date	13-May-12	time	2.67	3.78	4.86	5.94	7.05	8.11	9.20	10.28	11.37	12.47	13.88	/ 2			
reaction time		interval		1.11	1.08	1.08	1.11	1.06	1.09	1.08	1.09	1.10	1.41		3.27	3.26	3.27

wind	2.0 m/s	velocity	5.14	8.23	8.46	8.46	8.23	8.62	8.39	8.46	8.39	8.31	9.94	7.93		8.39	8.41	8.39
FINAL - 2012 Mito Invitational Athletics Meeting (Mito, JPN)																		
<i>Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13</i>																		
date	04-May-12	time	2.65	3.72	4.80	5.87	6.91	7.99	9.07	10.16	11.25	12.35		13.78	/ 3			
reaction time		interval		1.07	1.08	1.07	1.04	1.08	1.08	1.09	1.09	1.10	1.43			3.22	3.20	3.28
wind	-0.3 m/s	velocity	5.18	8.54	8.46	8.54	8.79	8.46	8.46	8.39	8.39	8.31	9.80	7.98		8.52	8.57	8.36
B FINAL - 2012 Mikio Oda Memorial (Hiroshima, JPN)																		
<i>Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13</i>																		
date	29-Apr-12	time	2.60	3.70	4.76	5.84	6.92	8.00	9.08	10.17	11.27	12.39		13.83	7 / 2			
reaction time		interval		1.10	1.06	1.08	1.08	1.08	1.08	1.09	1.10	1.12	1.44			3.24	3.24	3.31
wind	2.1 m/s	velocity	5.28	8.31	8.62	8.46	8.46	8.46	8.46	8.39	8.31	8.16	9.74	7.95		8.46	8.46	8.28
FINAL - 2011 Japanese National Championships (Kumagaya, JPN)																		
<i>Hisashi (2012) - performance analysis of Japanese record holder Keisuke Ushiro</i>																		
date	11-Jun-11	time	2.63	3.74	4.84	5.92	7.02	8.10	9.21	10.31	11.41	12.53		13.98	/ 6			
reaction time		interval		1.11	1.10	1.08	1.10	1.08	1.11	1.10	1.10	1.12	1.45			3.29	3.29	3.32
wind	-0.1 m/s	velocity	5.22	8.23	8.31	8.46	8.31	8.46	8.23	8.31	8.31	8.16	9.67	7.87		8.33	8.33	8.26
Semi-Final 1 - 2011 Japanese National Championships (Kumagaya, JPN)																		
<i>Hisashi (2012) - performance analysis of Japanese record holder Keisuke Ushiro</i>																		
date	11-Jun-11	time	2.67	3.76	4.85	5.94	7.03	8.14	9.26	10.39	11.52	12.66		14.09	/ 2			
reaction time		interval		1.09	1.09	1.09	1.09	1.11	1.12	1.13	1.13	1.14	1.43			3.27	3.32	3.40
wind	-2.0 m/s	velocity	5.14	8.39	8.39	8.39	8.39	8.23	8.16	8.09	8.09	8.02	9.80	7.81		8.39	8.26	8.06
FINAL - 2011 Mikio Oda Memorial (Hiroshima, JPN)																		
<i>Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13</i>																		
date	29-Apr-11	time	2.59	3.67	4.72	5.80	6.87	7.90	8.98	10.04	11.14	12.23		13.66	/ 2			
reaction time		interval		1.08	1.05	1.08	1.07	1.03	1.08	1.06	1.10	1.09	1.43			3.21	3.18	3.25
wind	2.4 m/s	velocity	5.30	8.46	8.70	8.46	8.54	8.87	8.46	8.62	8.31	8.39	9.80	8.05		8.54	8.62	8.44
Ono, Kazuto (JPN) (2001)																		
H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10																		
FINAL - 2019 National Sports Festival (Hitachinaka, JPN) (99cm)																		
<i>Enomoto (2019) - research on athlete performance and technique- 2019 data book</i>																		
date	06-Oct-19	time	2.68	3.76	4.84	5.91	6.97	8.03	9.10	10.16	11.24	12.32		13.79	3 / 7			
reaction time	0.157	interval		1.08	1.08	1.07	1.06	1.06	1.07	1.06	1.08	1.08	1.47			3.23	3.19	3.22
wind	2.7 m/s	velocity	5.12	8.46	8.46	8.54	8.62	8.62	8.54	8.62	8.46	8.46	9.54	7.98		8.49	8.60	8.52
Ortega, Orlando (ESP) (1991)																		
H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10																		
FINAL - 2022 Müller Indoor Grand Prix (Birmingham, GBR) (TV Analysis)																		
<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>																		
date	19-Feb-22	time	2.50	3.58	4.62	5.67	6.72							7.79	2 / 7			
reaction time	0.165	interval		1.08	1.04	1.05	1.05						1.07			3.17		
		velocity	5.49	8.46	8.79	8.70	8.70						9.08	7.70		8.65		
FINAL - 2021 István Gyulai Memorial (Székesfehérvár, HUN) (TV Analysis)																		
<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>																		
date	06-Jul-21	time	2.47	3.50	4.54	5.54	6.54	7.54	8.56	9.57	10.58	11.63		13.15	5 / 2			
reaction time	0.134	interval	7 steps	1.03	1.04	1.00	1.00	1.00	1.02	1.01	1.01	1.05	1.52			3.07	3.02	3.07
wind	-0.1 m/s	velocity	5.55	8.87	8.79	9.14	9.14	9.14	8.96	9.05	9.05	8.70	9.22	8.37		8.93	9.08	8.93
FINAL - 2020 Meeting Pro Athlé Tour de Marseille (Marseille, FRA) (TV Analysis)																		
<i>Henson (2020) - Athlete First: 2020 year end hurdle report</i>																		
date	03-Sep-20	time	2.49	3.55	4.61	5.59	6.60	7.57	8.55	9.62	10.67	11.70		13.15	5 / 1			
reaction time	0.214	interval	7 steps	1.06	1.06	0.98	1.01	0.97	0.98	1.07	1.05	1.03	1.45			3.10	2.96	3.15
wind	-0.3 m/s	velocity	5.51	8.62	8.62	9.33	9.05	9.42	9.33	8.54	8.70	8.87	9.67	8.37		8.85	9.26	8.70
FINAL - 2020 István Gyulai Memorial (Székesfehérvár, HUN) (TV Analysis)																		
<i>Henson (2020) - Athlete First: 2020 year end hurdle report</i>																		
date	19-Aug-20	time	2.50	3.54	4.57	5.60	6.64	7.64	8.66	9.68	10.71	11.74		13.21	4 / 1			
reaction time	0.146	interval	7 steps	1.04	1.03	1.03	1.04	1.00	1.02	1.02	1.03	1.03	1.47			3.10	3.06	3.08
wind	0.3 m/s	velocity	5.49	8.79	8.87	8.87	8.79	9.14	8.96	8.96	8.87	8.87	9.54	8.33		8.85	8.96	8.90
FINAL - 2020 Herculis Meeting International d'Athletisme (Monaco, MON) (TV Analysis)																		
<i>Henson (2020) - Athlete First: 2020 year end hurdle report</i>																		
date	14-Aug-20	time	2.54	3.57	4.60	5.60	6.57	7.57	8.61	9.61	10.67	11.71		13.11	4 / 1			
reaction time	0.125	interval	7 steps	1.03	1.03	1.00	0.97	1.00	1.04	1.00	1.06	1.04	1.40			3.06	3.01	3.10
wind	0.8 m/s	velocity	5.40	8.87	8.87	9.14	9.42	9.14	8.79	9.14	8.62	8.79	10.01	8.39		8.96	9.11	8.85
FINAL - 2019 IAAF World Championships (Doha, QAT)																		
<i>CAA Hurdle Development (2019)</i>																		
date	02-Oct-19	time	2.58	3.60	4.65	5.63	6.66	7.65	8.63	9.66	10.69	11.79		13.30	5 / 3			
reaction time	0.130	interval	7 steps	1.02	1.05	0.98	1.03	0.99	0.98	1.03	1.03	1.10	1.51			3.05	3.00	3.16
wind	0.6 m/s	velocity	5.32	8.96	8.70	9.33	8.87	9.23	9.33	8.87	8.87	8.31	9.28	8.27		8.99	9.14	8.68
Semi-Final 3 - 2019 IAAF World Championships (Doha, QAT)																		
<i>CAA Hurdle Development (2019)</i>																		
date	02-Oct-19	time	2.58	3.63	4.63	5.67	6.66	7.67	8.68	9.69	10.74	11.77		13.16	4 / 1			
reaction time	0.131	interval	7 steps	1.05	1.00	1.04	0.99	1.01	1.01	1.01	1.05	1.03	1.39			3.09	3.01	3.09
wind	0.6 m/s	velocity	5.32	8.70	9.14	8.79	9.23	9.05	9.05	9.05	8.70	8.87	10.09	8.36		8.87	9.11	8.87
Heat 5 - 2019 IAAF World Championships (Doha, QAT)																		
<i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>																		
date	30-Sep-19	time	2.58	3.63	4.63	5.63	6.63	7.64	8.63	9.66	10.68	11.74		13.15	9 / 1			
reaction time	0.140	interval	7 steps	1.05	1.00	1.00	1.00	1.01	0.99	1.03	1.02	1.06	1.41			3.05	3.00	3.11
wind	-0.5 m/s	velocity	5.32	8.70	9.14	9.14	9.14	9.05	9.23	8.87	8.96	8.62	9.94	8.37		8.99	9.14	8.82

FINAL - 2019 The Match - Europe v USA (Minsk, BLR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>				
date	10-Sep-19	time	2.58	3.64	4.66	5.71	6.71	7.73	8.73	9.73	10.75	11.77	13.21	5 / 1				
reaction time	0.158	interval	7 steps	1.06	1.02	1.05	1.00	1.02	1.00	1.00	1.02	1.02	1.44			3.13	3.02	3.04
wind	0.1 m/s	velocity	5.32	8.62	8.96	8.70	9.14	8.96	9.14	9.14	8.96	8.96	9.74	8.33		8.76	9.08	9.02
FINAL - 2019 AG Memorial van Damme (Brussels, BEL) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>				
date	06-Sep-19	time	2.52	3.56	4.58	5.60	6.58	7.58	8.60	9.64	10.68	11.72	13.22	5 / 1				
reaction time	0.126	interval	7 steps	1.04	1.02	1.02	0.98	1.00	1.02	1.04	1.04	1.04	1.50			3.08	3.00	3.12
wind	0.0 m/s	velocity	5.44	8.79	8.96	8.96	9.33	9.14	8.96	8.79	8.79	8.79	9.35	8.32		8.90	9.14	8.79
FINAL - 2019 Meeting de Paris (Paris, FRA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>				
date	24-Aug-19	time	2.50	3.52	4.54	5.54	6.52	7.56	8.58	9.62	10.66	11.70	13.14	6 / 2				
reaction time	0.132	interval	7 steps	1.02	1.02	1.00	0.98	1.04	1.02	1.04	1.04	1.04	1.44			3.04	3.04	3.12
wind	0.8 m/s	velocity	5.49	8.96	8.96	9.14	9.33	8.79	8.96	8.79	8.79	8.79	9.74	8.37		9.02	9.02	8.79
FINAL - 2019 Athletissima (Lausanne, SU) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>				
date	05-Jul-19	time	2.52	3.52	4.54	5.54	6.54	7.54	8.54	9.56	10.58	11.62	13.05	4 / 1				
reaction time	0.134	interval	7 steps	1.00	1.02	1.00	1.00	1.00	1.00	1.02	1.02	1.04	1.43			3.02	3.00	3.08
wind	1.0 m/s	velocity	5.44	9.14	8.96	9.14	9.14	9.14	9.14	8.96	8.96	8.79	9.80	8.43		9.08	9.14	8.90
FINAL - 2019 Prefontaine Classic (Stanford, CA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>				
date	30-Jun-19	time	2.55	3.60	4.62	5.63	6.62	7.64	8.68	9.70	10.75	11.80	13.24	4 / 1				
reaction time	0.163	interval	7 steps	1.05	1.02	1.01	0.99	1.02	1.04	1.02	1.05	1.05	1.44			3.08	3.05	3.12
wind	0.3 m/s	velocity	5.38	8.70	8.96	9.05	9.23	8.96	8.79	8.96	8.70	8.70	9.74	8.31		8.90	8.99	8.79
FINAL - 2019 Golden Gala Pietro Mennea (Rome, ITA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>				
date	06-Jun-19	time	2.60	3.71	4.80	5.82	6.87	7.89	8.97	10.02	11.13	12.27	14.00	6 / 9				
reaction time	0.127	interval	7 steps	1.11	1.09	1.02	1.05	1.02	1.08	1.05	1.11	1.14	1.73			3.22	3.15	3.30
wind	0.4 m/s	velocity	5.28	8.23	8.39	8.96	8.70	8.96	8.46	8.70	8.23	8.02	8.10	7.86		8.52	8.70	8.31
FINAL - 2019 Nanjing World Challenge (Nanjing, CHN)														<i>CAA Hurdle Development (2019)</i>				
date	21-May-19	time	2.57	3.63	4.65	5.68	6.68	7.72	8.74	9.78	10.81	11.87	13.27	5 / 1				
reaction time	0.145	interval	7 steps	1.06	1.02	1.03	1.00	1.04	1.02	1.04	1.03	1.06	1.40			3.11	3.06	3.13
wind	0.1 m/s	velocity	5.34	8.62	8.96	8.87	9.14	8.79	8.96	8.79	8.87	8.62	10.01	8.29		8.82	8.96	8.76
FINAL - 2019 Shanghai Diamond League (Shanghai, CHN)														<i>CAA Hurdle Development (2019)</i>				
date	18-May-19	time	2.58	3.62	4.64	5.64	6.66	7.68	8.70	9.74	10.80	11.86	13.28	6 / 4				
reaction time	0.154	interval	7 steps	1.04	1.02	1.00	1.02	1.02	1.02	1.04	1.06	1.06	1.42			3.06	3.06	3.16
wind	0.7 m/s	velocity	5.32	8.79	8.96	9.14	8.96	8.96	8.96	8.79	8.62	8.62	9.87	8.28		8.96	8.96	8.68
FINAL - 2019 PSD Bank Meeting (Düsseldorf, GER) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>				
date	20-Feb-19	time	2.43	3.46	4.48	5.50	6.48						7.52	4 / 1				
reaction time	0.120	interval	7 steps	1.03	1.02	1.02	0.98						1.04			3.07		
		velocity	5.65	8.87	8.96	8.96	9.33						9.35	7.98		8.93		
FINAL - 2018 AG Memorial van Damme (Brussels, BEL) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>				
date	31-Aug-18	time	2.54	3.56	4.58	5.58	6.56	7.56	8.58	9.58	10.62	11.66	13.10	6 / 2				
reaction time	0.124	interval	7 steps	1.02	1.02	1.00	0.98	1.00	1.02	1.00	1.04	1.04	1.44			3.04	3.00	3.08
wind	-0.1 m/s	velocity	5.40	8.96	8.96	9.14	9.33	9.14	8.96	9.14	8.79	8.79	9.74	8.40		9.02	9.14	8.90
FINAL - 2018 Müller Grand Prix (Birmingham, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>				
date	18-Aug-18	time	2.48	3.52	4.54	5.54	6.52	7.52	8.52	9.54	10.56	11.58	13.08	6 / 1				
reaction time	0.139	interval	7 steps	1.04	1.02	1.00	0.98	1.00	1.00	1.02	1.02	1.02	1.50			3.06	2.98	3.06
wind	1.3 m/s	velocity	5.53	8.79	8.96	9.14	9.33	9.14	9.14	8.96	8.96	8.96	9.35	8.41		8.96	9.20	8.96
FINAL - 2018 Herculis Meeting International d'Athletisme (Monaco, MON) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>				
date	20-Jul-18	time	2.48	3.56	4.56	5.56	6.58	7.60	8.60	9.64	10.66	11.70	13.18	5 / 2				
reaction time	0.129	interval	7 steps	1.08	1.00	1.00	1.02	1.02	1.00	1.04	1.02	1.04	1.48			3.08	3.04	3.10
wind	-0.2 m/s	velocity	5.53	8.46	9.14	9.14	8.96	8.96	9.14	8.79	8.96	8.79	9.47	8.35		8.90	9.02	8.85
FINAL - 2018 Meeting de Paris (Paris, FRA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>				
date	30-Jun-18	time	2.52	3.60	4.64	5.68	6.68	7.70	8.72	9.74	10.80	11.88	13.44	5 / 6				
reaction time	0.135	interval	7 steps	1.08	1.04	1.04	1.00	1.02	1.02	1.02	1.06	1.08	1.56			3.16	3.04	3.16
wind	1.5 m/s	velocity	5.44	8.46	8.79	8.79	9.14	8.96	8.96	8.96	8.62	8.46	8.99	8.18		8.68	9.02	8.68
FINAL - 2018 Prefontaine Classic (Eugene, OR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>				
date	26-May-18	time	2.54	3.60	4.62	5.62	6.62	7.64	8.64	9.66	10.66	11.72	13.17	5 / 4				
reaction time	0.158	interval	7 steps	1.06	1.02	1.00	1.00	1.02	1.00	1.02	1.00	1.06	1.45			3.08	3.02	3.08
wind	3.0 m/s	velocity	5.40	8.62	8.96	9.14	9.14	8.96	9.14	8.96	9.14	8.62	9.67	8.35		8.90	9.08	8.90
FINAL - 2018 Shanghai Diamond League (Shanghai, CHN) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>				
date	12-May-18	time	2.52	3.58	4.60	5.60	6.62	7.64	8.64	9.64	10.68	11.72	13.17	8 / 2				

reaction time	0.135	interval	7 steps	1.06	1.02	1.00	1.02	1.02	1.00	1.00	1.04	1.04	1.45		3.08	3.04	3.08
wind	0.2 m/s	velocity	5.44	8.62	8.96	9.14	8.96	8.96	9.14	9.14	8.79	8.79	9.67	8.35	8.90	9.02	8.90
FINAL - 2017 Memorial van Damme (Brussels, BEL) (TV Analysis)														<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>			
date	01-Sep-17	time	2.54	3.62	4.62	5.62	6.62	7.64	8.64	9.66	10.68	11.72		13.17		7 / 2	
reaction time	0.102	interval	7 steps	1.08	1.00	1.00	1.00	1.02	1.00	1.02	1.02	1.04	1.45		3.08	3.02	3.08
wind	0.5 m/s	velocity	5.40	8.46	9.14	9.14	9.14	8.96	9.14	8.96	8.96	8.79	9.67	8.35	8.90	9.08	8.90
FINAL - 2017 Müller Grand Prix (Birmingham, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>			
date	20-Aug-17	time	2.56	3.62	4.68	5.72	6.74	7.78	8.82	9.86	10.92	12.02		13.48		4 / 5	
reaction time	0.140	interval		1.06	1.06	1.04	1.02	1.04	1.04	1.04	1.06	1.10	1.46		3.16	3.10	3.20
wind	-0.6 m/s	velocity	5.36	8.62	8.62	8.79	8.96	8.79	8.79	8.79	8.62	8.31	9.60	8.16	8.68	8.85	8.57
FINAL - 2017 IAAF World Championships (London, GBR)														<i>Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles</i>			
date	07-Aug-17	time	2.45	3.51	4.55	5.60	6.62	7.65	8.68	9.71	10.73	11.78		13.37		3 / 7	
reaction time	0.140	interval		1.06	1.04	1.05	1.02	1.03	1.03	1.03	1.02	1.05	1.59		3.15	3.08	3.10
wind	0.0 m/s	velocity	5.60	8.62	8.79	8.70	8.96	8.87	8.87	8.87	8.96	8.70	8.82	8.23	8.70	8.90	8.85
Semi-Final 1 - 2017 IAAF World Championships (London, GBR)														<i>Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles</i>			
date	06-Aug-17	time	2.45	3.51	4.54	5.56	6.60	7.61	8.60	9.62	10.66	11.71		13.23		4 / 4	
reaction time	0.148	interval		1.06	1.03	1.02	1.04	1.01	0.99	1.02	1.04	1.05	1.52		3.11	3.04	3.11
wind	0.2 m/s	velocity	5.60	8.62	8.87	8.96	8.79	9.05	9.23	8.96	8.79	8.70	9.22	8.31	8.82	9.02	8.82
FINAL - 2017 Bauhaus Athletics (Stockholm, SWE) (TV Analysis)														<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>			
date	18-Jun-17	time	2.56	3.56	4.58	5.62	6.62	7.62	8.62	9.60	10.62	11.64		13.09		4 / 1	
reaction time	0.146	interval		1.00	1.02	1.04	1.00	1.00	1.00	0.98	1.02	1.02	1.45		3.06	3.00	3.02
wind	3.5 m/s	velocity	5.36	9.14	8.96	8.79	9.14	9.14	9.14	9.33	8.96	8.96	9.67	8.40	8.96	9.14	9.08
FINAL - 2017 Golden Gala Pietro Mennea (Rome, ITA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>			
date	08-Jun-17	time	2.58	3.62	4.64	5.66	6.68	7.66	8.68	9.70	10.72	11.76		13.17		6 / 2	
reaction time	0.152	interval	7 steps	1.04	1.02	1.02	1.02	0.98	1.02	1.02	1.02	1.04	1.41		3.08	3.02	3.08
wind	-0.3 m/s	velocity	5.32	8.79	8.96	8.96	8.96	9.33	8.96	8.96	8.96	8.79	9.94	8.35	8.90	9.08	8.90
FINAL - 2017 Shanghai Diamond League (Shanghai, CHN) (TV Analysis)														<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>			
date	13-May-17	time	2.50	3.56	4.58	5.58	6.58	7.58	8.60	9.60	10.64	11.70		13.15		6 / 2	
reaction time	0.136	interval	7 steps	1.06	1.02	1.00	1.00	1.00	1.02	1.00	1.04	1.06	1.45		3.08	3.02	3.10
wind	0.5 m/s	velocity	5.49	8.62	8.96	9.14	9.14	9.14	8.96	9.14	8.79	8.62	9.67	8.37	8.90	9.08	8.85
FINAL - 2017 European Indoor Championships (Beograd, SRB)														<i>(2017.03.05) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>			
date	03-Mar-17	time	2.63	3.67	4.71	5.69	6.75							7.64		7 / 7	
reaction time		interval	7 steps	1.04	1.04	0.98	1.06						0.89		3.06		
		velocity	5.22	8.79	8.79	9.33	8.62						10.92	7.85	8.96		
FINAL - 2016 Memorial van Damme (Brussels, BEL) (TV Analysis)														<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>			
date	09-Sep-16	time	2.50	3.54	4.57	5.57	6.57	7.57	8.57	9.59	10.61	11.64		13.08		5 / 1	
reaction time	0.145	interval	7 steps	1.04	1.03	1.00	1.00	1.00	1.00	1.02	1.02	1.03	1.44		3.07	3.00	3.07
wind	0.2 m/s	velocity	5.49	8.79	8.87	9.14	9.14	9.14	9.14	8.96	8.96	8.87	9.74	8.41	8.93	9.14	8.93
FINAL - 2016 Athletissima (Lausanne, SUI) (TV Analysis)														<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>			
date	25-Aug-16	time	2.52	3.56	4.58	5.60	6.60	7.60	8.62	9.64	10.64	11.68		13.11		5 / 1	
reaction time	0.133	interval	7 steps	1.04	1.02	1.02	1.00	1.00	1.02	1.02	1.00	1.04	1.43		3.08	3.02	3.06
wind	0.5 m/s	velocity	5.44	8.79	8.96	8.96	9.14	9.14	8.96	8.96	9.14	8.79	9.80	8.39	8.90	9.08	8.96
FINAL - 2016 Olympic Games (Rio de Janeiro, BRA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>			
date	16-Aug-16	time	2.56	3.62	4.64	5.64	6.64	7.64	8.64	9.68	10.70	11.74		13.17		7 / 2	
reaction time	0.127	interval	7 steps	1.06	1.02	1.00	1.00	1.00	1.00	1.04	1.02	1.04	1.43		3.08	3.00	3.10
wind	0.2 m/s	velocity	5.36	8.62	8.96	9.14	9.14	9.14	9.14	8.79	8.96	8.79	9.80	8.35	8.90	9.14	8.85
FINAL - 2016 Spanish National Championships (Gijón, ESP) (TV Analysis)														<i>Henson (2021) - Athlete First: 2016 year end hurdle report</i>			
date	24-Jul-16	time	2.50	3.56	4.57	5.56	6.54	7.56	8.56	9.56	10.56	11.60		13.09		4 / 1	
reaction time	0.161	interval	7 steps	1.06	1.01	0.99	0.98	1.02	1.00	1.00	1.00	1.04	1.49		3.06	3.00	3.04
wind	1.0 m/s	velocity	5.49	8.62	9.05	9.23	9.33	8.96	9.14	9.14	9.14	8.79	9.41	8.40	8.96	9.14	9.02
FINAL - 2016 Herculis Meeting International d'Athlétisme (Monaco, MON) (TV Analysis)														<i>Henson (2021) - Athlete First: 2016 year end hurdle report</i>			
date	15-Jul-16	time	2.48	3.52	4.54	5.54	6.54	7.54	8.56	9.56	10.56	11.60		13.04		3 / 1	
reaction time	0.136	interval	7 steps	1.04	1.02	1.00	1.00	1.00	1.02	1.00	1.00	1.04	1.44	NR	3.06	3.02	3.04
wind	0.0 m/s	velocity	5.53	8.79	8.96	9.14	9.14	9.14	8.96	9.14	9.14	8.79	9.74	8.44	8.96	9.08	9.02
FINAL - 2016 Golden Gala Pietro Mennea (Roma, ITA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>			
date	02-Jun-16	time	2.56	3.60	4.64	5.66	6.66	7.66	8.66	9.68	10.70	11.74		13.22		7 / 1	
reaction time		interval	7 steps	1.04	1.04	1.02	1.00	1.00	1.00	1.02	1.02	1.04	1.48		3.10	3.00	3.08
wind	0.6 m/s	velocity	5.36	8.79	8.79	8.96	9.14	9.14	9.14	8.96	8.96	8.79	9.47	8.32	8.85	9.14	8.90

FINAL - 2016 Meeting International Mohammed VI D'Athletisme (Rabat, MAR) (TV Analysis)													<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>				
date	22-May-16	time	2.50	3.54	4.54	5.52	6.52	7.54	8.56	9.60	10.62	11.66	13.13	6 / 2			
reaction time	0.150	interval	7 steps	1.04	1.00	0.98	1.00	1.02	1.02	1.04	1.02	1.04	1.47		3.02	3.04	3.10
wind	1.4 m/s	velocity	5.49	8.79	9.14	9.33	9.14	8.96	8.96	8.79	8.96	8.79	9.54	8.38	9.08	9.02	8.85

FINAL - 2016 Doha Diamond League (Doha, QAT) (TV Analysis)													<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>				
date	06-May-16	time	2.56	3.58	4.60	5.60	6.60	7.60	8.60	9.64	10.68	11.72	13.12	6 / 3			
reaction time	0.118	interval	7 steps	1.02	1.02	1.00	1.00	1.00	1.00	1.04	1.04	1.04	1.40	NR	3.04	3.00	3.12
wind	1.4 m/s	velocity	5.36	8.96	8.96	9.14	9.14	9.14	9.14	8.79	8.79	8.79	10.01	8.38	9.02	9.14	8.79

FINAL - 2012 Olympic Games (London, GBR) (TV Analysis)													<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>				
date	08-Aug-12	time	2.54	3.62	4.64	5.64	6.66	7.68	8.70	9.74	10.80	11.90	13.43	9 / 6			
reaction time	0.135	interval	7 steps	1.08	1.02	1.00	1.02	1.02	1.02	1.04	1.06	1.10	1.53		3.10	3.06	3.20
wind	-0.3 m/s	velocity	5.40	8.46	8.96	9.14	8.96	8.96	8.96	8.79	8.62	8.31	9.16	8.19	8.85	8.96	8.57

Semi-Final 1 - 2012 Olympic Games (London, GBR) (TV Analysis)													<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>				
date	08-Aug-12	time	2.52	3.56	4.60	5.60	6.60	7.62	8.62	9.62	10.66	11.74	13.26	6 / 2			
reaction time	0.151	interval	7 steps	1.04	1.04	1.00	1.00	1.02	1.00	1.00	1.04	1.08	1.52		3.08	3.02	3.12
wind	-0.5 m/s	velocity	5.44	8.79	8.79	9.14	9.14	8.96	9.14	9.14	8.79	8.46	9.22	8.30	8.90	9.08	8.79

Osaghae, Omo (USA) (1988)																	
FINAL - 2007 USATF National Junior Championships (Indianapolis, IN) (99cm)													<i>USATF Men's Hurdle Development (2007)</i>				
date	21-Jun-07	time	2.72	3.80	4.87	5.92	6.96	7.99	9.06	10.13	11.18	12.28	13.71	/ 5			
reaction time		interval		1.08	1.07	1.05	1.04	1.03	1.07	1.07	1.05	1.10	1.43		3.20	3.14	3.22
wind	2.7 m/s	velocity	5.04	8.46	8.54	8.70	8.79	8.87	8.54	8.54	8.70	8.31	9.80	8.02	8.57	8.73	8.52

Oschenat, Andreas (GDR) (1962)																	
FINAL - 1986 East German National Championships (Jena, GDR)													<i>Aubert (1987) - mesures et observations biomecaniques a propos des courses de haies hautes</i>				
date	27-Jun-86	time	2.62	3.68	4.73	5.76	6.82	7.88	8.95	10.01	11.10	12.17	13.63	/ 2			
reaction time		interval		1.06	1.05	1.03	1.06	1.06	1.07	1.06	1.09	1.07	1.46		3.14	3.19	3.22
wind	1.7 m/s	velocity	5.24	8.62	8.70	8.87	8.62	8.62	8.54	8.62	8.39	8.54	9.60	8.07	8.73	8.60	8.52

Otohe, Takumi (JPN) (1989)																	
Decathlon - Heat 1 - 2014 Nittai University Distance Meeting (Wakayama, JPN)													<i>Takeo (2014) - decathletes sprint ability and relationship of individual performance</i>				
date	27-Apr-14	time	2.70	3.90	5.06	6.21	7.36	8.52	9.66	10.84	12.00	13.19	14.74	6 / 3			<i>Matsuo (2014)</i>
reaction time		interval		1.20	1.16	1.15	1.15	1.16	1.14	1.18	1.16	1.19	1.55	PB	3.51	3.45	3.53
wind	1.0 m/s	velocity	5.08	7.62	7.88	7.95	7.95	7.88	8.02	7.75	7.88	7.68	9.05	7.46	7.81	7.95	7.77

Owens-Delerme, Ayden (PUR) (2000)																	
Decathlon - Heat 3 - 2024 Olympic Games (Paris, FRA)													<i>Paris 2024 Olympic Games - Results Book (2024)</i>				
date	03-Aug-24	time	2.47	3.57	4.66	5.76	6.85	7.94	9.04	10.16	11.30	12.42	14.09	4 / 7			
reaction time	0.160	interval	7 steps	1.10	1.09	1.10	1.09	1.09	1.10	1.12	1.14	1.12	1.67		3.29	3.28	3.38
wind	0.7 m/s	velocity	5.55	8.31	8.39	8.31	8.39	8.39	8.31	8.16	8.02	8.16	8.40	7.81	8.33	8.36	8.11

Oyeniye, Abejode (NGR) (1993)																	
FINAL - 2018 IAAF Continental Cup (Ostrava, CZE) (TV Analysis)													<i>Henson (2021) - Athlete First: 2018 year end hurdle report</i>				
date	09-Sep-18	time	2.60	3.76	4.82	5.88	6.96	8.00	9.08	10.14	11.20	12.30	13.85	8 / 8			
reaction time	0.225	interval	7 steps	1.16	1.06	1.06	1.08	1.04	1.08	1.06	1.06	1.10	1.55	PB	3.28	3.20	3.22
wind	0.9 m/s	velocity	5.28	7.88	8.62	8.62	8.46	8.79	8.46	8.62	8.62	8.31	9.05	7.94	8.36	8.57	8.52

Pan Yicheng (CHN) (2000)																	
U20 Heat 3 - 2019 Chinese National Youth Games (Taiyuan, CHN) (99cm)													<i>CAA Hurdle Development (2019)</i>				
date	14-Aug-19	time	2.70	3.79	4.87	5.95	7.04	8.11	9.21	10.31	11.44	12.58	14.05	5 / 4			
reaction time	0.163	interval		1.09	1.08	1.08	1.09	1.07	1.10	1.10	1.13	1.14	1.47		3.25	3.26	3.37
wind	0.6 m/s	velocity	5.08	8.39	8.46	8.46	8.39	8.54	8.31	8.31	8.09	8.02	9.54	7.83	8.44	8.41	8.14

Pan Zijie (CHN) (1995)																	
FINAL - 2021 Chinese National Championships (Chongqing, CHN)													<i>CAA Hurdle Development (2021)</i>				
date	25-Jun-21	time	2.64	3.75	4.81	5.88	6.95	8.02	9.16	10.29	11.43	12.55	14.10	9 / 8			
reaction time	0.185	interval		1.11	1.06	1.07	1.07	1.07	1.14	1.13	1.14	1.12	1.55		3.24	3.28	3.39
wind	1.6 m/s	velocity	5.20	8.23	8.62	8.54	8.54	8.54	8.02	8.09	8.02	8.16	9.05	7.80	8.46	8.36	8.09

Heat 3 - 2021 Chinese National Championships (Chongqing, CHN)													<i>CAA Hurdle Development (2021)</i>				
date	25-Jun-21	time	2.62	3.70	4.76	5.87	6.96	8.04	9.11	10.20	11.32	12.47	14.00	6 / 3			
reaction time	0.167	interval		1.08	1.06	1.11	1.09	1.08	1.07	1.09	1.12	1.15	1.53		3.25	3.24	3.36
wind	0.5 m/s	velocity	5.24	8.46	8.62	8.23	8.39	8.46	8.54	8.39	8.16	7.95	9.16	7.86	8.44	8.46	8.16

FINAL - 2020 Chinese Olympic Trials (Shaoxing, CHN)													<i>CAA Hurdle Development (2021)</i>				
date	12-Jun-21	time	2.63	3.74	4.81	5.93	7.03	8.13	9.22	10.30	11.43	12.55	14.02	1 / 5			
reaction time	0.158	interval		1.11	1.07	1.12	1.10	1.10	1.09	1.08	1.13	1.12	1.47		3.30	3.29	3.33
wind	0.9 m/s	velocity	5.22	8.23	8.54	8.16	8.31	8.31	8.39	8.46	8.09	8.16	9.54	7.85	8.31	8.33	8.23

Heat 1 - 2020 Chinese Olympic Trials (Shaoxing, CHN)													<i>CAA Hurdle Development (2021)</i>				
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date	12-Jun-21	time	2.51	3.61	4.72	5.80	6.91	8.03	9.14	10.25	11.40	12.53	14.16	7 / 4			
reaction time	0.111	interval		1.10	1.11	1.08	1.11	1.12	1.11	1.11	1.15	1.13	1.63		3.29	3.34	3.39
wind	-0.4 m/s	velocity	5.47	8.31	8.23	8.46	8.23	8.16	8.23	8.23	7.95	8.09	8.60	7.77	8.33	8.21	8.09
FINAL - 2021 East China District Meeting (Zhaoqing, CHN)														<i>CAA Hurdle Development (2021)</i>			
date	24-Apr-21	time	2.68	3.79	4.91	5.99	7.08	8.19	9.28	10.39	11.54	12.68	14.19	2 / 5			
reaction time	0.186	interval		1.11	1.12	1.08	1.09	1.11	1.09	1.11	1.15	1.14	1.51		3.31	3.29	3.40
wind	-0.3 m/s	velocity	5.12	8.23	8.16	8.46	8.39	8.23	8.39	8.23	7.95	8.02	9.28	7.75	8.28	8.33	8.06
Heat 2 - 2021 East China District Meeting (Zhaoqing, CHN)														<i>CAA Hurdle Development (2021)</i>			
date	24-Apr-21	time	2.68	3.80	4.90	5.98	7.10	8.25	9.36	10.50	11.63	12.78	14.31	9 / 4			
reaction time	0.178	interval		1.12	1.10	1.08	1.12	1.15	1.11	1.14	1.13	1.15	1.53		3.30	3.38	3.42
wind	-1.2 m/s	velocity	5.12	8.16	8.31	8.46	8.16	7.95	8.23	8.02	8.09	7.95	9.16	7.69	8.31	8.11	8.02
FINAL - 2021 Yangtze River Delta Athletics Meeting (Shaoxing, CHN)														<i>CAA Hurdle Development (2021)</i>			
date	08-Apr-21	time	2.72	3.84	4.96	6.04	7.16	8.28	9.40	10.52	11.66	12.78	14.33	3 / 6			
reaction time		interval		1.12	1.12	1.08	1.12	1.12	1.12	1.12	1.14	1.12	1.55		3.32	3.36	3.38
wind	-0.1 m/s	velocity	5.04	8.16	8.16	8.46	8.16	8.16	8.16	8.16	8.02	8.16	9.05	7.68	8.26	8.16	8.11
Heat 2 - 2020 Chinese National Championships (Shaoxing, CHN)														<i>CAA Hurdle Development (2020)</i>			
date	16-Sep-20	time	2.64	3.78	4.90	6.00	7.13	8.26	9.39	10.53	11.68	12.84	14.40	9 / 7			
reaction time	0.154	interval		1.14	1.12	1.10	1.13	1.13	1.13	1.14	1.15	1.16	1.56		3.36	3.39	3.45
wind	-0.5 m/s	velocity	5.20	8.02	8.16	8.31	8.09	8.09	8.09	8.02	7.95	7.88	8.99	7.64	8.16	8.09	7.95
FINAL - 2019 Chinese National Grand Prix Final (Daqing, CHN)														<i>CAA Hurdle Development (2019)</i>			
date	24-Aug-19	time	2.68	3.80	4.90	6.00	7.09	8.17	9.27	10.38	11.49	12.61	14.08	2 / 4			
reaction time	0.204	interval		1.12	1.10	1.10	1.09	1.08	1.10	1.11	1.11	1.12	1.47		3.32	3.27	3.34
wind	-0.1 m/s	velocity	5.12	8.16	8.31	8.31	8.39	8.46	8.31	8.23	8.23	8.16	9.54	7.81	8.26	8.39	8.21
Heat 2 - 2019 Chinese National Grand Prix Final (Daqing, CHN)														<i>CAA Hurdle Development (2019)</i>			
date	23-Aug-19	time	2.67	3.80	4.90	6.01	7.12	8.24	9.36	10.52	11.67	12.86	14.48	7 / 2			
reaction time	0.195	interval		1.13	1.10	1.11	1.11	1.12	1.12	1.16	1.15	1.19	1.62		3.34	3.35	3.50
wind	-0.2 m/s	velocity	5.14	8.09	8.31	8.23	8.23	8.16	8.16	7.88	7.95	7.68	8.65	7.60	8.21	8.19	7.83
FINAL - 2019 Chinese World Championship Trials (Shenyang, CHN)														<i>CAA Hurdle Development (2019)</i>			
date	02-Aug-19	time	2.62	3.70	4.77	5.84	6.91	7.96	9.04	10.11	11.21	12.32	13.77	8 / 3			
reaction time	0.171	interval		1.08	1.07	1.07	1.07	1.05	1.08	1.07	1.10	1.11	1.45	PB	3.22	3.20	3.28
wind	0.0 m/s	velocity	5.24	8.46	8.54	8.54	8.54	8.70	8.46	8.54	8.31	8.23	9.67	7.99	8.52	8.57	8.36
Heat 1 - 2019 Chinese World Championship Trials (Shenyang, CHN)														<i>CAA Hurdle Development (2019)</i>			
date	02-Aug-19	time	2.65	3.77	4.87	6.00	7.14	8.24	9.35	10.46	11.57	12.68	14.17	3 / 3			
reaction time	0.173	interval		1.12	1.10	1.13	1.14	1.10	1.11	1.11	1.11	1.11	1.49		3.35	3.35	3.33
wind	-0.3 m/s	velocity	5.18	8.16	8.31	8.09	8.02	8.31	8.23	8.23	8.23	8.23	9.41	7.76	8.19	8.19	8.23
FINAL - 2019 Chinese National Championships (Shenyang, CHN)														<i>CAA Hurdle Development (2019)</i>			
date	08-Jul-19	time	2.63	3.70	4.80	5.87	6.96	8.02	9.11	10.21	11.31	12.41	13.87	3 / 3			
reaction time	0.187	interval		1.07	1.10	1.07	1.09	1.06	1.09	1.10	1.10	1.10	1.46		3.24	3.24	3.30
wind	0.1 m/s	velocity	5.22	8.54	8.31	8.54	8.39	8.62	8.39	8.31	8.31	8.31	9.60	7.93	8.46	8.46	8.31
Heat 2 - 2019 Chinese National Championships (Shenyang, CHN)														<i>CAA Hurdle Development (2019)</i>			
date	08-Jul-19	time	2.65	3.77	4.83	5.90	6.97	8.06	9.14	10.23	11.33	12.43	13.88	4 / 2			
reaction time	0.191	interval		1.12	1.06	1.07	1.07	1.09	1.08	1.09	1.10	1.10	1.45		3.25	3.24	3.29
wind	0.4 m/s	velocity	5.18	8.16	8.62	8.54	8.54	8.39	8.46	8.39	8.31	8.31	9.67	7.93	8.44	8.46	8.33
FINAL - 2019 Chinese National Grand Prix 4 (Luoyang, CHN)														<i>CAA Hurdle Development (2019)</i>			
date	30-May-19	time	2.64	3.72	4.82	5.89	6.97	8.05	9.14	10.24	11.34	12.51	14.03	2 / 4			
reaction time	0.177	interval		1.08	1.10	1.07	1.08	1.08	1.09	1.10	1.10	1.17	1.52		3.25	3.25	3.37
wind	0.0 m/s	velocity	5.20	8.46	8.31	8.54	8.46	8.46	8.39	8.31	8.31	7.81	9.22	7.84	8.44	8.44	8.14
FINAL - 2019 Chinese National Grand Prix 3 (Jinhau, CHN)														<i>CAA Hurdle Development (2019)</i>			
date	23-May-19	time	2.68	3.76	4.84	5.92	7.00	8.08	9.14	10.20	11.30	12.38	13.83	5 / 2			
reaction time	0.182	interval		1.08	1.08	1.08	1.08	1.08	1.06	1.06	1.10	1.08	1.45		3.24	3.22	3.24
wind	2.5 m/s	velocity	5.12	8.46	8.46	8.46	8.46	8.46	8.62	8.62	8.31	8.46	9.67	7.95	8.46	8.52	8.46
B-FINAL - 2019 Chinese Indoor National Grand Prix Final (Hangzhou, CHN)														<i>CAA Hurdle Development (2019)</i>			
date	20-Mar-19	time	2.66	3.76	4.89	5.96	7.05						7.97	4 / 3			
reaction time		interval		1.10	1.13	1.07	1.09						0.92		3.30		
		velocity	5.16	8.31	8.09	8.54	8.39						10.57	7.53	8.31		
A-FINAL - 2019 Chinese Indoor National Grand Prix 2 (Nanjing, CHN)														<i>CAA Hurdle Development (2019)</i>			
date	24-Feb-19	time	2.60	3.75	4.85	5.94	7.04						7.97	4 / 2			
reaction time		interval		1.15	1.10	1.09	1.10						0.93		3.34		
		velocity	5.28	7.95	8.31	8.39	8.31						10.45	7.53	8.21		

B-FINAL - 2019 Chinese Indoor National Grand Prix 1 (Nanjing, CHN)

CAA Hurdle Development (2019)

date	20-Feb-19	time	2.68	3.78	4.89	5.95	7.04							7.96	3 / 2			
reaction time		interval		1.10	1.11	1.06	1.09							0.92				3.27
		velocity	5.12	8.31	8.23	8.62	8.39							10.57	7.54			8.39

FINAL - 2018 Chinese National Championships (Taiyuan, CHN)

Henson (2018) - coaching observations

date	16-Sep-18	time	2.64	3.75	4.84	5.96	7.04	8.13	9.23	10.33	11.46	12.60		14.12	8 / 5			
reaction time		interval		1.11	1.09	1.12	1.08	1.09	1.10	1.10	1.13	1.14	1.52					3.32 3.27 3.37
wind	-0.3 m/s	velocity	5.20	8.23	8.39	8.16	8.46	8.39	8.31	8.31	8.09	8.02	9.22	7.79				8.26 8.39 8.14

Heat 2 - 2018 Chinese National Championships (Taiyuan, CHN)

Henson (2018) - coaching observations

date	15-Sep-18	time	2.70	3.80	4.87	5.98	7.07	8.15	9.26	10.38	11.48	12.64		14.11	7 / 3			
reaction time		interval		1.10	1.07	1.11	1.09	1.08	1.11	1.12	1.10	1.16	1.47					3.28 3.28 3.38
wind	0.7 m/s	velocity	5.08	8.31	8.54	8.23	8.39	8.46	8.23	8.16	8.31	7.88	9.54	7.80				8.36 8.36 8.11

Parakhonka, Vitali (BLR) (1993)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

FINAL - 2019 The Match - Europe v USA (Minsk, BLR) (TV Analysis)

Henson (2020) - Athlete First: 2019 year end hurdle report

date	10-Sep-19	time	2.63	3.73	4.78	5.80	6.83	7.92	8.96	10.10	11.16	12.28		13.80	9 / 6			
reaction time	0.162	interval		1.10	1.05	1.02	1.03	1.09	1.04	1.14	1.06	1.12	1.52					3.17 3.16 3.32
wind	0.1 m/s	velocity	5.22	8.31	8.70	8.96	8.87	8.39	8.79	8.02	8.62	8.16	9.22	7.97				8.65 8.68 8.26

Parchment, Hansle (JAM) (1990)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

FINAL - 2024 Weltklasse (Zürich, SUI)

Omega Timing (2024) - diamond league race analysis

date	05-Sep-24	time	2.45	3.50	4.52	5.54	6.55	7.57	8.58	9.59	10.61	11.63		13.18	8 / 4			
reaction time	0.131	interval	7 steps	1.05	1.02	1.02	1.01	1.02	1.01	1.01	1.02	1.02	1.55					3.09 3.04 3.05
wind	-0.3 m/s	velocity	5.60	8.70	8.96	8.96	9.05	8.96	9.05	9.05	8.96	8.96	9.05	8.35				8.87 9.02 8.99

FINAL - 2024 Athletissima (Lausanne, SUI)

Omega Timing (2024) - diamond league race analysis

date	22-Aug-24	time	2.44	3.49	4.49	5.49	6.49	7.49	8.49	9.50	10.55	11.63		13.23	7 / 3			
reaction time	0.154	interval	7 steps	1.05	1.00	1.00	1.00	1.00	1.00	1.01	1.05	1.08	1.60					3.05 3.00 3.14
wind	-0.1 m/s	velocity	5.62	8.70	9.14	9.14	9.14	9.14	9.14	9.05	8.70	8.46	8.76	8.31				8.99 9.14 8.73

FINAL - 2024 Olympic Games (Paris, FRA)

Paris 2024 Olympic Games - Results Book (2024)

date	08-Aug-24	time	2.47	3.55	4.58	5.60	6.61	7.63	8.65	9.69	10.74	11.78		13.39	2 / 8			
reaction time	0.144	interval	7 steps	1.08	1.03	1.02	1.01	1.02	1.02	1.04	1.05	1.04	1.61					3.13 3.05 3.13
wind	-0.1 m/s	velocity	5.55	8.46	8.87	8.96	9.05	8.96	8.96	8.79	8.70	8.79	8.71	8.22				8.76 8.99 8.76

Semi-Final 1 - 2024 Olympic Games (Paris, FRA)

Paris 2024 Olympic Games - Results Book (2024)

date	07-Aug-24	time	2.46	3.51	4.51	5.53	6.52	7.51	8.52	9.54	10.59	11.64		13.19	3 / 3			
reaction time	0.148	interval	7 steps	1.05	1.00	1.02	0.99	0.99	1.01	1.02	1.05	1.05	1.55					3.07 2.99 3.12
wind	0.1 m/s	velocity	5.58	8.70	9.14	8.96	9.23	9.23	9.05	8.96	8.70	8.70	9.05	8.34				8.93 9.17 8.79

Heat 3 - 2024 Olympic Games (Paris, FRA)

Paris 2024 Olympic Games - Results Book (2024)

date	04-Aug-24	time	2.46	3.54	4.56	5.58	6.60	7.61	8.66	9.70	10.76	11.83		13.43	8 / 5			
reaction time	0.159	interval	7 steps	1.08	1.02	1.02	1.02	1.01	1.05	1.04	1.06	1.07	1.60					3.12 3.08 3.17
wind	1.1 m/s	velocity	5.58	8.46	8.96	8.96	8.96	9.05	8.70	8.79	8.62	8.54	8.76	8.19				8.79 8.90 8.65

FINAL - 2024 Prefontaine Classic (Eugene, OR)

Omega Timing (2024) - diamond league race analysis

date	25-May-24	time	2.51	3.56	4.59	5.59	6.59	7.59	8.60	9.61	10.64	11.70		13.28	6 / 4			
reaction time	0.151	interval	7 steps	1.05	1.03	1.00	1.00	1.00	1.01	1.01	1.03	1.06	1.58					3.08 3.01 3.10
wind	-0.1 m/s	velocity	5.47	8.70	8.87	9.14	9.14	9.14	9.05	9.05	8.87	8.62	8.87	8.28				8.90 9.11 8.85

FINAL - 2024 Yangtze River Delta Athletics Diamond Gala (Suzhou, CHN) (TV Analysis)

Omega Timing (2024) - diamond league race analysis

date	27-Apr-24	time	2.54	3.62	4.65	5.65	6.65	7.65	8.66	9.69	10.74	11.80		13.26	5 / 3			
reaction time	0.143	interval	7 steps	1.08	1.03	1.00	1.00	1.00	1.01	1.03	1.05	1.06	1.46					3.11 3.01 3.14
wind	0.8 m/s	velocity	5.40	8.46	8.87	9.14	9.14	9.14	9.05	8.87	8.70	8.62	9.60	8.30				8.82 9.11 8.73

FINAL - 2024 Xiamen Diamond League (Xiamen, CHN)

Omega Timing (2024) - diamond league race analysis

date	20-Apr-24	time	2.50	3.57	4.59	5.61	6.61	7.63	8.64	9.66	10.70	11.75		13.33	5 / 6			
reaction time	0.157	interval	7 steps	1.07	1.02	1.02	1.00	1.02	1.01	1.02	1.04	1.05	1.58					3.11 3.03 3.11
wind	-0.3 m/s	velocity	5.49	8.54	8.96	8.96	9.14	8.96	9.05	8.96	8.79	8.70	8.87	8.25				8.82 9.05 8.82

FINAL - 2023 Prefontaine Classic (Eugene, OR)

Omega Timing (2023) - diamond league race analysis

date	17-Sep-23	time	2.47	3.50	4.48	5.47	6.45	7.42	8.40	9.40	10.40	11.41		12.93	5 / 1			
reaction time	0.168	interval	7 steps	1.03	0.98	0.99	0.98	0.97	0.98	1.00	1.00	1.01	1.52	PB				3.00 2.93 3.01
wind	0.9 m/s	velocity	5.55	8.87	9.33	9.23	9.33	9.42	9.33	9.14	9.14	9.05	9.22	8.51				9.14 9.36 9.11

FINAL - 2023 Xiamen Diamond League (Xiamen, CHN)

Omega Timing (2023) - diamond league race analysis

date	02-Sep-23	time	2.40	3.40	4.40	5.40	6.40	7.40	8.40	9.40	10.40	11.40		12.96	5 / 1			
reaction time	0.163	interval	7 steps	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.56					3.00 3.00 3.00
wind	0.0 m/s	velocity	5.72	9.14	9.14	9.14	9.14	9.14	9.14	9.14	9.14	9.14	8.99	8.49				9.14 9.14 9.14

FINAL - 2023 World Athletics Championships (Budapest, HUN)														<i>Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season</i>				
date	21-Aug-23	time	2.58	3.64	4.64	5.62	6.61	7.63	8.63	9.62	10.63	11.66	13.07	8 / 2				
reaction time	0.169	interval	7 steps	1.06	1.00	0.98	0.99	1.02	1.00	0.99	1.01	1.03	1.41		3.04	3.01	3.03	
wind	0.0 m/s	velocity	5.32	8.62	9.14	9.33	9.23	8.96	9.14	9.23	9.05	8.87	9.94	8.42	9.02	9.11	9.05	
Semi-Final 3 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>				
date	21-Aug-23	time	2.52	3.55	4.55	5.53	6.56	7.56	8.60	9.63	10.66	11.73	13.18	5 / 2				
reaction time	0.138	interval	7 steps	1.03	1.00	0.98	1.03	1.00	1.04	1.03	1.03	1.07	1.45		3.01	3.07	3.13	
wind	-0.1 m/s	velocity	5.44	8.87	9.14	9.33	8.87	9.14	8.79	8.87	8.87	8.54	9.67	8.35	9.11	8.93	8.76	
Heat 1 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>				
date	20-Aug-23	time	2.58	3.63	4.63	5.65	6.63	7.66	8.70	9.73	10.77	11.80	13.30	3 / 1				
reaction time	0.195	interval	7 steps	1.05	1.00	1.02	0.98	1.03	1.04	1.03	1.04	1.03	1.50		3.07	3.05	3.10	
wind	-0.3 m/s	velocity	5.32	8.70	9.14	8.96	9.33	8.87	8.79	8.87	8.79	8.87	9.35	8.27	8.93	8.99	8.85	
FINAL - 2023 London Athletics Meet (London, GBR)														<i>Omega Timing (2023) - diamond league race analysis</i>				
date	23-Jul-23	time	2.41	3.45	4.44	5.43	6.44	7.45	8.46	9.49	10.56	11.63	13.26	4 / 4				
reaction time	0.135	interval	7 steps	1.04	0.99	0.99	1.01	1.01	1.01	1.03	1.07	1.07	1.63		3.02	3.03	3.17	
wind	1.3 m/s	velocity	5.69	8.79	9.23	9.23	9.05	9.05	9.05	8.87	8.54	8.54	8.60	8.30	9.08	9.05	8.65	
FINAL - 2023 Jamaican National Championships (Kingston, JAM) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>				
date	09-Jul-23	time	2.53	3.58	4.60	5.58	6.56	7.56	8.54	9.56	10.58	11.62	13.12	4 / 2				
reaction time		interval	7 steps	1.05	1.02	0.98	0.98	1.00	0.98	1.02	1.02	1.04	1.50		3.05	2.96	3.08	
wind	0.7 m/s	velocity	5.42	8.70	8.96	9.33	9.33	9.14	9.33	8.96	8.96	8.79	9.35	8.38	8.99	9.26	8.90	
FINAL - 2023 Meeting International Mohammed VI d'Athlétisme (Rabat, MAR)														<i>Omega Timing (2023) - diamond league race analysis</i>				
date	28-May-23	time	2.48	3.52	4.52	5.53	6.52	7.52	8.53	9.55	10.58	11.65	13.24	4 / 3				
reaction time	0.157	interval	7 steps	1.04	1.00	1.01	0.99	1.00	1.01	1.02	1.03	1.07	1.59		3.05	3.00	3.12	
wind	-1.3 m/s	velocity	5.53	8.79	9.14	9.05	9.23	9.14	9.05	8.96	8.87	8.54	8.82	8.31	8.99	9.14	8.79	
FINAL - 2022 Weltklasse (Zürich, SUI) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
date	08-Sep-22	time	2.53	3.60	4.64	5.64	6.64	7.64	8.65	9.67	10.71	11.75	13.26	5 / 3				
reaction time	0.153	interval	7 steps	1.07	1.04	1.00	1.00	1.00	1.01	1.02	1.04	1.04	1.51		3.11	3.01	3.10	
wind	-1.0 m/s	velocity	5.42	8.54	8.79	9.14	9.14	9.14	9.05	8.96	8.79	8.79	9.28	8.30	8.82	9.11	8.85	
FINAL - 2022 Athletissima (Lausanne, SUI) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
date	26-Aug-22	time	2.60	3.64	4.64	5.64	6.64	7.64	8.64	9.64	10.67	11.71	13.13	4 / 4				
reaction time	0.151	interval	7 steps	1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.03	1.04	1.42		3.04	3.00	3.07	
wind	0.0 m/s	velocity	5.28	8.79	9.14	9.14	9.14	9.14	9.14	9.14	8.87	8.79	9.87	8.38	9.02	9.14	8.93	
FINAL - 2022 Herculis Meeting International d'Athlétisme (Monaco, MON) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
date	10-Aug-22	time	2.50	3.53	4.53	5.53	6.53	7.53	8.53	9.56	10.56	11.60	13.08	5 / 3				
reaction time	0.128	interval	7 steps	1.03	1.00	1.00	1.00	1.00	1.00	1.03	1.00	1.04	1.48		3.03	3.00	3.07	
wind	0.6 m/s	velocity	5.49	8.87	9.14	9.14	9.14	9.14	9.14	8.87	9.14	8.79	9.47	8.41	9.05	9.14	8.93	
Semi-Final 3 - 2022 World Athletics Championships (Eugene, OR)														<i>Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season</i>				
date	17-Jul-22	time	2.57	3.60	4.60	5.57	6.53	7.55	8.53	9.53	10.55	11.58	13.02	3 / 1				
reaction time	0.128	interval	7 steps	1.03	1.00	0.97	0.96	1.02	0.98	1.00	1.02	1.03	1.44		3.00	2.96	3.05	
wind	2.5 m/s	velocity	5.34	8.87	9.14	9.42	9.52	8.96	9.33	9.14	8.96	8.87	9.74	8.45	9.14	9.26	8.99	
Heat 4 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
date	16-Jul-22	time	2.53	3.56	4.63	5.63	6.66	7.66	8.66	9.66	10.66	11.70	13.17	4 / 1				
reaction time	0.153	interval	7 steps	1.03	1.07	1.00	1.03	1.00	1.00	1.00	1.00	1.04	1.47		3.10	3.03	3.04	
wind	0.2 m/s	velocity	5.42	8.87	8.54	9.14	8.87	9.14	9.14	9.14	9.14	8.79	9.54	8.35	8.85	9.05	9.02	
FINAL - 2022 Müller Birmingham Diamond League (Birmingham, GBR) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
date	21-May-22	time	2.47	3.50	4.50	5.49	6.47	7.45	8.45	9.45	10.49	11.53	13.09	4 / 1				
reaction time	0.143	interval	7 steps	1.03	1.00	0.99	0.98	0.98	1.00	1.00	1.04	1.04	1.56		3.02	2.96	3.08	
wind	0.7 m/s	velocity	5.55	8.87	9.14	9.23	9.33	9.33	9.14	9.14	8.79	8.79	8.99	8.40	9.08	9.26	8.90	
FINAL - 2021 Boris Hanzeković Memorial (Zagreb, CRO) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>				
date	14-Sep-21	time	2.50	3.55	4.55	5.54	6.53	7.52	8.53	9.54	10.56	11.63	13.12	6 / 3				
reaction time	0.141	interval	7 steps	1.05	1.00	0.99	0.99	0.99	1.01	1.01	1.02	1.07	1.49		3.04	2.99	3.10	
wind	0.7 m/s	velocity	5.49	8.70	9.14	9.23	9.23	9.23	9.05	9.05	8.96	8.54	9.41	8.38	9.02	9.17	8.85	
FINAL - 2021 Weltklasse (Zürich, SUI) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>				
date	09-Sep-21	time	2.50	3.52	4.54	5.52	6.54	7.54	8.54	9.56	10.60	11.68	13.17	5 / 3				
reaction time	0.132	interval	7 steps	1.02	1.02	0.98	1.02	1.00	1.00	1.02	1.04	1.08	1.49		3.02	3.02	3.14	
wind	0.6 m/s	velocity	5.49	8.96	8.96	9.33	8.96	9.14	9.14	8.96	8.79	8.46	9.41	8.35	9.08	9.08	8.73	
FINAL - 2021 Meeting de Paris (Paris, FRA) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>				
date	28-Aug-21	time	2.46	3.48	4.48	5.48	6.46	7.46	8.44	9.46	10.50	11.54	13.03	6 / 1				
reaction time	0.138	interval	7 steps	1.02	1.00	1.00	0.98	1.00	0.98	1.02	1.04	1.04	1.49		3.02	2.96	3.10	

wind	0.7 m/s	velocity	5.58	8.96	9.14	9.14	9.33	9.14	9.33	8.96	8.79	8.79	9.41	8.44		9.08	9.26	8.85	
FINAL - 2021 Athletissima (Lausanne, SU) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>					
date	26-Aug-21	time	2.52	3.52	4.54	5.52	6.54	7.54	8.56	9.56	10.66	11.76		13.58		6 / 8			
reaction time	0.133	interval	7 steps	1.00	1.02	0.98	1.02	1.00	1.02	1.00	1.10	1.10	1.82			3.00	3.04	3.20	
wind	2.5 m/s	velocity	5.44	9.14	8.96	9.33	8.96	9.14	8.96	9.14	8.31	8.31	7.70	8.10		9.14	9.02	8.57	
FINAL - 2020 Olympic Games (Tokyo, JPN) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>					
date	06-Aug-21	time	2.50	3.54	4.56	5.54	6.52	7.50	8.50	9.54	10.56	11.58		13.04		7 / 1			
reaction time	0.130	interval	7 steps	1.04	1.02	0.98	0.98	0.98	1.00	1.04	1.02	1.02	1.46			3.04	2.96	3.08	
wind	-0.5 m/s	velocity	5.49	8.79	8.96	9.33	9.33	9.33	9.14	8.79	8.96	8.96	9.60	8.44		9.02	9.26	8.90	
Semi-Final 3 - 2020 Olympic Games (Tokyo, JPN) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>					
date	04-Aug-21	time	2.53	3.60	4.61	5.61	6.61	7.57	8.57	9.65	10.65	11.72		13.23		6 / 2			
reaction time	0.145	interval	7 steps	1.07	1.01	1.00	1.00	0.96	1.00	1.08	1.00	1.07	1.51			3.08	2.96	3.15	
wind	-0.1 m/s	velocity	5.42	8.54	9.05	9.14	9.14	9.52	9.14	8.46	9.14	8.54	9.28	8.31		8.90	9.26	8.70	
Heat 3 - 2020 Olympic Games (Tokyo, JPN) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>					
date	02-Aug-21	time	2.51	3.56	4.59	5.59	6.59	7.59	8.61	9.63	10.64	11.70		13.23		7 / 2			
reaction time	0.155	interval	7 steps	1.05	1.03	1.00	1.00	1.00	1.02	1.02	1.01	1.06	1.53			3.08	3.02	3.09	
wind	0.1 m/s	velocity	5.47	8.70	8.87	9.14	9.14	9.14	8.96	8.96	9.05	8.62	9.16	8.31		8.90	9.08	8.87	
FINAL - 2018 AG Memorial van Damme (Brussels, BEL) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>					
date	31-Aug-18	time	2.56	3.62	4.66	5.66	6.70	7.72	8.74	9.78	10.82	11.86		13.35		7 / 3			
reaction time	0.152	interval	7 steps	1.06	1.04	1.00	1.04	1.02	1.02	1.04	1.04	1.04	1.49			3.10	3.08	3.12	
wind	-0.1 m/s	velocity	5.36	8.62	8.79	9.14	8.79	8.96	8.96	8.79	8.79	8.79	9.41	8.24		8.85	8.90	8.79	
FINAL - 2018 Herculis Meeting International d'Athletisme (Monaco, MON) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>					
date	20-Jul-18	time	2.52	3.56	4.58	5.58	6.58	7.58	8.60	9.62	10.66	11.70		13.21		3 / 4			
reaction time	0.155	interval	7 steps	1.04	1.02	1.00	1.00	1.00	1.02	1.02	1.04	1.04	1.51			3.06	3.02	3.10	
wind	-0.2 m/s	velocity	5.44	8.79	8.96	9.14	9.14	9.14	8.96	8.96	8.79	8.79	9.28	8.33		8.96	9.08	8.85	
FINAL - 2018 Meeting de Paris (Paris, FRA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>					
date	30-Jun-18	time	2.54	3.58	4.62	5.62	6.62	7.62	8.62	9.66	10.66	11.74		13.22		6 / 2			
reaction time	0.160	interval	7 steps	1.04	1.04	1.00	1.00	1.00	1.00	1.04	1.00	1.08	1.48			3.08	3.00	3.12	
wind	1.5 m/s	velocity	5.40	8.79	8.79	9.14	9.14	9.14	9.14	8.79	9.14	8.46	9.47	8.32		8.90	9.14	8.79	
FINAL - 2018 Shanghai Diamond League (Shanghai, CHN) (TV Analysis)														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>					
date	12-May-18	time	2.58	3.64	4.68	5.70	6.74	7.74	8.78	9.82	10.86	11.94		13.48		2 / 5			
reaction time	0.137	interval	7 steps	1.06	1.04	1.02	1.04	1.00	1.04	1.04	1.04	1.08	1.54			3.12	3.08	3.16	
wind	0.2 m/s	velocity	5.32	8.62	8.79	8.96	8.79	9.14	8.79	8.79	8.79	8.46	9.10	8.16		8.79	8.90	8.68	
FINAL - 2017 IAAF World Championships (London, GBR)														<i>Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles</i>					
date	07-Aug-17	time	2.51	3.58	4.62	5.65	6.68	7.67	8.69	9.69	10.76	11.82		13.37		8 / 8			
reaction time	0.145	interval	7 steps	1.07	1.04	1.03	1.03	0.99	1.02	1.00	1.07	1.06	1.55			3.14	3.04	3.13	
wind	0.0 m/s	velocity	5.47	8.54	8.79	8.87	8.87	9.23	8.96	9.14	8.54	8.62	9.05	8.23		8.73	9.02	8.76	
Semi-Final 2 - 2017 IAAF World Championships (London, GBR)														<i>Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles</i>					
date	06-Aug-17	time	2.48	3.56	4.58	5.61	6.63	7.61	8.63	9.66	10.68	11.73		13.27		7 / 2			
reaction time	0.181	interval	7 steps	1.08	1.02	1.03	1.02	0.98	1.02	1.03	1.02	1.05	1.54			3.13	3.02	3.10	
wind	0.6 m/s	velocity	5.53	8.46	8.96	8.87	8.96	9.33	8.96	8.87	8.96	8.70	9.10	8.29		8.76	9.08	8.85	
FINAL - 2017 Jamaican National Championships (Kingston, JAM) (TV Analysis)														<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>					
date	24-Jun-17	time	2.50	3.55	4.57	5.57	6.57	7.57	8.57	9.57	10.60	11.63		13.19		8 / 3			
reaction time		interval	7 steps	1.05	1.02	1.00	1.00	1.00	1.00	1.00	1.03	1.03	1.56			3.07	3.00	3.06	
wind	0.7 m/s	velocity	5.49	8.70	8.96	9.14	9.14	9.14	9.14	9.14	8.87	8.87	8.99	8.34		8.93	9.14	8.96	
FINAL - 2017 Shanghai Diamond League (Shanghai, CHN) (TV Analysis)														<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>					
date	13-May-17	time	2.54	3.58	4.58	5.60	6.62	7.62	8.66	9.70	10.76	11.82		13.35		3 / 4			
reaction time	0.143	interval	7 steps	1.04	1.00	1.02	1.02	1.00	1.04	1.04	1.06	1.06	1.53			3.06	3.06	3.16	
wind	0.5 m/s	velocity	5.40	8.79	9.14	8.96	8.96	9.14	8.79	8.79	8.62	8.62	9.16	8.24		8.96	8.96	8.68	
FINAL - 2016 Prefontaine Classic (Eugene, OR) (TV Analysis)														<i>Henson (2021) - Athlete First: 2016 year end hurdle report</i>					
date	28-May-16	time	2.52	3.58	4.60	5.60	6.60	7.60	8.60	9.64	10.72	11.88		13.58		2 / 8			
reaction time		interval	7 steps	1.06	1.02	1.00	1.00	1.00	1.00	1.04	1.08	1.16	1.70			3.08	3.00	3.28	
wind	0.7 m/s	velocity	5.44	8.62	8.96	9.14	9.14	9.14	9.14	8.79	8.46	7.88	8.25	8.10		8.90	9.14	8.36	
FINAL - 2016 Shanghai Golden Grand Prix (Shanghai, CHN)														<i>Henson (2021) - Athlete First: 2016 year end hurdle report</i>					
date	14-May-16	time	2.50	3.54	4.58	5.58	6.58	7.56	8.56	9.56	10.58	11.62		13.12		4 / 2			
reaction time	0.136	interval	7 steps	1.04	1.04	1.00	1.00	0.98	1.00	1.00	1.02	1.04	1.50			3.08	2.98	3.06	
wind	1.2 m/s	velocity	5.49	8.79	8.79	9.14	9.14	9.33	9.14	9.14	8.96	8.79	9.35	8.38		8.90	9.20	8.96	
FINAL - 2016 Doha Diamond League (Doha, QAT) (TV Analysis)														<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>					

date	06-May-16	time	2.56	3.62	4.64	5.64	6.64	7.64	8.64	9.64	10.66	11.70	13.10	7 / 2				
reaction time	0.127	interval	7 steps	1.06	1.02	1.00	1.00	1.00	1.00	1.00	1.02	1.04	1.40		3.08	3.00	3.06	
wind	1.4 m/s	velocity	5.36	8.62	8.96	9.14	9.14	9.14	9.14	9.14	8.96	8.79	10.01	8.40	8.90	9.14	8.96	
FINAL - 2015 IAAF World Championships (Beijing, CHN) (TV Analysis)														<i>Henson (2021) - Athlete First: major championships report</i>				
date	28-Aug-15	time	2.54	3.58	4.60	5.58	6.58	7.56	8.56	9.56	10.56	11.62	13.03	8 / 2				
reaction time	0.143	interval	7 steps	1.04	1.02	0.98	1.00	0.98	1.00	1.00	1.00	1.06	1.41		3.04	2.98	3.06	
wind	0.2 m/s	velocity	5.40	8.79	8.96	9.33	9.14	9.33	9.14	9.14	9.14	8.62	9.94	8.44	9.02	9.20	8.96	
FINAL - 2012 Memorial Van Damme (Brussels, BEL) (TV Analysis)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>				
date	07-Sep-12	time	2.56	3.62	4.62	5.60	6.60	7.58	8.58	9.60	10.62	11.66	13.14	4 / 3				
reaction time	0.157	interval	7 steps	1.06	1.00	0.98	1.00	0.98	1.00	1.02	1.02	1.04	1.48		3.04	2.98	3.08	
wind	0.3 m/s	velocity	5.36	8.62	9.14	9.33	9.14	9.33	9.14	8.96	8.96	8.79	9.47	8.37	9.02	9.20	8.90	
FINAL - 2012 AVIVA Grand Prix (Birmingham, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>				
date	26-Aug-12	time	2.54	3.63	4.75	5.85	6.97	8.00	9.05	10.12	11.16	12.22	13.76	5 / 8				
reaction time	0.155	interval	7 steps	1.09	1.12	1.10	1.12	1.03	1.05	1.07	1.04	1.06	1.54		3.31	3.20	3.17	
wind	-0.9 m/s	velocity	5.40	8.39	8.16	8.31	8.16	8.87	8.70	8.54	8.79	8.62	9.10	7.99	8.28	8.57	8.65	
FINAL - 2012 Olympic Games (London, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>				
date	08-Aug-12	time	2.56	3.62	4.62	5.62	6.62	7.62	8.62	9.62	10.64	11.68	13.12	7 / 3				
reaction time	0.172	interval	7 steps	1.06	1.00	1.00	1.00	1.00	1.00	1.00	1.02	1.04	1.44	NR	3.06	3.00	3.06	
wind	-0.3 m/s	velocity	5.36	8.62	9.14	9.14	9.14	9.14	9.14	9.14	8.96	8.79	9.74	8.38	8.96	9.14	8.96	
Semi-Final 3 - 2012 Olympic Games (London, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>				
date	08-Aug-12	time	2.54	3.58	4.62	5.62	6.62	7.62	8.62	9.62	10.64	11.66	13.14	5 / 2				
reaction time	0.172	interval	7 steps	1.04	1.04	1.00	1.00	1.00	1.00	1.00	1.02	1.02	1.48	NR	3.08	3.00	3.04	
wind	0.1 m/s	velocity	5.40	8.79	8.79	9.14	9.14	9.14	9.14	9.14	8.96	8.96	9.47	8.37	8.90	9.14	9.02	
Park Tae-Kyong (KOR) (1980)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2009 Mikio Oda Memorial (Hiroshima, JPN)														<i>Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdles</i>				
date	29-Apr-09	time	2.64	3.71	4.77	5.84	6.89	7.96	9.08	10.13	11.23	12.33	13.77	1 / 4				
reaction time		interval		1.07	1.06	1.07	1.05	1.07	1.12	1.05	1.10	1.10	1.44		3.20	3.24	3.25	
wind	1.9 m/s	velocity	5.20	8.54	8.62	8.54	8.70	8.54	8.16	8.70	8.31	8.31	9.74	7.99	8.57	8.46	8.44	
Heat 1 - 2009 Mikio Oda Memorial (Hiroshima, JPN)														<i>Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdles</i>				
date	29-Apr-09	time	2.45	3.54	4.61	5.68	6.74	7.82	8.93	10.03	11.13	12.23	13.87	1 / 1				
reaction time		interval		1.09	1.07	1.07	1.06	1.08	1.11	1.10	1.10	1.10	1.64		3.23	3.25	3.30	
wind	0.6 m/s	velocity	5.60	8.39	8.54	8.54	8.62	8.46	8.23	8.31	8.31	8.31	8.55	7.93	8.49	8.44	8.31	
Pascoe, Alan (GBR) (1947)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Heat 3 - 1972 Olympic Games (Munich, GER)														<i>Letzelter (1977) - Hurdensprint: geschwindigkeitsverlauf und spezielle eigenschaften</i>				
date	03-Sep-72	time	2.5			5.8								14.08	3 / 3			
reaction time		interval				3.26										3.26		
wind	-1.6 m/s	velocity	5.51			8.41								7.81		8.41		
Patterson, Kentre (USA) (1999)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2022 NCAA Championships (Eugene, OR) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
date	10-Jun-22	time	2.50	3.55	4.60	5.60	6.64	7.67	8.72	9.78	10.84	11.91	13.46	9 / 6				
reaction time		interval		1.05	1.05	1.00	1.04	1.03	1.05	1.06	1.06	1.07	1.55		3.10	3.12	3.19	
wind	0.0 m/s	velocity	5.49	8.70	8.70	9.14	8.79	8.87	8.70	8.62	8.62	8.54	9.05	8.17	8.85	8.79	8.60	
Pavelka, Lukáš (CZE) (1990)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Heat 3 - 2013 Czech Republic National Championships (Tábor, CZE)														<i>Fehér (2013) - Final report from the men's & women's Czech Republic national championships</i>				
date	15-Jun-13	time	2.92	4.12	5.33	6.55	7.78	9.05	10.31	11.55	12.89	14.20	15.95	7 / 6				
reaction time	0.207	interval		1.20	1.21	1.22	1.23	1.27	1.26	1.24	1.34	1.31	1.75		3.63	3.76	3.89	
wind	-0.3 m/s	velocity	4.70	7.62	7.55	7.49	7.43	7.20	7.25	7.37	6.82	6.98	8.01	6.90	7.55	7.29	7.05	
Pawowicz, Piotr (POL)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Semi-Final ? - 1986 French National Indoor Championships (Lievin, FRA)														<i>Aubert (1986) - indoor - video - haies, etude des performances</i>				
date	26-Jan-86	time	2.68	3.79	4.89	5.97	7.10							8.00	1 / 1			
reaction time		interval		1.11	1.10	1.08	1.13						0.90		3.29			
		velocity	5.12	8.23	8.31	8.46	8.09						10.80	7.50	8.33			
Heat ? - 1986 French National Indoor Championships (Lievin, FRA)														<i>Aubert (1986) - indoor - video - haies, etude des performances</i>				
date	25-Jan-86	time	2.75	3.88	5.00	6.08	7.20							8.06	1 / 1			
reaction time		interval		1.13	1.12	1.08	1.12						0.86		3.33			
		velocity	4.99	8.09	8.16	8.46	8.16						11.30	7.44	8.23			
Payne, David (USA) (1982)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2009 IAAF World Championships (Berlin, GER)														<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>				
date	20-Aug-09	time	2.54	3.58	4.61	5.61	6.62	7.64	8.66	9.69	10.74	11.78	13.15	3 / 3				
reaction time	0.122	interval		1.04	1.03	1.00	1.01	1.02	1.02	1.03	1.05	1.04	1.37		3.07	3.05	3.12	

wind	0.1 m/s	velocity	5.40	8.79	8.87	9.14	9.05	8.96	8.96	8.87	8.70	8.79	10.23	8.37	8.93	8.99	8.79
Semi-Final 2 - 2009 IAAF World Championships (Berlin, GER)															<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>		
date	20-Aug-09	time	2.60	3.65	4.68	5.69	6.71	7.75	8.78	9.80	10.83	11.89	13.24	7 / 2			
reaction time	0.151	interval		1.05	1.03	1.01	1.02	1.04	1.03	1.02	1.03	1.06	1.35		3.09	3.09	3.11
wind	0.6 m/s	velocity	5.28	8.70	8.87	9.05	8.96	8.79	8.87	8.96	8.87	8.62	10.39	8.31	8.87	8.87	8.82
Heat 6 - 2009 IAAF World Championships (Berlin, GER)															<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>		
date	19-Aug-09	time	2.61	3.69	4.75	5.77	6.80	7.85	8.89	9.93	10.99	12.05	13.54	6 / 3			
reaction time	0.150	interval		1.08	1.06	1.02	1.03	1.05	1.04	1.04	1.06	1.06	1.49		3.16	3.12	3.16
wind	0.1 m/s	velocity	5.26	8.46	8.62	8.96	8.87	8.70	8.79	8.79	8.62	8.62	9.41	8.12	8.68	8.79	8.68
FINAL - 2009 ISTAF (Berlin, GER)															<i>Graubner (2009) - http://www.fgs.uni-halle.de</i>		
date	14-Jun-09	time	2.59	3.63	4.66	5.68	6.69	7.71	8.74	9.78	10.83	11.87	13.22	3 / 3			
reaction time	0.181	interval		1.04	1.03	1.02	1.01	1.02	1.03	1.04	1.05	1.04	1.35		3.09	3.06	3.13
wind	0.7 m/s	velocity	5.30	8.79	8.87	8.96	9.05	8.96	8.87	8.79	8.70	8.79	10.39	8.32	8.87	8.96	8.76
FINAL - 2008 Olympic Games (Beijing, CHN)															<i>Tsiokanos (2018) - race pattern of men's 110m hurdles- time analysis of olympic hurdle performance</i>		
date	21-Aug-08	time	2.58	3.62	4.64	5.65	6.68	7.67	8.69	9.73	10.76	11.80	13.17	5 / 2			
reaction time	0.175	interval		1.04	1.02	1.01	1.03	0.99	1.02	1.04	1.03	1.04	1.37		3.07	3.04	3.11
wind	0.1 m/s	velocity	5.32	8.79	8.96	9.05	8.87	9.23	8.96	8.79	8.87	8.79	10.23	8.35	8.93	9.02	8.82
FINAL - 2008 USA Olympic Trials (Eugene, OR)															<i>USATF Hurdle Development (2008)</i>		
date	06-Jul-08	time	2.55	3.64	4.65	5.69	6.71	7.72	8.74	9.75	10.79	11.86	13.25	5 / 3			
reaction time	0.161	interval		1.09	1.01	1.04	1.02	1.01	1.02	1.01	1.04	1.07	1.39		3.14	3.05	3.12
wind	3.5 m/s	velocity	5.38	8.39	9.05	8.79	8.96	9.05	8.96	9.05	8.79	8.54	10.09	8.30	8.73	8.99	8.79
FINAL - 2007 IAAF World Athletics Final (Stuttgart, GER)															<i>Graubner (2007) - http://www.fgs.uni-halle.de</i>		
date	23-Sep-07	time	2.57	3.61	4.64	5.65	6.67	7.68	8.69	9.69	10.71	11.74	13.08	5 / 2			
reaction time	0.146	interval		1.04	1.03	1.01	1.02	1.01	1.01	1.00	1.02	1.03	1.34		3.08	3.04	3.05
wind	0.0 m/s	velocity	5.34	8.79	8.87	9.05	8.96	9.05	9.05	9.14	8.96	8.87	10.46	8.41	8.90	9.02	8.99
FINAL - 2007 IAAF World Championships (Osaka, JPN)															<i>Ae (2008) - IAAF biomechanics team - a booklet of biomechanics data</i>		
date	31-Aug-07	time	2.52	3.55	4.57	5.58	6.60	7.60	8.62	9.62	10.63	11.67	13.02	7 / 3			
reaction time	0.141	interval		1.03	1.02	1.01	1.02	1.00	1.02	1.00	1.01	1.04	1.35	PB	3.06	3.04	3.05
wind	1.7 m/s	velocity	5.44	8.87	8.96	9.05	8.96	9.14	8.96	9.14	9.05	8.79	10.39	8.45	8.96	9.02	8.99
Semi-Final 1 - 2007 IAAF World Championships (Osaka, JPN)															<i>Shibayama (2008) - analysis of racing patterns in the men's 110m & women's 100m sprint hurdles</i>		
date	30-Aug-07	time	2.61	3.66	4.68	5.68	6.68	7.68	8.71	9.73	10.76	11.83	13.19	7 / 1			
reaction time	0.166	interval		1.05	1.02	1.00	1.00	1.00	1.03	1.02	1.03	1.07	1.36		3.07	3.03	3.12
wind	-0.4 m/s	velocity	5.26	8.70	8.96	9.14	9.14	9.14	8.87	8.96	8.87	8.54	10.31	8.34	8.93	9.05	8.79
Heat 5 - 2007 IAAF World Championships (Osaka, JPN)															<i>Shibayama (2008) - analysis of racing patterns in the men's 110m & women's 100m sprint hurdles</i>		
date	29-Aug-07	time	2.62	3.69	4.71	5.71	6.73	7.75	8.77	9.80	10.83	11.86	13.27	3 / 2			
reaction time	0.163	interval		1.07	1.02	1.00	1.02	1.02	1.02	1.03	1.03	1.03	1.41		3.09	3.06	3.09
wind	0.6 m/s	velocity	5.24	8.54	8.96	9.14	8.96	8.96	8.96	8.87	8.87	8.87	9.94	8.29	8.87	8.96	8.87
FINAL - 2007 USATF National Championships (Indianapolis, IN)															<i>USATF Men's Hurdle Development (2007)</i>		
date	24-Jun-07	time	2.59	3.65	4.65	5.69	6.71	7.72	8.74	9.76	10.81	11.86	13.22	4 / 4			
reaction time		interval		1.06	1.00	1.04	1.02	1.01	1.02	1.02	1.05	1.05	1.36		3.10	3.05	3.12
wind	0.5 m/s	velocity	5.30	8.62	9.14	8.79	8.96	9.05	8.96	8.96	8.70	8.70	10.31	8.32	8.85	8.99	8.79
Semi-Final 1 - 2007 USATF National Championships (Indianapolis, IN)															<i>USATF Men's Hurdle Development (2007)</i>		
date	24-Jun-07	time	2.57	3.64	4.65	5.69	6.69	7.72	8.76	9.78	10.82	11.88	13.28	4 / 1			
reaction time		interval		1.07	1.01	1.04	1.00	1.03	1.04	1.02	1.04	1.06	1.40		3.12	3.07	3.12
wind	-0.6 m/s	velocity	5.34	8.54	9.05	8.79	9.14	8.87	8.79	8.96	8.79	8.62	10.01	8.28	8.79	8.93	8.79
Heat 1 - 2007 USATF National Championships (Indianapolis, IN)															<i>USATF Men's Hurdle Development (2007)</i>		
date	23-Jun-07	time	2.59	3.65	4.70	5.72	6.73	7.76	8.78	9.83	10.88	11.95	13.43	8 / 1			
reaction time		interval		1.06	1.05	1.02	1.01	1.03	1.02	1.05	1.05	1.07	1.48		3.13	3.06	3.17
wind	0.1 m/s	velocity	5.30	8.62	8.70	8.96	9.05	8.87	8.96	8.70	8.70	8.54	9.47	8.19	8.76	8.96	8.65
FINAL - 2006 USATF National Championships (Indianapolis, IN)															<i>USATF Men's Hurdle Development (2006)</i>		
date	25-Jun-06	time	2.59	3.67	4.69	5.72	6.72	7.76	8.78	9.84	10.93	12.01	13.42	1 / 5			
reaction time		interval		1.08	1.02	1.03	1.00	1.04	1.02	1.06	1.09	1.08	1.41		3.13	3.06	3.23
wind	-0.4 m/s	velocity	5.30	8.46	8.96	8.87	9.14	8.79	8.96	8.62	8.39	8.46	9.94	8.20	8.76	8.96	8.49
FINAL - 2005 USATF National Championships (Carson, CA)															<i>USATF Women's Sprint Development (2005)</i>		
date	24-Jun-05	time	2.62	3.67	4.71	5.73	6.76	7.81	8.83	9.84	10.90	11.91	13.33	7 / 5			
reaction time		interval		1.05	1.04	1.02	1.03	1.05	1.02	1.01	1.06	1.01	1.42	PB	3.11	3.10	3.08
wind	0.2 m/s	velocity	5.24	8.70	8.79	8.96	8.87	8.70	8.96	9.05	8.62	9.05	9.87	8.25	8.82	8.85	8.90

Pechonkin, Yevgeniy (RUS) (1973) H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

FINAL - 2001 European Cup (Bremen, GER)Graubner (2009) - <http://www.fgs.uni-halle.de>

date	24-Jun-01	time	2.61	3.66	4.68	5.69	6.71	7.76	8.79	9.83	10.90	11.98	13.38	8 / 1				
reaction time	0.128	interval		1.05	1.02	1.01	1.02	1.05	1.03	1.04	1.07	1.08	1.40		3.08	3.10	3.19	
wind	1.3 m/s	velocity	5.26	8.70	8.96	9.05	8.96	8.70	8.87	8.79	8.54	8.46	10.01	8.22	8.90	8.85	8.60	

Pedriks, Keiso (EST) (1994)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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FINAL - 2021 Boris Hanžeković Memorial (Zagreb, CRO) (TV Analysis)

Henson (2021) - Athlete First: 2021 year end hurdle report

date	14-Sep-21	time	2.63	3.68	4.73	5.78	6.81	7.83	8.86	9.93		13.63	8 / 6				
reaction time	0.182	interval	7 steps	1.05	1.05	1.05	1.03	1.02	1.03	1.07		PB		3.15	3.08		
wind	0.7 m/s	velocity	5.22	8.70	8.70	8.70	8.87	8.96	8.87	8.54		8.07		8.70	8.90		

Penáz, Petr (CZE) (1991)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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FINAL - 2014 Czech Republic National Championships (Ostrava, CZE)

Feher (2014) - Final report from the Czech Republic national championships

date	02-Aug-14	time	2.77	3.90	5.02	6.10	7.20	8.38	9.55	10.70	11.87	13.05	14.87	5 / 4			
reaction time	0.172	interval		1.13	1.12	1.08	1.10	1.18	1.17	1.15	1.17	1.18	1.82		3.33	3.45	3.50
wind	-1.2 m/s	velocity	4.95	8.09	8.16	8.46	8.31	7.75	7.81	7.95	7.81	7.75	7.70	7.40	8.23	7.95	7.83

Heat 2 - 2014 Czech Republic National Championships (Ostrava, CZE)

Feher (2014) - Final report from the Czech Republic national championships

date	02-Aug-14	time	2.82	3.93	5.03	6.13	7.21	8.31	9.40	10.49	11.60	12.72	14.21	5 / 1			
reaction time	0.190	interval		1.11	1.10	1.10	1.08	1.10	1.09	1.09	1.11	1.12	1.49		3.31	3.27	3.32
wind	0.8 m/s	velocity	4.87	8.23	8.31	8.31	8.46	8.31	8.39	8.39	8.23	8.16	9.41	7.74	8.28	8.39	8.26

FINAL - 2013 Czech Republic National Championships (Tábor, CZE)

Feher (2013) - Final report from the men's & women's Czech Republic national championships

date	15-Jun-13	time	2.78	3.85	4.93	5.96	7.00	8.04	9.10	10.18	11.25	12.29	13.77	5 / 2			
reaction time	0.202	interval		1.07	1.08	1.03	1.04	1.04	1.06	1.08	1.07	1.04	1.48	PB	3.18	3.14	3.19
wind	0.4 m/s	velocity	4.94	8.54	8.46	8.87	8.79	8.79	8.62	8.46	8.54	8.79	9.47	7.99	8.62	8.73	8.60

Heat 2 - 2013 Czech Republic National Championships (Tábor, CZE)

Feher (2013) - Final report from the men's & women's Czech Republic national championships

date	15-Jun-13	time	2.79	3.90	5.00	6.07	7.13	8.19	9.26	10.35	11.45	12.58	14.08	4 / 1			
reaction time	0.185	interval		1.11	1.10	1.07	1.06	1.06	1.07	1.09	1.10	1.13	1.50		3.28	3.19	3.32
wind	-0.6 m/s	velocity	4.92	8.23	8.31	8.54	8.62	8.62	8.54	8.39	8.31	8.09	9.35	7.81	8.36	8.60	8.26

FINAL - 2012 Czech Republic National Indoor Championships (Praha, CZE)

Feher (2012) - Czech Republic indoor national championships - men's 60m hurdles

date	25-Feb-12	time	2.72	3.83	4.90	5.93	7.02						7.99	3 / 3			
reaction time	0.156	interval		1.11	1.07	1.03	1.09						0.97		3.21		
		velocity	5.04	8.23	8.54	8.87	8.39						10.02	7.51	8.54		

Heat 2 - 2012 Czech Republic National Indoor Championships (Praha, CZE)

Feher (2012) - Czech Republic indoor national championships - men's 60m hurdles

date	25-Feb-12	time	2.75	3.85	4.92	5.97	7.03						8.01	4 / 1			
reaction time	0.168	interval		1.10	1.07	1.05	1.06						0.98		3.22		
		velocity	4.99	8.31	8.54	8.70	8.62						9.92	7.49	8.52		

Pereira, Rafael (BRA) (1997)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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Semi-Final 2 - 2024 Olympic Games (Paris, FRA)

Paris 2024 Olympic Games - Results Book (2024)

date	07-Aug-24	time	2.42	3.53	4.60	5.67	6.73	7.79	8.86	9.94	11.04	12.17	13.87	9 / 8			
reaction time	0.148	interval		1.11	1.07	1.07	1.06	1.06	1.07	1.08	1.10	1.13	1.70		3.25	3.19	3.31
wind	-0.1 m/s	velocity	5.67	8.23	8.54	8.54	8.62	8.62	8.54	8.46	8.31	8.09	8.25	7.93	8.44	8.60	8.28

Repechage 2 - 2024 Olympic Games (Paris, FRA)

Paris 2024 Olympic Games - Results Book (2024)

date	06-Aug-24	time	2.43	3.52	4.55	5.60	6.62	7.65	8.69	9.75	10.83	11.94	13.54	3 / 1			
reaction time	0.140	interval		1.09	1.03	1.05	1.02	1.03	1.04	1.06	1.08	1.11	1.60		3.17	3.09	3.25
wind	-0.5 m/s	velocity	5.65	8.39	8.87	8.70	8.96	8.87	8.79	8.62	8.46	8.23	8.76	8.12	8.65	8.87	8.44

Heat 3 - 2024 Olympic Games (Paris, FRA)

Paris 2024 Olympic Games - Results Book (2024)

date	04-Aug-24	time	2.41	3.49	4.55	5.59	6.61	7.63	8.66	9.71	10.77	11.86	13.47	4 / 6			
reaction time	0.142	interval		1.08	1.06	1.04	1.02	1.02	1.03	1.05	1.06	1.09	1.61		3.18	3.07	3.20
wind	1.1 m/s	velocity	5.69	8.46	8.62	8.79	8.96	8.96	8.87	8.70	8.62	8.39	8.71	8.17	8.62	8.93	8.57

Semi-Final 3 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)

Henson (2023) - Athlete First: 2023 year end hurdle report

date	21-Aug-23	time	2.56	3.60	4.70	5.70	6.74	7.76	8.80	9.86	10.93	12.00	13.52	3 / 8			
reaction time	0.160	interval	7 steps	1.04	1.10	1.00	1.04	1.02	1.04	1.06	1.07	1.07	1.52		3.14	3.10	3.20
wind	-0.1 m/s	velocity	5.36	8.79	8.31	9.14	8.79	8.96	8.79	8.62	8.54	8.54	9.22	8.14	8.73	8.85	8.57

Heat 2 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)

Henson (2023) - Athlete First: 2023 year end hurdle report

date	20-Aug-23	time	2.58	3.63	4.66	5.66	6.68	7.74	8.78	9.82	10.92	12.02	13.52	4 / 3			
reaction time	0.146	interval		1.05	1.03	1.00	1.02	1.06	1.04	1.04	1.10	1.10	1.50		3.08	3.12	3.24
wind	0.5 m/s	velocity	5.32	8.70	8.87	9.14	8.96	8.62	8.79	8.79	8.31	8.31	9.35	8.14	8.90	8.79	8.46

Heat 2 - 2023 Kamila Skolimowska Memorial (Silesia, POL)

Omega Timing (2023) - diamond league race analysis

date	16-Jul-23	time	2.43	3.52	4.57	5.61	6.66	7.70	8.74	9.78	10.83	11.89	13.50	7 / 5			
reaction time	0.136	interval		1.09	1.05	1.04	1.05	1.04	1.04	1.04	1.05	1.06	1.61		3.18	3.13	3.15
wind	-0.2 m/s	velocity	5.65	8.39	8.70	8.79	8.70	8.79	8.79	8.79	8.70	8.62	8.71	8.15	8.62	8.76	8.70

FINAL - 2023 Athletissima (Lausanne, SUI)

date	30-Jun-23	time	2.43	3.50	4.55	5.58	6.61	7.64	8.69	9.75	10.83	11.92	13.56	2 / 6			
reaction time	0.153	interval		1.07	1.05	1.03	1.03	1.03	1.05	1.06	1.08	1.09	1.64		3.15	3.11	3.23
wind	-1.0 m/s	velocity	5.65	8.54	8.70	8.87	8.87	8.87	8.70	8.62	8.46	8.39	8.55	8.11	8.70	8.82	8.49

Omega Timing (2023) - diamond league race analysis

Heat 2 - 2023 Meeting de Paris (Paris, FRA)

date	09-Jun-23	time	2.42	3.48	4.52	5.55	6.56	7.61	8.65	9.72	10.81	11.90	13.57	8 / 8			
reaction time	0.149	interval		1.06	1.04	1.03	1.01	1.05	1.04	1.07	1.09	1.09	1.67		3.13	3.10	3.25
wind	-0.6 m/s	velocity	5.67	8.62	8.79	8.87	9.05	8.70	8.79	8.54	8.39	8.39	8.40	8.11	8.76	8.85	8.44

Omega Timing (2023) - diamond league race analysis

FINAL - 2023 Golden Gala Pietro Mennea (Firenze, ITA) (TV Analysis)

date	02-Jun-23	time	2.54	3.58	4.64	5.64	6.66	7.70	8.74	9.82	10.88	11.97	13.47	2 / 7			
reaction time	0.145	interval		1.04	1.06	1.00	1.02	1.04	1.04	1.08	1.06	1.09	1.50		3.10	3.10	3.23
wind	-0.2 m/s	velocity	5.40	8.79	8.62	9.14	8.96	8.79	8.79	8.46	8.62	8.39	9.35	8.17	8.85	8.85	8.49

Henson (2023) - Athlete First: 2023 year end hurdle report

FINAL - 2023 Meeting International Mohammed VI d'Athlétisme (Rabat, MAR)

date	28-May-23	time	2.43	3.52	4.57	5.62	6.66	7.70	8.77	9.82	10.90	12.01	13.68	8 / 6			
reaction time	0.165	interval		1.09	1.05	1.05	1.04	1.04	1.07	1.05	1.08	1.11	1.67		3.19	3.15	3.24
wind	-1.3 m/s	velocity	5.65	8.39	8.70	8.70	8.79	8.79	8.54	8.70	8.46	8.23	8.40	8.04	8.60	8.70	8.46

Omega Timing (2023) - diamond league race analysis

FINAL - 2022 Weltklasse (Zürich, SUI) (TV Analysis)

date	08-Sep-22	time	2.50	3.55	4.57	5.60	6.61	7.64	8.65	9.81	11.01	12.12	13.73	8 / 9			
reaction time	0.130	interval		1.05	1.02	1.03	1.01	1.03	1.01	1.16	1.20	1.11	1.61		3.10	3.05	3.47
wind	-1.0 m/s	velocity	5.49	8.70	8.96	8.87	9.05	8.87	9.05	7.88	7.62	8.23	8.71	8.01	8.85	8.99	7.90

Henson (2022) - Athlete First: 2022 year end hurdle report

FINAL - 2022 Athletissima (Lausanne, SUI) (TV Analysis)

date	26-Aug-22	time	2.57	3.60	4.67	5.67	6.71	7.74	8.81	9.88	10.95	12.03	13.49	1 / 5			
reaction time	0.140	interval		1.03	1.07	1.00	1.04	1.03	1.07	1.07	1.07	1.08	1.46		3.10	3.14	3.22
wind	0.0 m/s	velocity	5.34	8.87	8.54	9.14	8.79	8.87	8.54	8.54	8.54	8.46	9.60	8.15	8.85	8.73	8.52

Henson (2022) - Athlete First: 2022 year end hurdle report

Semi-Final 1 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)

date	17-Jul-22	time	2.50	3.63	4.66	5.70	6.70	7.76	8.80	9.83	10.87	11.96	13.46	4 / 4			
reaction time	0.125	interval		1.13	1.03	1.04	1.00	1.06	1.04	1.03	1.04	1.09	1.50		3.20	3.10	3.16
wind	-0.6 m/s	velocity	5.49	8.09	8.87	8.79	9.14	8.62	8.79	8.87	8.79	8.39	9.35	8.17	8.57	8.85	8.68

Henson (2022) - Athlete First: 2022 year end hurdle report

Heat 4 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)

date	16-Jul-22	time	2.50	3.56	4.63	5.63	6.63	7.63	8.66	9.66	10.70	11.76	13.23	6 / 2			
reaction time	0.140	interval		1.06	1.07	1.00	1.00	1.00	1.03	1.00	1.04	1.06	1.47		3.13	3.03	3.10
wind	0.2 m/s	velocity	5.49	8.62	8.54	9.14	9.14	9.14	8.87	9.14	8.79	8.62	9.54	8.31	8.76	9.05	8.85

Henson (2022) - Athlete First: 2022 year end hurdle report

FINAL - 2022 Meeting de Paris (Paris, FRA) (TV Analysis)

date	18-Jun-22	time	2.50	3.54	4.56	5.56	6.58	7.58	8.60	9.62	10.68	11.76	13.25	4 / 2			
reaction time	0.141	interval		1.04	1.02	1.00	1.02	1.00	1.02	1.02	1.06	1.08	1.49	=PB	3.06	3.04	3.16
wind	-0.2 m/s	velocity	5.49	8.79	8.96	9.14	8.96	9.14	8.96	8.96	8.62	8.46	9.41	8.30	8.96	9.02	8.68

Henson (2022) - Athlete First: 2022 year end hurdle report

FINAL - 2022 Bislett Games (Oslo, NOR) (TV Analysis)

date	16-Jun-22	time	2.48	3.54	4.58	5.62	6.62	7.66	8.68	9.74	10.78	11.86	13.37	3 / 3			
reaction time	0.137	interval		1.06	1.04	1.04	1.00	1.04	1.02	1.06	1.04	1.08	1.51		3.14	3.06	3.18
wind	-1.2 m/s	velocity	5.53	8.62	8.79	8.79	9.14	8.79	8.96	8.62	8.79	8.46	9.28	8.23	8.73	8.96	8.62

Henson (2022) - Athlete First: 2022 year end hurdle report

Semi-Final 1 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis) Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record

date	20-Mar-22	time	2.50	3.53	4.56	5.60	6.63						7.58	3 / 4			
reaction time	0.141	interval		1.03	1.03	1.04	1.03						0.95	=NR =PB	3.10		
		velocity	5.49	8.87	8.87	8.79	8.87						10.23	7.92	8.85		

Heat 2 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis) Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record

date	20-Mar-22	time	2.49	3.53	4.56	5.58	6.65						7.60	5 / 1			
reaction time	0.130	interval		1.04	1.03	1.02	1.07						0.95		3.09		
		velocity	5.51	8.79	8.87	8.96	8.54						10.23	7.89	8.87		

Peremota, Igor (RUS) (1981)

			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2007 European Cup (Munich, GER)																		
Graubner (2007) - http://www.fgs.uni-halle.de																		
date	24-Jun-07	time	2.61	3.63	4.67	5.69	6.73	7.77	8.83	9.93	11.03	12.15	13.61	1 / 4				
reaction time	0.132	interval		1.02	1.04	1.02	1.04	1.04	1.06	1.10	1.10	1.12	1.46		3.08	3.14	3.32	
wind	0.4 m/s	velocity	5.26	8.96	8.79	8.96	8.79	8.79	8.62	8.31	8.31	8.16	9.60	8.08	8.90	8.73	8.26	

Pérez, Eduardo (ESP) (1970)

			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 1998 Spanish National Championships (San Sebastián, ESP)																		
Ruiz (1998) - campeonato des españa absoluto: análisis de la carreras con villas																		
date	02-Aug-98	time	2.69	3.76	4.89	6.03	7.08	8.20	9.32	10.45	11.58	12.78	14.33	1 / 4				
reaction time		interval		1.07	1.13	1.14	1.05	1.12	1.12	1.13	1.13	1.20	1.55		3.34	3.29	3.46	
wind	0.1 m/s	velocity	5.10	8.54	8.09	8.02	8.70	8.16	8.16	8.09	8.09	7.62	9.05	7.68	8.21	8.33	7.92	

Perini, Lorenzo (ITA) (1994)

			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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FINAL - 2021 Golden Gala Pietro Mennea (Florence, ITA) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>				
date	10-Jun-21	time	2.54	3.60	4.68	5.72	6.76	7.80	8.84	9.90	10.98	12.06	13.63	8 / 6				
reaction time	0.140	interval		1.06	1.08	1.04	1.04	1.04	1.04	1.06	1.08	1.08	1.57		3.18	3.12	3.22	
wind	-0.1 m/s	velocity	5.40	8.62	8.46	8.79	8.79	8.79	8.79	8.62	8.46	8.46	8.93	8.07	8.62	8.79	8.52	
FINAL - 2020 Golden Gala Pietro Mennea (Rome, ITA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2020 year end hurdle report</i>				
date	17-Sep-20	time	2.54	3.62	4.68	5.72	6.78	7.82	8.88	9.94	11.02	12.08	13.61	7 / 6				
reaction time	0.132	interval		1.08	1.06	1.04	1.06	1.04	1.06	1.06	1.08	1.06	1.53		3.18	3.16	3.20	
wind	0.1 m/s	velocity	5.40	8.46	8.62	8.79	8.62	8.79	8.62	8.62	8.46	8.62	9.16	8.08	8.62	8.68	8.57	
FINAL - 2019 Golden Gala Pietro Mennea (Rome, ITA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>				
date	06-Jun-19	time	2.60	3.66	4.72	5.75	6.78	7.83	8.88	9.94	11.00	12.08	13.58	9 / 7				
reaction time	0.161	interval		1.06	1.06	1.03	1.03	1.05	1.05	1.06	1.06	1.08	1.50		3.15	3.13	3.20	
wind	0.4 m/s	velocity	5.28	8.62	8.62	8.87	8.87	8.70	8.70	8.62	8.62	8.46	9.35	8.10	8.70	8.76	8.57	
FINAL - 2017 Golden Gala Pietro Mennea (Rome, ITA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>				
date	08-Jun-17	time	2.56	3.62	4.68	5.74	6.80	7.84	8.90	9.96	11.06	12.14	13.65	1 / 8				
reaction time	0.141	interval		1.06	1.06	1.06	1.06	1.04	1.06	1.06	1.10	1.08	1.51		3.18	3.16	3.24	
wind	-0.3 m/s	velocity	5.36	8.62	8.62	8.62	8.62	8.79	8.62	8.62	8.31	8.46	9.28	8.06	8.62	8.68	8.46	
FINAL - 2016 Golden Gala Pietro Mennea (Roma, ITA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>				
date	02-Jun-16	time	2.62	3.70	4.76	5.80	6.88	7.98	9.02	10.18	11.28	12.40	13.90	1 / 7				
reaction time	0.151	interval		1.08	1.06	1.04	1.08	1.10	1.04	1.16	1.10	1.12	1.50		3.18	3.22	3.38	
wind	0.6 m/s	velocity	5.24	8.46	8.62	8.79	8.46	8.31	8.79	7.88	8.31	8.16	9.35	7.91	8.62	8.52	8.11	
FINAL - 2015 Italian National Championships (Torino, ITA)														<i>Incalza (FIDAL - Centro Studi & Ricerche) (2015) - https://www.youtube.com/watch?v=Ytpg1XHNpfg</i>				
date	25-Jul-15	time	2.69	3.75	4.81	5.88	6.94	7.98	9.05	10.13	11.23	12.35	13.77	4 / 2				
reaction time		interval		1.06	1.06	1.07	1.06	1.04	1.07	1.08	1.10	1.12	1.42		3.19	3.17	3.30	
wind	1.8 m/s	velocity	5.10	8.62	8.62	8.54	8.62	8.79	8.54	8.46	8.31	8.16	9.87	7.99	8.60	8.65	8.31	
Heat 1 - 2014 European Championships (Zurich, SUI)														<i>Incalza (2014) - https://www.youtube.com/watch?v=4CScuS4aCYI&list=UU7691fXeyNFIMROfkJ-WWUg</i>				
date	13-Aug-14	time	2.64	3.72	4.78	5.81	6.84	7.90	8.97	10.06	11.16	12.28	13.77	4 / 6				
reaction time	0.141	interval		1.08	1.06	1.03	1.03	1.06	1.07	1.09	1.10	1.12	1.49		3.17	3.16	3.31	
wind	-0.7 m/s	velocity	5.20	8.46	8.62	8.87	8.87	8.62	8.54	8.39	8.31	8.16	9.41	7.99	8.65	8.68	8.28	
FINAL - 2013 Italian National Junior Championships (Rieti, ITA) (99cm)														<i>FIDAL - Centro Studi & Ricerche (2013) - www.youtube.com/watch?v=IGr3fQGxe1c</i>				
date	15-Jun-13	time	2.70	3.76	4.80	5.82	6.83	7.84	8.86	9.89	10.92	11.95	13.39	6 / 1				
reaction time		interval		1.06	1.04	1.02	1.01	1.01	1.02	1.03	1.03	1.03	1.44	NR	3.12	3.04	3.09	
wind	1.6 m/s	velocity	5.08	8.62	8.79	8.96	9.05	9.05	8.96	8.87	8.87	8.87	9.74	8.22	8.79	9.02	8.87	
FINAL - 2013 Italian National Indoor Junior Championships (Ancona, ITA) (99cm)														<i>FIDAL - Centro Studi & Ricerche (2013) - www.youtube.com/watch?v=Egf_xlSp-DI</i>				
date	23-Feb-13	time	2.71	3.80	4.86	5.91	6.95						7.90	6 / 1				
reaction time		interval		1.09	1.06	1.05	1.04						0.95		3.20			
		velocity	5.06	8.39	8.62	8.70	8.79						10.23	7.59	8.57			
FINAL - 2012 Italian National Indoor Junior Championships (Ancona, ITA) (99cm)														<i>FIDAL - Centro Studi & Ricerche (2012) - www.youtube.com/watch?v=SU_c9jUKwsw</i>				
date	18-Feb-12	time	2.68	3.77	4.85	5.90	6.95						7.91	3 / 1				
reaction time		interval		1.09	1.08	1.05	1.05						0.96	PB	3.22			
		velocity	5.12	8.39	8.46	8.70	8.70						10.13	7.59	8.52			
Perutka, Martin (CZE) (1995)																		
			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Heat 3 - 2014 Czech Republic National U20 Championships (Trinec, CZE) (99cm)														<i>Fehér (2014) - Final report from the U18 & U20 Czech Republic national championships</i>				
date	28-Jun-14	time	2.77	3.96	5.17	6.38	7.60	8.84	10.10	11.36	12.66	14.15	15.80	2 / 4				
reaction time	0.139	interval		1.19	1.21	1.21	1.22	1.24	1.26	1.26	1.30	1.49	1.65		3.61	3.72	4.05	
wind	-2.5 m/s	velocity	4.95	7.68	7.55	7.55	7.49	7.37	7.25	7.25	7.03	6.13	8.50	6.96	7.60	7.37	6.77	
Perutka, Jonathan (GER) (1998)																		
			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2017 German National Indoor Junior Championships (Sindelfingen, GER) (99cm)														<i>Poser (2017) - mit merhrkampftraining zum hürdentitel</i>				
date	25-Feb-17	time	2.66	3.72	4.80	5.86	6.93						7.81	1 / 1				
reaction time		interval		1.06	1.08	1.06	1.07						0.88	PB	3.20			
		velocity	5.16	8.62	8.46	8.62	8.54						11.05	7.68	8.57			
Semi-Final 1 - 2017 German National Indoor Junior Championships (Sindelfingen, GER) (99cm)														<i>Poser (2017) - mit merhrkampftraining zum hürdentitel</i>				
date	25-Feb-17	time	2.70	3.77	4.88	5.95	7.04						7.97	1 / 1				
reaction time		interval		1.07	1.11	1.07	1.09						0.93	PB	3.25			
		velocity	5.08	8.54	8.23	8.54	8.39						10.45	7.53	8.44			
Philibert, Dan (FRA) (1970)																		
			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Semi-Final 2 - 1999 IAAF World Championships (Sevilla, ESP)														<i>Sanchez (1999) - Sevilla '99: análisis de la carreras con villas</i>				
date	24-Aug-99	time	2.58	3.59	4.62	5.64	6.65	7.66	8.70	9.77	10.84	11.92	13.49	8 / 5				
reaction time	0.113	interval		1.01	1.03	1.02	1.01	1.01	1.04	1.07	1.07	1.08	1.57		3.06	3.06	3.22	
wind	0.0 m/s	velocity	5.32	9.05	8.87	8.96	9.05	9.05	8.79	8.54	8.54	8.46	8.93	8.15	8.96	8.96	8.52	

FINAL - 1997 IAAF World Championships (Athens, GRE)													<i>Hommel (1997) - biomechanical research project at the VI th world championships in athletics, Athens 1997</i>					
date	07-Aug-97	time	2.62	3.70	4.70	5.70	6.70	7.72	8.74	9.76	10.82	11.86	13.26	6 / 5				
reaction time	0.118	interval		1.08	1.00	1.00	1.00	1.02	1.02	1.02	1.06	1.04	1.40	PB	3.08	3.04	3.12	
wind	0.0 m/s	velocity	5.24	8.46	9.14	9.14	9.14	8.96	8.96	8.96	8.62	8.79	10.01	8.30	8.90	9.02	8.79	

Phillips, Christopher (USA) (1972) H1 H2 H3 H4 H5 H6 H7 H8 H9 H10													<i>USATF Women's Sprint Development (2003)</i>					
FINAL - 2003 USATF National Championships (Palo Alto, CA)													<i>USATF Women's Sprint Development (2003)</i>					
date	21-Jun-03	time	2.42	3.50	4.55	5.56	6.62	7.64	8.68	9.71	10.78	11.88	13.55	7 / 4				
reaction time		interval		1.08	1.05	1.01	1.06	1.02	1.04	1.03	1.07	1.10	1.67		3.14	3.12	3.20	
wind	-2.4 m/s	velocity	5.67	8.46	8.70	9.05	8.62	8.96	8.79	8.87	8.54	8.31	8.40	8.12	8.73	8.79	8.57	

Phillips, Richard (JAM) (1983) H1 H2 H3 H4 H5 H6 H7 H8 H9 H10													<i>Blomkvist (2010) - www.sub13.se</i>					
FINAL - 2010 Folksam GP (Sollentuna, SWE)													<i>Blomkvist (2010) - www.sub13.se</i>					
date	01-Jul-10	time	2.48	3.54	4.57	5.60	6.63	7.67	8.70	9.75	10.81	11.88	13.52	5 / 1				
reaction time		interval	7 steps	1.06	1.03	1.03	1.03	1.04	1.03	1.05	1.06	1.07	1.64		3.12	3.10	3.18	
wind	0.4 m/s	velocity	5.53	8.62	8.87	8.87	8.87	8.79	8.87	8.70	8.62	8.54	8.55	8.14	8.79	8.85	8.62	

FINAL - 2008 Olympic Games (Beijing, CHN)													<i>Tsiokanos (2018) - race pattern of men's 110m hurdles- time analysis of olympic hurdle performance</i>					
date	21-Aug-08	time	2.62	3.70	4.73	5.77	6.80	7.82	8.90	9.96	11.02	12.15	13.60	3 / 7				
reaction time	0.154	interval		1.08	1.03	1.04	1.03	1.02	1.08	1.06	1.06	1.13	1.45		3.15	3.13	3.25	
wind	0.1 m/s	velocity	5.24	8.46	8.87	8.79	8.87	8.96	8.46	8.62	8.62	8.09	9.67	8.09	8.70	8.76	8.44	

Pierce, Jack (USA) (1962) H1 H2 H3 H4 H5 H6 H7 H8 H9 H10													<i>McNichols (2000) - Hurdle technique study through video analysis</i>					
FINAL - 1996 USA Olympic Trials (Atlanta, GA)													<i>McNichols (2000) - Hurdle technique study through video analysis</i>					
date	23-Jun-96	time	2.38											dnf 5 / --				
reaction time		interval																
wind	0.9 m/s	velocity	5.76															

FINAL - 1992 Olympic Games (Barcelona, ESP)													<i>Knight (1992) - 1992 Olympic report: the hurdling events</i>					
date	03-Aug-92	time	2.60	3.66	4.69	5.70	6.75	7.78	8.81	9.84	10.89	11.92	13.26	6 / 3				
reaction time	0.173	interval		1.06	1.03	1.01	1.05	1.03	1.03	1.03	1.05	1.03	1.34		3.10	3.11	3.11	
wind	0.8 m/s	velocity	5.28	8.62	8.87	9.05	8.70	8.87	8.87	8.87	8.70	8.87	10.46	8.30	8.85	8.82	8.82	

Piétris, Dimítrios (GRE) (1979) H1 H2 H3 H4 H5 H6 H7 H8 H9 H10													<i>Graubner (2007) - http://www.fgs.uni-halle.de</i>					
FINAL - 2001 European Cup (Bremen, GER)													<i>Graubner (2007) - http://www.fgs.uni-halle.de</i>					
date	24-Jun-01	time	2.78	3.87	4.93	6.02	7.09	8.17	9.23	10.31	11.45	12.56	14.04	1 / 8				
reaction time	0.155	interval		1.09	1.06	1.09	1.07	1.08	1.06	1.08	1.14	1.11	1.48		3.24	3.21	3.33	
wind	1.3 m/s	velocity	4.94	8.39	8.62	8.39	8.54	8.46	8.62	8.46	8.02	8.23	9.47	7.83	8.46	8.54	8.23	

Pilar, Lukáš (CZE) (1995) H1 H2 H3 H4 H5 H6 H7 H8 H9 H10													<i>Fehér (2014) - Final report from the U18 & U20 Czech Republic national championships</i>					
Heat 2 - 2014 Czech Republic National U20 Championships (Trinec, CZE) (99cm)													<i>Fehér (2014) - Final report from the U18 & U20 Czech Republic national championships</i>					
date	28-Jun-14	time	2.88	4.05	5.23	6.44	7.64	8.86	10.05	11.29	12.53	13.78	15.52	7 / 4				
reaction time	0.212	interval		1.17	1.18	1.21	1.20	1.22	1.19	1.24	1.24	1.25	1.74		3.56	3.61	3.73	
wind	-2.9 m/s	velocity	4.76	7.81	7.75	7.55	7.62	7.49	7.68	7.37	7.37	7.31	8.06	7.09	7.70	7.60	7.35	

Pirochta, Tomáš (CZE) (1997) H1 H2 H3 H4 H5 H6 H7 H8 H9 H10													<i>Fehér (2015) - Final report U18 & U20 Czech Republic indoor national champs</i>					
FINAL - 2015 Czech Republic National U20 Indoor Championships (Praha, CZE) (99cm)													<i>Fehér (2015) - Final report U18 & U20 Czech Republic indoor national champs</i>					
date	14-Feb-15	time	2.75	3.91	5.06	6.24	7.42							8.42 2 / 4				
reaction time	0.284	interval		1.16	1.15	1.18	1.18						1.00		3.49			
		velocity	4.99	7.88	7.95	7.75	7.75						9.72	7.13	7.86			

Heat 2 - 2014 Czech Republic National U18 Championships (Trinec, CZE) (91cm)													<i>Fehér (2014) - Final report from the U18 & U20 Czech Republic national championships</i>					
date	28-Jun-14	time	2.85	4.05	5.24	6.46	7.67	8.87	10.10	11.28	12.53	13.79	15.54	6 / 4				
reaction time	0.190	interval		1.20	1.19	1.22	1.21	1.20	1.23	1.18	1.25	1.26	1.75		3.61	3.64	3.69	
wind	-4.1 m/s	velocity	4.81	7.62	7.68	7.49	7.55	7.62	7.43	7.75	7.31	7.25	8.01	7.08	7.60	7.53	7.43	

Pistol, Marvin (FRA) (1996) H1 H2 H3 H4 H5 H6 H7 H8 H9 H10													<i>Henson (2020) - Athlete First: 2020 year end hurdle report</i>					
FINAL - 2020 French National Championships (Albi, FRA) (TV Analysis)													<i>Henson (2020) - Athlete First: 2020 year end hurdle report</i>					
date	13-Sep-20	time	2.67	3.75	4.86	5.94	6.96	8.10	9.15	10.23	11.34	12.49	14.20	1 / 5				
reaction time	0.202	interval		1.08	1.11	1.08	1.02	1.14	1.05	1.08	1.11	1.15	1.71		3.27	3.21	3.34	
wind	0.0 m/s	velocity	5.14	8.46	8.23	8.46	8.96	8.02	8.70	8.46	8.23	7.95	8.20	7.75	8.39	8.54	8.21	

Pizzoli, Emiliano (ITA) (1974) H1 H2 H3 H4 H5 H6 H7 H8 H9 H10													<i>Graubner (2007) - http://www.fgs.uni-halle.de</i>					
FINAL - 2001 European Cup (Bremen, GER)													<i>Graubner (2007) - http://www.fgs.uni-halle.de</i>					
date	24-Jun-01	time	2.63	3.73	4.79	5.83	6.88	7.93	8.98	10.04	11.14	12.25	13.71	6 / 4				
reaction time	0.138	interval		1.10	1.06	1.04	1.05	1.05	1.05	1.06	1.10	1.11	1.46		3.20	3.15	3.27	
wind	1.3 m/s	velocity	5.22	8.31	8.62	8.79	8.70	8.70	8.70	8.62	8.31	8.23	9.60	8.02	8.57	8.70	8.39	

Pogorelov, Aleksandr (RUS) (1980) H1 H2 H3 H4 H5 H6 H7 H8 H9 H10													<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>					
Decathlon - Heat 1 - 2009 IAAF World Championships (Berlin, GER)													<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>					
date	20-Aug-09	time	2.82	3.94	5.04	6.15	7.25	8.34	9.41	10.52	11.64	12.74	14.19	8 / 1				
reaction time	0.146	interval		1.12	1.10	1.11	1.10	1.09	1.07	1.11	1.12	1.10	1.45		3.33	3.26	3.33	
wind	0.3 m/s	velocity	4.87	8.16	8.31	8.23	8.31	8.39	8.54	8.23	8.16	8.31	9.67	7.75	8.23	8.41	8.23	

		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Pohland, Holger (GDR) (1963)																	
FINAL - 1986 East German National Championships (Jena, GDR)												<i>Aubert (1987) - mesures et observations biomecaniques a propos des courses de haies hautes</i>					
date	27-Jun-86	time	2.61	3.66	4.68	5.71	6.76	7.81	8.88	9.94	11.03	12.12	13.56	1 / 1			
reaction time		interval	1.05	1.02	1.03	1.05	1.05	1.07	1.06	1.09	1.09	1.44			3.10	3.17	3.24
wind	1.7 m/s	velocity	5.26	8.70	8.96	8.87	8.70	8.70	8.54	8.62	8.39	8.39	9.74	8.11	8.85	8.65	8.46
Pokorny, Martin (CZE) (1988)																	
FINAL - 2014 Czech Republic National Championships (Ostrava, CZE)												<i>Feher (2014) - Final report from the Czech Republic national championships</i>					
date	02-Aug-14	time	2.75	3.90	5.05	6.17	7.31	8.47	9.64	10.80	11.99	13.22	14.89	8 / 5			
reaction time	0.135	interval	1.15	1.15	1.12	1.14	1.16	1.17	1.16	1.19	1.23	1.67			3.42	3.47	3.58
wind	-1.2 m/s	velocity	4.99	7.95	7.95	8.16	8.02	7.88	7.81	7.88	7.68	7.43	8.40	7.39	8.02	7.90	7.66
Heat 1 - 2014 Czech Republic National Championships (Ostrava, CZE)												<i>Feher (2014) - Final report from the Czech Republic national championships</i>					
date	02-Aug-14	time	2.75	3.93	5.11	6.26	7.41	8.56	9.75	10.91	12.12	13.34	15.02	6 / 3			
reaction time	0.156	interval	1.18	1.18	1.15	1.15	1.15	1.19	1.16	1.21	1.22	1.68			3.51	3.49	3.59
wind	-1.6 m/s	velocity	4.99	7.75	7.75	7.95	7.95	7.95	7.68	7.88	7.55	7.49	8.35	7.32	7.81	7.86	7.64
Heat 2 - 2013 Czech Republic National Championships (Tábor, CZE)												<i>Feher (2013) - Final report from the men's & women's Czech Republic national championships</i>					
date	15-Jun-13	time	2.77	3.94	5.10	6.26	7.43	8.58	9.75	10.98	12.20	13.46	15.21	6 / 4			
reaction time	0.155	interval	1.17	1.16	1.16	1.17	1.15	1.17	1.23	1.22	1.26	1.75			3.49	3.49	3.71
wind	-0.6 m/s	velocity	4.95	7.81	7.88	7.88	7.81	7.95	7.81	7.43	7.49	7.25	8.01	7.23	7.86	7.86	7.39
FINAL - 2012 Czech Republic National Indoor Championships (Praha, CZE)												<i>Feher (2012) - Czech Republic indoor national championships - men's 60m hurdles</i>					
date	25-Feb-12	time	2.72	3.84	4.94	6.03	7.14						8.17	1 / 6			
reaction time	0.156	interval	1.12	1.10	1.09	1.11						1.03			3.31		
		velocity	5.04	8.16	8.31	8.39	8.23					9.44	7.34		8.28		
Heat 3 - 2012 Czech Republic National Indoor Championships (Praha, CZE)												<i>Feher (2012) - Czech Republic indoor national championships - men's 60m hurdles</i>					
date	25-Feb-12	time	2.71	3.85	4.95	6.06	7.17						8.20	6 / 4			
reaction time	0.154	interval	1.14	1.10	1.11	1.11						1.03			3.35		
		velocity	5.06	8.02	8.31	8.23	8.23					9.44	7.32		8.19		
Polách, Josef (CZE) (1990)																	
FINAL - 2014 Czech Republic National Championships (Ostrava, CZE)												<i>Feher (2014) - Final report from the Czech Republic national championships</i>					
date	02-Aug-14	time	2.70	3.82	4.93	6.05	7.15	8.26	9.37	10.52	11.63	12.83	14.39	3 / 2			
reaction time	0.154	interval	1.12	1.11	1.12	1.10	1.11	1.11	1.15	1.11	1.20	1.56			3.35	3.32	3.46
wind	-1.2 m/s	velocity	5.08	8.16	8.23	8.16	8.31	8.23	8.23	7.95	8.23	7.62	8.99	7.64	8.19	8.26	7.92
Heat 2 - 2014 Czech Republic National Championships (Ostrava, CZE)												<i>Feher (2014) - Final report from the Czech Republic national championships</i>					
date	02-Aug-14	time	2.73	3.85	4.94	6.05	7.15	8.26	9.35	10.46	11.61	12.76	14.26	4 / 2			
reaction time	0.143	interval	1.12	1.09	1.11	1.10	1.11	1.09	1.11	1.15	1.15	1.50			3.32	3.30	3.41
wind	0.8 m/s	velocity	5.03	8.16	8.39	8.23	8.31	8.23	8.39	8.23	7.95	7.95	9.35	7.71	8.26	8.31	8.04
Heat 1 - 2013 Czech Republic National Championships (Tábor, CZE)												<i>Feher (2013) - Final report from the men's & women's Czech Republic national championships</i>					
date	15-Jun-13	time	2.74	3.88	5.00	6.17	7.31	8.48	9.59	10.77	11.95	13.12	14.76	3 / 3			
reaction time	0.151	interval	1.14	1.12	1.17	1.14	1.17	1.11	1.18	1.18	1.17	1.64			3.43	3.42	3.53
wind	-0.6 m/s	velocity	5.01	8.02	8.16	7.81	8.02	7.81	8.23	7.75	7.75	7.81	8.55	7.45	7.99	8.02	7.77
Porter, Jeff (USA) (1985)																	
FINAL - 2017 Seiko Golden Grand Prix (Kawasaki, JPN)												<i>(2017) - tfdata-store.com/2017/05/22/post-599/</i>					
date	21-May-17	time	2.59	3.68	4.74	5.82	6.87	7.94	9.00	10.08	11.16	12.26	13.73	4 / 7			
reaction time	0.125	interval	1.09	1.06	1.08	1.05	1.07	1.06	1.08	1.08	1.10	1.47			3.23	3.18	3.26
wind	-1.8 m/s	velocity	5.30	8.39	8.62	8.46	8.70	8.54	8.62	8.46	8.46	8.31	9.54	8.01	8.49	8.62	8.41
FINAL - 2017 Shanghai Diamond League (Shanghai, CHN) (TV Analysis)												<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>					
date	13-May-17	time	2.58	3.66	4.70	5.72	6.76	7.82	8.88	9.96	11.04	12.16	13.70	1 / 9			
reaction time	0.141	interval	1.08	1.04	1.02	1.04	1.06	1.06	1.08	1.08	1.12	1.54			3.14	3.16	3.28
wind	0.5 m/s	velocity	5.32	8.46	8.79	8.96	8.79	8.62	8.62	8.46	8.46	8.16	9.10	8.03	8.73	8.68	8.36
FINAL - 2016 USA Olympic Trials (Eugene, OR) (TV Analysis)												<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>					
date	09-Jul-16	time	2.50	3.53	4.53	5.55	6.57	7.60	8.62	9.67	10.69	11.73	13.21	6 / 3			
reaction time	0.163	interval	1.03	1.00	1.02	1.02	1.03	1.02	1.05	1.02	1.04	1.48			3.05	3.07	3.11
wind	1.0 m/s	velocity	5.49	8.87	9.14	8.96	8.96	8.87	8.96	8.70	8.96	8.79	9.47	8.33	8.99	8.93	8.82
FINAL - 2016 Prefontaine Classic (Eugene, OR) (TV Analysis)												<i>Henson (2021) - Athlete First: 2016 year end hurdle report</i>					
date	28-May-16	time	2.52	3.58	4.62	5.64	6.68	7.74	8.78	9.82	10.88	11.96	13.48	1 / 3			
reaction time		interval	1.06	1.04	1.02	1.04	1.06	1.04	1.04	1.06	1.08	1.52			3.12	3.14	3.18
wind	0.7 m/s	velocity	5.44	8.62	8.79	8.96	8.79	8.62	8.79	8.79	8.62	8.46	9.22	8.16	8.79	8.73	8.62
FINAL - 2012 Herculis Meeting International D'Atlétisme (Monaco, MON) (TV Analysis)												<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>					
date	20-Jul-12	time	2.46	3.50	4.53	5.53	6.55	7.55	8.55	9.58	10.62	11.71	13.19	3 / 5			
reaction time	0.153	interval	1.04	1.03	1.00	1.02	1.00	1.00	1.03	1.04	1.09	1.48			3.07	3.02	3.16

wind	0.0 m/s	velocity	5.58	8.79	8.87	9.14	8.96	9.14	9.14	8.87	8.79	8.39	9.47	8.34	8.93	9.08	8.68	
FINAL - 2012 AVIVA London Grand Prix (London, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>				
date	13-Jul-12	time	2.48	3.56	4.56	5.56	6.60	7.64	8.68	9.74	10.80	11.86	13.32	5 / 4				
reaction time	0.154	interval	1.08	1.00	1.00	1.04	1.04	1.04	1.06	1.06	1.06	1.46			3.08	3.12	3.18	
wind	0.6 m/s	velocity	5.53	8.46	9.14	9.14	8.79	8.79	8.79	8.62	8.62	9.60	8.26		8.90	8.79	8.62	
FINAL - 2012 USA Olympic Trials (Eugene, OR)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>				
date	30-Jun-12	time	2.40	3.42	4.43	5.42	6.44	7.44	8.44	9.47	10.51	11.53	13.08	4 / 3				
reaction time	0.157	interval	1.02	1.01	0.99	1.02	1.00	1.00	1.03	1.04	1.02	1.55	PB		3.02	3.02	3.09	
wind	1.2 m/s	velocity	5.72	8.96	9.05	9.23	8.96	9.14	9.14	8.87	8.79	8.96	9.05	8.41	9.08	9.08	8.87	
FINAL - 2010 Windsprint (Sundsvall, SWE)														<i>Blomkvist (2010) - www.sub13.se</i>				
date	08-Aug-10	time	2.63	3.71	4.76	5.85	6.91	8.00	9.08	10.14	11.23	12.32	13.79	/ 3				
reaction time		interval	1.08	1.05	1.09	1.06	1.09	1.08	1.06	1.09	1.09	1.47			3.22	3.23	3.24	
wind	1.1 m/s	velocity	5.22	8.46	8.70	8.39	8.62	8.39	8.46	8.62	8.39	8.39	9.54	7.98	8.52	8.49	8.46	
Heat 2 - 2010 Samsung Galan (Göteborg, SWE)														<i>Blomkvist (2010) - www.sub13.se</i>				
date	02-Feb-10	time	2.54	3.64	4.68	5.76	6.88						7.87	/ 4				
reaction time		interval	1.10	1.04	1.08	1.12						0.99			3.22			
		velocity	5.40	8.31	8.79	8.46	8.16					9.82	7.62		8.52			
Semi-Final 1 - 2007 USATF National Championships (Indianapolis, IN)														<i>USATF Men's Hurdle Development (2007)</i>				
date	24-Jun-07	time	2.67	3.74	4.79	5.86	6.92	7.99	9.06	10.14	11.24	12.36	13.83	7 / 8				
reaction time		interval	1.07	1.05	1.07	1.06	1.07	1.07	1.08	1.10	1.12	1.47			3.19	3.20	3.30	
wind	-0.6 m/s	velocity	5.14	8.54	8.70	8.54	8.62	8.54	8.54	8.46	8.31	8.16	9.54	7.95	8.60	8.57	8.31	
Heat 1 - 2007 USATF National Championships (Indianapolis, IN)														<i>USATF Men's Hurdle Development (2007)</i>				
date	23-Jun-07	time	2.62	3.67	4.77	5.84	6.91	7.95	9.04	10.11	11.21	12.27	13.80	5 / 7				
reaction time		interval	1.05	1.10	1.07	1.07	1.04	1.09	1.07	1.10	1.06	1.53			3.22	3.20	3.23	
wind	0.1 m/s	velocity	5.24	8.70	8.31	8.54	8.54	8.79	8.39	8.54	8.31	8.62	9.16	7.97	8.52	8.57	8.49	
Pozzi, Andy (GBR) (1992)																		
			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2022 European Athletics Championships (Munich, GER) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
date	17-Aug-22	time	2.52	3.58	4.64	5.68	6.72	7.76	8.82	9.92	11.02	12.14	13.66	1 / 6				
reaction time	0.166	interval	7 steps	1.06	1.06	1.04	1.04	1.04	1.06	1.10	1.10	1.12	1.52			3.16	3.14	3.32
wind	-0.2 m/s	velocity	5.44	8.62	8.62	8.79	8.79	8.79	8.62	8.31	8.31	8.16	9.22	8.05		8.68	8.73	8.26
Semi-Final 3 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
date	17-Jul-22	time	2.56	3.56	4.60	5.60	6.60	7.60	8.63	9.66	10.76	11.83	13.35	7 / 6				
reaction time	0.141	interval	7 steps	1.00	1.04	1.00	1.00	1.00	1.03	1.03	1.10	1.07	1.52			3.04	3.03	3.20
wind	2.5 m/s	velocity	5.36	9.14	8.79	9.14	9.14	9.14	8.87	8.87	8.31	8.54	9.22	8.24		9.02	9.05	8.57
Heat 1 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
date	16-Jul-22	time	2.46	3.53	4.53	5.56	6.58	7.60	8.63	9.70	10.80	11.86	13.45	2 / 3				
reaction time	0.120	interval	7 steps	1.07	1.00	1.03	1.02	1.02	1.03	1.07	1.10	1.06	1.59			3.10	3.07	3.23
wind	-0.5 m/s	velocity	5.58	8.54	9.14	8.87	8.96	8.96	8.87	8.54	8.31	8.62	8.82	8.18		8.85	8.93	8.49
FINAL - 2022 Meeting de Paris (Paris, FRA) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
date	18-Jun-22	time	2.50	3.54	4.58	5.60	6.62	7.66	8.70	9.76	10.84	11.94	13.49	1 / 6				
reaction time	0.126	interval	7 steps	1.04	1.04	1.02	1.02	1.04	1.04	1.06	1.08	1.10	1.55			3.10	3.10	3.24
wind	-0.2 m/s	velocity	5.49	8.79	8.79	8.96	8.96	8.79	8.79	8.62	8.46	8.31	9.05	8.15		8.85	8.85	8.46
FINAL - 2022 Müller Birmingham Diamond League (Birmingham, GBR) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
date	21-May-22	time	2.47	3.50	4.53	5.53	6.55	7.57	8.61	9.69	10.77	11.87	13.39	3 / 5				
reaction time	0.102	interval	7 steps	1.03	1.03	1.00	1.02	1.02	1.04	1.08	1.10	1.52				3.06	3.08	3.26
wind	0.7 m/s	velocity	5.55	8.87	8.87	9.14	8.96	8.96	8.79	8.46	8.46	8.31	9.22	8.22		8.96	8.90	8.41
Semi-Final 2 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)														<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>				
date	20-Mar-22	time	2.48	3.52	4.56	5.56	6.58						7.60	3 / 4				
reaction time	0.122	interval	7 steps	1.04	1.04	1.00	1.02					1.02				3.08		
		velocity	5.53	8.79	8.79	9.14	8.96					9.53	7.89			8.90		
Heat 5 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)														<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>				
date	20-Mar-22	time	2.56	3.64	4.65	5.65	6.67						7.60	4 / 2				
reaction time	0.132	interval	7 steps	1.08	1.01	1.00	1.02					0.93				3.09		
		velocity	5.36	8.46	9.05	9.14	8.96					10.45	7.89			8.87		
FINAL - 2022 Müller Indoor Grand Prix (Birmingham, GBR) (TV Analysis)														<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>				
date	19-Feb-22	time	2.47	3.53	4.55	5.56	6.57						7.59	4 / 2				
reaction time	0.141	interval	7 steps	1.06	1.02	1.01	1.01					1.02				3.09		
		velocity	5.55	8.62	8.96	9.05	9.05					9.53	7.91			8.87		

FINAL - 2022 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)

date	17-Feb-22	time	2.55	3.58	4.58	5.60	6.62											
reaction time	0.163	interval	7 steps	1.03	1.00	1.02	1.02							1.00				3.05
		velocity	5.38	8.87	9.14	8.96	8.96							9.72	7.87			8.99

Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record

7.62 1 / 5

FINAL - 2021 Meeting de Paris (Paris, FRA) (TV Analysis)

date	28-Aug-21	time	2.52	3.56	4.60	5.62	6.64	7.68	8.72	9.76	10.86	11.94								
reaction time	0.126	interval	7 steps	1.04	1.04	1.02	1.02	1.04	1.04	1.04	1.10	1.08	1.55					3.10	3.10	3.22
wind	0.7 m/s	velocity	5.44	8.79	8.79	8.96	8.96	8.79	8.79	8.79	8.31	8.46	9.05	8.15				8.85	8.85	8.52

Henson (2021) - Athlete First: 2021 year end hurdle report

13.49 8 / 6

FINAL - 2021 Athletissima (Lausanne, SUI) (TV Analysis)

date	26-Aug-21	time	2.48	3.52	4.56	5.56	6.56	7.58	8.62	9.68	10.80	11.92								
reaction time	0.149	interval	7 steps	1.04	1.04	1.00	1.00	1.02	1.04	1.06	1.12	1.12	1.53					3.08	3.06	3.30
wind	2.5 m/s	velocity	5.53	8.79	8.79	9.14	9.14	8.96	8.79	8.62	8.16	8.16	9.16	8.18				8.90	8.96	8.31

Henson (2021) - Athlete First: 2021 year end hurdle report

13.45 8 / 7

FINAL - 2020 Olympic Games (Tokyo, JPN) (TV Analysis)

date	06-Aug-21	time	2.46	3.50	4.52	5.52	6.52	7.54	8.58	9.62	10.68	11.76								
reaction time	0.140	interval	7 steps	1.04	1.02	1.00	1.00	1.02	1.04	1.04	1.06	1.08	1.54					3.06	3.06	3.18
wind	-0.5 m/s	velocity	5.58	8.79	8.96	9.14	9.14	8.96	8.79	8.79	8.62	8.46	9.10	8.27				8.96	8.96	8.62

Henson (2021) - Athlete First: 2021 year end hurdle report

13.30 3 / 7

FINAL - 2021 Müller British Grand Prix (Gateshead, GBR) (TV Analysis)

date	13-Jul-21	time	2.56	3.62	4.64	5.64	6.66	7.72	8.76	9.80	10.88	11.98								
reaction time	0.114	interval	7 steps	1.06	1.02	1.00	1.02	1.06	1.04	1.04	1.08	1.10	1.47					3.08	3.12	3.22
wind	0.8 m/s	velocity	5.36	8.62	8.96	9.14	8.96	8.62	8.79	8.79	8.46	8.31	9.54	8.18				8.90	8.79	8.52

Henson (2021) - Athlete First: 2021 year end hurdle report

13.45 3 / 3

FINAL - 2021 Golden Gala Pietro Mennea (Florence, ITA) (TV Analysis)

date	10-Jun-21	time	2.48	3.52	4.50	5.50	6.52	7.54	8.56	9.60	10.64	11.74								
reaction time	0.113	interval	7 steps	1.04	0.98	1.00	1.02	1.02	1.02	1.04	1.04	1.10	1.51					3.02	3.06	3.18
wind	-0.1 m/s	velocity	5.53	8.79	9.33	9.14	8.96	8.96	8.96	8.79	8.79	8.31	9.28	8.30				9.08	8.96	8.62

Henson (2021) - Athlete First: 2021 year end hurdle report

13.25 3 / 2

FINAL - 2021 European Indoor Championships (Toruń, POL) (TV Analysis)

date	07-Mar-21	time	2.42	3.44	4.44	5.42	6.44												
reaction time	0.151	interval	7 steps	1.02	1.00	0.98	1.02							0.99				3.00	
		velocity	5.67	8.96	9.14	9.33	8.96							9.82	8.08			9.14	

Henson (2021) - Athlete First: 2021 year end hurdle report

7.43 6 / 2

FINAL - 2021 Villa de Madrid (Madrid, ESP) (TV Analysis)

date	24-Feb-21	time	2.40	3.44	4.45	5.45	6.47												
reaction time		interval	7 steps	1.04	1.01	1.00	1.02							1.04				3.05	
		velocity	5.72	8.79	9.05	9.14	8.96							9.35	7.99			8.99	

Henson (2021) - men's 60m hurdles world record season - Grant Holloway

7.51 3 / 2

Heat 2 - 2021 Villa de Madrid (Madrid, ESP) (TV Analysis)

date	24-Feb-21	time	2.57	3.63	4.63	5.65	6.66												
reaction time	0.132	interval	7 steps	1.06	1.00	1.02	1.01							0.87				3.08	
		velocity	5.34	8.62	9.14	8.96	9.05							11.17	7.97			8.90	

Henson (2021) - men's 60m hurdles world record season - Grant Holloway

7.53 4 / 1

FINAL - 2020 Golden Gala Pietro Mennea (Rome, ITA) (TV Analysis)

date	17-Sep-20	time	2.50	3.54	4.52	5.52	6.52	7.52	8.54	9.58	10.62	11.68								
reaction time	0.128	interval	7 steps	1.04	0.98	1.00	1.00	1.00	1.02	1.04	1.04	1.06	1.47					3.02	3.02	3.14
wind	0.1 m/s	velocity	5.49	8.79	9.33	9.14	9.14	9.14	8.96	8.79	8.79	8.62	9.54	8.37				9.08	9.08	8.73

Henson (2020) - Athlete First: 2020 year end hurdle report

13.15 4 / 1

FINAL - 2020 István Gyulai Memorial (Székesfehérvár, HUN) (TV Analysis)

date	19-Aug-20	time	2.50	3.54	4.54	5.57	6.57	7.61	8.64	9.68	10.74	11.91								
reaction time	0.127	interval	7 steps	1.04	1.00	1.03	1.00	1.04	1.03	1.04	1.06	1.17	1.69					3.07	3.07	3.27
wind	0.3 m/s	velocity	5.49	8.79	9.14	8.87	9.14	8.79	8.87	8.79	8.62	7.81	8.30	8.09				8.93	8.93	8.39

Henson (2020) - Athlete First: 2020 year end hurdle report

13.60 5 / 6

FINAL - 2020 Herculis Meeting International d'Athletisme (Monaco, MON) (TV Analysis)

date	14-Aug-20	time	2.52	3.54	4.54	5.54	6.54	7.54	8.57	9.57	10.61	11.68								
reaction time	0.125	interval	7 steps	1.02	1.00	1.00	1.00	1.00	1.03	1.00	1.04	1.07	1.46					3.02	3.03	3.11
wind	0.8 m/s	velocity	5.44	8.96	9.14	9.14	9.14	9.14	8.87	9.14	8.79	8.54	9.60	8.37				9.08	9.05	8.82

Henson (2020) - Athlete First: 2020 year end hurdle report

13.14 5 / 2

FINAL - 2020 Paavo Nurmi Games (Turku, FIN) (TV Analysis)

date	11-Aug-20	time	2.57	3.57	4.57	5.57	6.57	7.57	8.59	9.61	10.65	11.71								
reaction time	0.149	interval	7 steps	1.00	1.00	1.00	1.00	1.00	1.02	1.02	1.04	1.06	1.46					3.00	3.02	3.12
wind	1.1 m/s	velocity	5.34	9.14	9.14	9.14	9.14	9.14	8.96	8.96	8.79	8.62	9.60	8.35				9.14	9.08	8.79

Henson (2020) - Athlete First: 2020 year end hurdle report

13.17 6 / 1

Semi-Final 1 - 2019 IAAF World Championships (Doha, QAT)

date	02-Oct-19	time	2.58	3.61	4.64	5.66	6.68	7.74	8.86	9.94	11.04	12.14								
reaction time	0.123	interval	7 steps	1.03	1.03	1.02	1.02	1.06	1.12	1.08	1.10	1.10	1.46					3.08	3.20	3.28
wind	1.1 m/s	velocity	5.32	8.87	8.87	8.96	8.96	8.62	8.16	8.46	8.31	8.31	9.60	8.09				8.90	8.57	8.36

CAA Hurdle Development (2019)

4 / 5

FINAL - 2019 The Match - Europe v USA (Minsk, BLR) (TV Analysis)

date	10-Sep-19	time	2.53	3.60	4.63	5.63	6.65	7.71	8.75	9.82	10.90	12.06								
reaction time	0.155	interval	7 steps	1.07	1.03	1.00	1.02	1.06	1.04	1.07	1.08	1.16	1.53					3.10	3.12	3.31

Henson (2020) - Athlete First: 2019 year end hurdle report

13.59 3 / 4

wind	0.1 m/s	velocity	5.42	8.54	8.87	9.14	8.96	8.62	8.79	8.54	8.46	7.88	9.16	8.09		8.85	8.79	8.28	
FINAL - 2019 AG Memorial van Damme (Brussels, BEL) (TV Analysis)															<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>				
date	06-Sep-19	time	2.52	3.58	4.60	5.60	6.62	7.66	8.70	9.72	10.82	11.90		13.50		2 / 6			
reaction time	0.141	interval	7 steps	1.06	1.02	1.00	1.02	1.04	1.04	1.02	1.10	1.08	1.60			3.08	3.10	3.20	
wind	0.0 m/s	velocity	5.44	8.62	8.96	9.14	8.96	8.79	8.79	8.96	8.31	8.46	8.76	8.15		8.90	8.85	8.57	
FINAL - 2019 Müller Anniversary Games (London, GBR) (TV Analysis)															<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>				
date	21-Jul-19	time	2.38	3.43	4.45	5.46	6.46	7.50	8.55	9.63	10.77	11.89		13.52		3 / 6			
reaction time	0.131	interval	7 steps	1.05	1.02	1.01	1.00	1.04	1.05	1.08	1.14	1.12	1.63			3.08	3.09	3.34	
wind	0.4 m/s	velocity	5.76	8.70	8.96	9.05	9.14	8.79	8.70	8.46	8.02	8.16	8.60	8.14		8.90	8.87	8.21	
FINAL - 2019 Meeting International Mohammed VI d'Athlétisme (Rabat, MAR) (TV Analysis)															<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>				
date	16-Jun-19	time	2.48	3.52	4.52	5.52	6.54	7.58	8.62	9.66	10.72	11.78		13.30		4 / 2			
reaction time	0.118	interval	7 steps	1.04	1.00	1.00	1.02	1.04	1.04	1.04	1.06	1.06	1.52			3.04	3.10	3.16	
wind	0.3 m/s	velocity	5.53	8.79	9.14	9.14	8.96	8.79	8.79	8.79	8.62	8.62	9.22	8.27		9.02	8.85	8.68	
FINAL - 2019 Golden Gala Pietro Mennea (Rome, ITA) (TV Analysis)															<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>				
date	06-Jun-19	time	2.53	3.55	4.56	5.55	6.55	7.60	8.63	9.68	10.73	11.80		13.29		7 / 2			
reaction time	0.139	interval	7 steps	1.02	1.01	0.99	1.00	1.05	1.03	1.05	1.05	1.07	1.49			3.02	3.08	3.17	
wind	0.4 m/s	velocity	5.42	8.96	9.05	9.23	9.14	8.70	8.87	8.70	8.70	8.54	9.41	8.28		9.08	8.90	8.65	
FINAL - 2019 Nanjing World Challenge (Nanjing, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	21-May-19	time	2.57	3.60	4.60	5.61	6.64	7.67	8.73	9.78	10.88	12.02		13.66		8 / 9			
reaction time	0.146	interval	7 steps	1.03	1.00	1.01	1.03	1.03	1.06	1.05	1.10	1.14	1.64			3.04	3.12	3.29	
wind	0.1 m/s	velocity	5.34	8.87	9.14	9.05	8.87	8.87	8.62	8.70	8.31	8.02	8.55	8.05		9.02	8.79	8.33	
FINAL - 2019 Shanghai Diamond League (Shanghai, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	18-May-19	time	2.52	3.58	4.58	5.62	6.62	7.66	8.70	9.74	10.82	11.92		13.39		7 / 6			
reaction time	0.133	interval	7 steps	1.06	1.00	1.04	1.00	1.04	1.04	1.04	1.08	1.10	1.47			3.10	3.08	3.22	
wind	0.7 m/s	velocity	5.44	8.62	9.14	8.79	9.14	8.79	8.79	8.79	8.46	8.31	9.54	8.22		8.85	8.90	8.52	
FINAL - 2019 PSD Bank Meeting (Düsseldorf, GER) (TV Analysis)															<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>				
date	20-Feb-19	time	2.43	3.46	4.52	5.52	6.56									7.67		3 / 5	
reaction time	0.106	interval	7 steps	1.03	1.06	1.00	1.04						1.11			3.09			
		velocity	5.65	8.87	8.62	9.14	8.79						8.76	7.82		8.87			
FINAL - 2018 Müller Grand Prix (Birmingham, GBR) (TV Analysis)															<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>				
date	18-Aug-18	time	2.42	3.46	4.48	5.48	6.50	7.54	8.58	9.62	10.70	11.78		13.35		5 / 5			
reaction time	0.128	interval	7 steps	1.04	1.02	1.00	1.02	1.04	1.04	1.04	1.08	1.08	1.57			3.06	3.10	3.20	
wind	1.3 m/s	velocity	5.67	8.79	8.96	9.14	8.96	8.79	8.79	8.79	8.46	8.46	8.93	8.24		8.96	8.85	8.57	
FINAL - 2018 Müller Anniversary Games (London, GBR) (TV Analysis)															<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>				
date	22-Jul-18	time	2.50	3.54	4.56	5.56	6.58	7.60	8.66	9.70	10.76	11.84		13.36		3 / 4			
reaction time	0.129	interval	7 steps	1.04	1.02	1.00	1.02	1.02	1.06	1.04	1.06	1.08	1.52			3.06	3.10	3.18	
wind	0.2 m/s	velocity	5.49	8.79	8.96	9.14	8.96	8.96	8.62	8.79	8.62	8.46	9.22	8.23		8.96	8.85	8.62	
FINAL - 2018 Prefontaine Classic (Eugene, OR) (TV Analysis)															<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>				
date	26-May-18	time	2.54	3.60	4.60	5.60	6.60	7.64	8.68	9.74	10.84	11.94		13.51		3 / 7			
reaction time	0.164	interval	7 steps	1.06	1.00	1.00	1.00	1.04	1.04	1.06	1.10	1.10	1.57			3.06	3.08	3.26	
wind	3.0 m/s	velocity	5.40	8.62	9.14	9.14	9.14	8.79	8.79	8.62	8.31	8.31	8.93	8.14		8.96	8.90	8.41	
FINAL - 2018 IAAF World Indoor Championships (Birmingham, GBR) Walker (2019). Biomechanical Report for the IAAF World Indoor Championships 2018: 60 Metres Hurdles Men															<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>				
date	04-Mar-18	time	2.51	3.54	4.59	5.58	6.57									7.46		4 / 1	
reaction time	0.143	interval	7 steps	1.03	1.05	0.99	0.99						0.89			3.07			
		velocity	5.47	8.87	8.70	9.23	9.23						10.92	8.04		8.93			
FINAL - 2017 Müller Grand Prix (Birmingham, GBR) (TV Analysis)															<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>				
date	20-Aug-17	time	2.50	3.54	4.56	5.58	6.62	7.70	8.74	9.80	10.88	11.98		13.53		3 / 6			
reaction time	0.119	interval	7 steps	1.04	1.02	1.02	1.04	1.08	1.04	1.06	1.08	1.10	1.55			3.08	3.16	3.24	
wind	-0.6 m/s	velocity	5.49	8.79	8.96	8.96	8.79	8.46	8.79	8.62	8.46	8.31	9.05	8.13		8.90	8.68	8.46	
Semi-Final 2 - 2017 IAAF World Championships (London, GBR) Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles															<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>				
date	06-Aug-17	time	2.35	3.39	4.40	5.43	6.44	7.43	8.45	9.48	10.51	11.62		13.28		6 / 4			
reaction time	0.137	interval	7 steps	1.04	1.01	1.03	1.01	0.99	1.02	1.03	1.03	1.11	1.66			3.08	3.02	3.17	
wind	0.6 m/s	velocity	5.84	8.79	9.05	8.87	9.05	9.23	8.96	8.87	8.87	8.23	8.45	8.28		8.90	9.08	8.65	
FINAL - 2017 Meeting de Paris (Paris, FRA) (TV Analysis)															<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>				
date	01-Jul-17	time	2.48	3.50	4.50	5.48	6.48	7.48	8.50	9.54	10.58	11.66		13.14		3 / 2			
reaction time	0.107	interval	7 steps	1.02	1.00	0.98	1.00	1.00	1.02	1.04	1.04	1.08	1.48	PB		3.00	3.02	3.16	
wind	-0.1 m/s	velocity	5.53	8.96	9.14	9.33	9.14	9.14	8.96	8.79	8.79	8.46	9.47	8.37		9.14	9.08	8.68	
FINAL - 2017 Golden Gala Pietro Mennea (Rome, ITA) (TV Analysis)															<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>				

date	08-Jun-17	time	2.48	3.52	4.52	5.52	6.52	7.50	8.52	9.58	10.62	11.74		13.24	5 / 4			
reaction time	0.119	interval	7 steps	1.04	1.00	1.00	1.00	0.98	1.02	1.06	1.04	1.12	1.50			3.04	3.00	3.22
wind	-0.3 m/s	velocity	5.53	8.79	9.14	9.14	9.14	9.33	8.96	8.62	8.79	8.16	9.35	8.31		9.02	9.14	8.52
FINAL - 2017 Prefontaine Classic (Eugene, OR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>				
date	27-May-17	time	2.46	3.48	4.48	5.50	6.50	7.50	8.50	9.52	10.54	11.62		13.19	2 / 5			
reaction time	0.145	interval	7 steps	1.02	1.00	1.02	1.00	1.00	1.00	1.02	1.02	1.08	1.57	=PB		3.04	3.00	3.12
wind	0.9 m/s	velocity	5.58	8.96	9.14	8.96	9.14	9.14	9.14	8.96	8.96	8.46	8.93	8.34		9.02	9.14	8.79
FINAL - 2017 Drake Relays (Des Moines, IA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>				
date	29-Apr-17	time	2.50	3.53	4.53	5.53	6.50	7.53	8.53	9.55	10.60	11.66		13.24	3 / 2			
reaction time		interval	7 steps	1.03	1.00	1.00	0.97	1.03	1.00	1.02	1.05	1.06	1.58			3.03	3.00	3.13
wind	1.8 m/s	velocity	5.49	8.87	9.14	9.14	9.42	8.87	9.14	8.96	8.70	8.62	8.87	8.31		9.05	9.14	8.76
FINAL - 2017 European Indoor Championships (Beograd, SRB)														<i>(2017.03.05) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>				
date	03-Mar-17	time	2.62	3.63	4.63	5.61	6.62							7.51	5 / 1			
reaction time		interval	7 steps	1.01	1.00	0.98	1.01						0.89			2.99		
		velocity	5.24	9.05	9.14	9.33	9.05						10.92	7.99		9.17		
FINAL - 2016 Golden Gala Pietro Mennea (Roma, ITA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>				
date	02-Jun-16	time	2.50	3.54	4.54	5.58	6.58	7.60	8.66	9.70	10.74	11.86		13.37	2 / 3			
reaction time	0.139	interval	7 steps	1.04	1.00	1.04	1.00	1.02	1.06	1.04	1.04	1.12	1.51			3.08	3.08	3.20
wind	0.6 m/s	velocity	5.49	8.79	9.14	8.79	9.14	8.96	8.62	8.79	8.79	8.16	9.28	8.23		8.90	8.90	8.57
FINAL - 2012 AVIVA London Grand Prix (London, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>				
date	13-Jul-12	time	2.52	3.56											dnf	2 / --		
reaction time	0.160	interval		1.04														
wind	0.6 m/s	velocity	5.44	8.79														
FINAL - 2012 IAAF World Indoor Championships (Istanbul, TUR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>				
date	11-Mar-12	time	2.54	3.56	4.58	5.60	6.60							7.58	5 / 4			
reaction time	0.155	interval		1.02	1.02	1.02	1.00						0.98			3.06		
		velocity	5.40	8.96	8.96	8.96	9.14						9.92	7.92		8.96		
Prentice, Terry (USA) (1989)														<i>USATF Men's Hurdle Development (2007)</i>				
FINAL - 2007 USATF National Junior Championships (Indianapolis, IN) (99cm)														<i>USATF Men's Hurdle Development (2007)</i>				
date	21-Jun-07	time	2.70	3.77	4.89	5.91	6.94	7.96	8.98	10.01	11.06	12.10		13.52	1 / 4			
reaction time		interval		1.07	1.12	1.02	1.03	1.02	1.02	1.03	1.05	1.04	1.42			3.21	3.07	3.12
wind	2.7 m/s	velocity	5.08	8.54	8.16	8.96	8.87	8.96	8.96	8.87	8.70	8.79	9.87	8.14		8.54	8.93	8.79
Prescott, Matt (USA) (1984)														<i>CAA Hurdle Development (2020)</i>				
Semi-Final 1 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)														<i>CAA Hurdle Development (2020)</i>				
date	15-Feb-20	time	2.72	3.83	4.92	6.05	7.17							8.19	8 / 8			
reaction time	0.159	interval		1.11	1.09	1.13	1.12						1.02			3.33		
		velocity	5.04	8.23	8.39	8.09	8.16						9.53	7.33		8.23		
Heat 1 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)														<i>CAA Hurdle Development (2020)</i>				
date	14-Feb-20	time	2.68	3.79	4.89	5.96	7.06							8.01	4 / 6			
reaction time	0.161	interval		1.11	1.10	1.07	1.10						0.95			3.28		
		velocity	5.12	8.23	8.31	8.54	8.31						10.23	7.49		8.36		
Prokofyev, Andrey (URS) (1959)														<i>Heß (1985) - entwicklungsaspekte die leichtathletischen sprint-/hürdendisziplinen im olympiazklus 1981/84</i>				
FINAL - 1982 European Championships (Athens, GRE)														<i>Heß (1985) - entwicklungsaspekte die leichtathletischen sprint-/hürdendisziplinen im olympiazklus 1981/84</i>				
date	11-Sep-82	time	2.56		4.64		6.72		8.81				12.01		13.46	1 / 2		
reaction time		interval			2.08		2.08		2.09				3.20	1.45	PB			3.20
wind	-0.9 m/s	velocity	5.36		8.79		8.79		8.75				8.57	9.67	8.17			8.57
Puliček, Tomáš (CZE) (1997)														<i>Feher (2015) - Final report U18 & U20 Czech Republic indoor national champs</i>				
FINAL - 2015 Czech Republic National U20 Indoor Championships (Praha, CZE) (99cm)														<i>Feher (2015) - Final report U18 & U20 Czech Republic indoor national champs</i>				
date	14-Feb-15	time	2.60	3.72	4.82	5.90	7.03							7.98	3 / 1			
reaction time	0.132	interval		1.12	1.10	1.08	1.13						0.95	PB		3.30		
		velocity	5.28	8.16	8.31	8.46	8.09						10.23	7.52		8.31		
FINAL - 2014 Czech Republic National U18 Championships (Trinec, CZE) (91cm)														<i>Feher (2014) - Final report from the U18 & U20 Czech Republic national championships</i>				
date	28-Jun-14	time	2.66	3.74	4.80	5.87	6.92	7.99	9.06	10.13	11.22	12.35		13.89	4 / 1			
reaction time	0.177	interval		1.08	1.06	1.07	1.05	1.07	1.07	1.07	1.09	1.13	1.54			3.21	3.19	3.29
wind	-3.7 m/s	velocity	5.16	8.46	8.62	8.54	8.70	8.54	8.54	8.54	8.39	8.09	9.10	7.92		8.54	8.60	8.33
Heat 1 - 2014 Czech Republic National U18 Championships (Trinec, CZE) (91cm)														<i>Feher (2014) - Final report from the U18 & U20 Czech Republic national championships</i>				
date	28-Jun-14	time	2.74	3.82	4.93	6.00	7.05	8.10	9.17	10.24	11.33	12.44		14.05	3 / 1			
reaction time	0.247	interval		1.08	1.11	1.07	1.05	1.05	1.07	1.07	1.09	1.11	1.61			3.26	3.17	3.27
wind	-0.3 m/s	velocity	5.01	8.46	8.23	8.54	8.70	8.70	8.54	8.54	8.39	8.23	8.71	7.83		8.41	8.65	8.39

Qi Zhen (CHN) (1976)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2001 Chinese National Grand Prix (Shanghai, CHN)																		
<i>Fang (2001) - analysis on technical characteristics in Liu Xiang's 110m hurdles</i>																		
date	06-May-01	time	2.66	3.77	4.86	5.90	6.93	8.00	9.07	10.13	11.29	12.45		13.95	1 / 5			
reaction time		interval		1.11	1.09	1.04	1.03	1.07	1.07	1.06	1.16	1.16	1.50			3.24	3.17	3.38
wind	1.9 m/s	velocity	5.16	8.23	8.39	8.79	8.87	8.54	8.54	8.62	7.88	7.88	9.35	7.89		8.46	8.65	8.11
Qian Wenze (CHN) (2001)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Decathlon - Heat 1 - 2019 Chinese National Grand Prix Final (Daqing, CHN)																		
<i>CAA Hurdle Development (2019)</i>																		
date	23-Aug-19	time	2.87	4.02	5.30	6.54	7.76	9.01	10.24	11.51	12.80	14.11		15.76	6 / 4			
reaction time	0.194	interval		1.15	1.28	1.24	1.22	1.25	1.23	1.27	1.29	1.31	1.65			3.67	3.70	3.87
wind	?? m/s	velocity	4.78	7.95	7.14	7.37	7.49	7.31	7.43	7.20	7.09	6.98	8.50	6.98		7.47	7.41	7.09
Decathlon - Heat 1 - 2019 Chinese National Championships (Shenyang, CHN)																		
<i>CAA Hurdle Development (2019)</i>																		
date	11-Jul-19	time	2.87	4.10	5.29	6.50	7.72	8.96	10.17	11.43	12.71	13.96		15.59	4 / 4			
reaction time	0.211	interval		1.23	1.19	1.21	1.22	1.24	1.21	1.26	1.28	1.25	1.63	PB		3.63	3.67	3.79
wind	-0.6 m/s	velocity	4.78	7.43	7.68	7.55	7.49	7.37	7.55	7.25	7.14	7.31	8.60	7.06		7.55	7.47	7.23
Qin Guoyuan (CHN) (1996)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Decathlon - Heat 2 - 2021 Chinese National Championships (Chongqing, CHN)																		
<i>CAA Hurdle Development (2021)</i>																		
date	27-Jun-21	time	2.95	4.19	5.47	6.71	8.01	9.27	10.54	11.81	13.11	14.40		16.03	6 / 6			
reaction time	0.235	interval		1.24	1.28	1.24	1.30	1.26	1.27	1.27	1.30	1.29	1.63			3.76	3.83	3.86
wind	-0.2 m/s	velocity	4.65	7.37	7.14	7.37	7.03	7.25	7.20	7.20	7.03	7.09	8.60	6.86		7.29	7.16	7.10
Decathlon - Heat 1 - 2019 Chinese National Grand Prix Final (Daqing, CHN)																		
<i>CAA Hurdle Development (2019)</i>																		
date	23-Aug-19	time	2.84	4.00	5.17	6.38	7.56	8.77	9.99	11.23	12.46	13.78		15.40	5 / 3			
reaction time	0.183	interval		1.16	1.17	1.21	1.18	1.21	1.22	1.24	1.23	1.32	1.62			3.54	3.61	3.79
wind	?? m/s	velocity	4.83	7.88	7.81	7.55	7.75	7.55	7.49	7.37	7.43	6.92	8.65	7.14		7.75	7.60	7.23
Qin Weibo (CHN) (2002)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Semi-Final 1 - 2024 Olympic Games (Paris, FRA)																		
<i>Paris 2024 Olympc Games - Results Book (2024)</i>																		
date	07-Aug-24	time	2.46	3.55	4.58	5.61	6.62	7.64	8.67	9.70	10.75	11.82		13.41	2 / 6			
reaction time	0.178	interval	7 steps	1.09	1.03	1.03	1.01	1.02	1.03	1.03	1.05	1.07	1.59			3.15	3.06	3.15
wind	0.1 m/s	velocity	5.58	8.39	8.87	8.87	9.05	8.96	8.87	8.87	8.70	8.54	8.82	8.20		8.70	8.96	8.70
Repechage 3 - 2024 Olympic Games (Paris, FRA)																		
<i>Paris 2024 Olympc Games - Results Book (2024)</i>																		
date	06-Aug-24	time	2.46	3.54	4.56	5.56	6.57	7.60	8.64	9.69	10.74	11.81		13.44	3 / 1			
reaction time	0.184	interval	7 steps	1.08	1.02	1.00	1.01	1.03	1.04	1.05	1.05	1.07	1.63			3.10	3.08	3.17
wind	-1.1 m/s	velocity	5.58	8.46	8.96	9.14	9.05	8.87	8.79	8.70	8.70	8.54	8.60	8.18		8.85	8.90	8.65
Heat 5 - 2024 Olympic Games (Paris, FRA)																		
<i>Paris 2024 Olympc Games - Results Book (2024)</i>																		
date	04-Aug-24	time	2.50	3.60	4.64	5.65	6.67	7.69	8.72	9.79	10.89	12.00		13.64	3 / 6			
reaction time	0.199	interval	7 steps	1.10	1.04	1.01	1.02	1.02	1.03	1.07	1.10	1.11	1.64			3.15	3.07	3.28
wind	0.7 m/s	velocity	5.49	8.31	8.79	9.05	8.96	8.96	8.87	8.54	8.31	8.23	8.55	8.06		8.70	8.93	8.36
Heat 2 - 2021 Chinese National Championships (Chongqing, CHN)																		
<i>CAA Hurdle Development (2021)</i>																		
date	25-Jun-21	time	2.64	3.75	4.83	5.92	6.99	8.06	9.16	10.25	11.37	12.52		14.05	3 / 2			
reaction time	0.198	interval	7 steps	1.11	1.08	1.09	1.07	1.07	1.10	1.09	1.12	1.15	1.53	PB		3.28	3.24	3.36
wind	-1.2 m/s	velocity	5.20	8.23	8.46	8.39	8.54	8.54	8.31	8.39	8.16	7.95	9.16	7.83		8.36	8.46	8.16
Heat 2 - 2020 Chinese Olympic Trials (Shaoxing, CHN)																		
<i>CAA Hurdle Development (2021)</i>																		
date	12-Jun-21	time	2.58	3.72	4.81	5.91	7.00	8.10	9.23	10.36	11.49	12.64		14.26	4 / 5			
reaction time	0.174	interval	7 steps	1.14	1.09	1.10	1.09	1.10	1.13	1.13	1.13	1.15	1.62			3.33	3.32	3.41
wind	-0.8 m/s	velocity	5.32	8.02	8.39	8.31	8.39	8.31	8.09	8.09	8.09	7.95	8.65	7.71		8.23	8.26	8.04
FINAL - 2020 Chinese National Championships (Shaoxing, CHN)																		
<i>CAA Hurdle Development (2020)</i>																		
date	16-Sep-20	time	2.69	3.80	4.89	5.96	7.02	8.14	9.25	10.38	11.52	12.68		14.17	8 / 7			
reaction time	0.169	interval		1.11	1.09	1.07	1.06	1.12	1.11	1.13	1.14	1.16	1.49			3.27	3.29	3.43
wind	0.4 m/s	velocity	5.10	8.23	8.39	8.54	8.62	8.16	8.23	8.09	8.02	7.88	9.41	7.76		8.39	8.33	7.99
Heat 2 - 2020 Chinese National Championships (Shaoxing, CHN)																		
<i>CAA Hurdle Development (2020)</i>																		
date	16-Sep-20	time	2.67	3.80	4.86	5.93	7.01	8.09	9.18	10.30	11.44	12.58		14.08	2 / 3			
reaction time	0.187	interval		1.13	1.06	1.07	1.08	1.08	1.09	1.12	1.14	1.14	1.50			3.26	3.25	3.40
wind	-0.5 m/s	velocity	5.14	8.09	8.62	8.54	8.46	8.46	8.39	8.16	8.02	8.02	9.35	7.81		8.41	8.44	8.06
Heat 1 - 2018 Chinese National Championships (Taiyuan, CHN)																		
<i>Henson (2018) - coaching observations</i>																		
date	15-Sep-18	time	2.75	3.84	4.92	5.97	7.07	8.14	9.31	10.47	11.64	12.80		14.34	3 / 6			
reaction time		interval		1.09	1.08	1.05	1.10	1.07	1.17	1.16	1.17	1.16	1.54			3.22	3.34	3.49
wind	-0.2 m/s	velocity	4.99	8.39	8.46	8.70	8.31	8.54	7.81	7.88	7.81	7.88	9.10	7.67		8.52	8.21	7.86
Quiñónez, Jackson (ESP) (1980)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Race 1 - 2011 European Team Championships (Stockholm, SWE)																		
<i>Blomkvist (2011) - www.sub13.se</i>																		
date	19-Jun-11	time	2.56	3.64	4.68	5.72	6.76	7.80	8.88	9.96	11.08	12.20		13.71	3 / 1			
reaction time	0.171	interval		1.08	1.04	1.04	1.04	1.04	1.08	1.08	1.12	1.12	1.51			3.16	3.16	3.32

wind	-0.8 m/s	velocity	5.36	8.46	8.79	8.79	8.79	8.79	8.46	8.46	8.16	8.16	9.28	8.02		8.68	8.68	8.26
Heat 1 - 2009 IAAF World Championships (Berlin, GER)															<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>			
date	19-Aug-09	time	2.70	3.76	4.79	5.82	6.84	7.88	8.92	9.98	11.06	12.16		13.63	8 / 3			
reaction time	0.221	interval		1.06	1.03	1.03	1.02	1.04	1.04	1.06	1.08	1.10	1.47			3.12	3.10	3.24
wind	-0.4 m/s	velocity	5.08	8.62	8.87	8.87	8.96	8.79	8.79	8.62	8.46	8.31	9.54	8.07		8.79	8.85	8.46
Time Trial - 2009 University of Barcelona Hurdle Analysis (Barcelona, ESP)															<i>Padulles (2010) - valoracio funcional i analisi tecnica biomecanica den dayron robes</i>			
date	Jun-09	time	2.37	3.48	4.56	5.61	6.70	7.79	8.91	10.01	11.15	12.32		14.11	5 / 1			
reaction time	0.148	interval		1.11	1.08	1.05	1.09	1.09	1.12	1.10	1.14	1.17	1.79			3.24	3.30	3.41
wind	-0.4 m/s	velocity	5.79	8.23	8.46	8.70	8.39	8.39	8.16	8.31	8.02	7.81	7.83	7.80		8.46	8.31	8.04
FINAL - 2008 Olympic Games (Beijing, CHN)															<i>Tsiokanos (2018) - race pattern of men's 110m hurdles- time analysis of olympic hurdle performance</i>			
date	21-Aug-08	time	2.64	3.72	4.76	5.79	6.82	7.87	8.92	9.99	11.10	12.20		13.69	9 / 8			
reaction time	0.187	interval		1.08	1.04	1.03	1.03	1.05	1.05	1.07	1.11	1.10	1.49			3.15	3.13	3.28
wind	0.1 m/s	velocity	5.20	8.46	8.79	8.87	8.87	8.70	8.70	8.54	8.23	8.31	9.41	8.04		8.70	8.76	8.36
FINAL - 2008 Spanish National Indoor Championships (Valencia, ESP)															<i>Frutos (2008) - 7.52 record de españa de 60mv masculino de jackson quiñonez: estudio biomecánico</i>			
date	24-Feb-08	time	2.56	3.62	4.62	5.62	6.64							7.52	1 / 1			
reaction time		interval		1.06	1.00	1.00	1.02						0.88	NR		3.06		
		velocity	5.36	8.62	9.14	9.14	8.96						11.05	7.98		8.96		
Raja, Andres (EST) (1982)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Decathlon - Heat 2 - 2009 IAAF World Championships (Berlin, GER)															<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>			
date	20-Aug-09	time	2.67	3.79	4.91	6.00	7.10	8.19	9.29	10.43	11.55	12.71		14.22	7 / 3			
reaction time	0.151	interval		1.12	1.12	1.09	1.10	1.09	1.10	1.14	1.12	1.16	1.51			3.33	3.29	3.42
wind	0.3 m/s	velocity	5.14	8.16	8.16	8.39	8.31	8.39	8.31	8.02	8.16	7.88	9.28	7.74		8.23	8.33	8.02
Re, Mauro (ITA) (1967)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 1997 European Cup (Munich, GER)															<i>Jung (2003) - http://www.fgs.uni-halle.de</i>			
date	22-Jun-97	time	2.70	3.76	4.81	5.84	6.89	7.94	9.00	10.06	11.18	12.30		13.76	1 / 6			
reaction time		interval		1.06	1.05	1.03	1.05	1.05	1.06	1.06	1.12	1.12	1.46			3.14	3.16	3.30
wind	0.2 m/s	velocity	5.08	8.62	8.70	8.87	8.70	8.70	8.62	8.62	8.16	8.16	9.60	7.99		8.73	8.68	8.31
Reed, Darius (USA) (1988)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2007 USATF National Junior Championships (Indianapolis, IN) (99cm)															<i>USATF Men's Hurdle Development (2007)</i>			
date	21-Jun-07	time	2.65	3.72	4.75	5.77	6.81	7.86	8.93	9.98	11.09	12.21		13.79	1 / 6			
reaction time		interval		1.07	1.03	1.02	1.04	1.05	1.07	1.05	1.11	1.12	1.58			3.12	3.16	3.28
wind	2.7 m/s	velocity	5.18	8.54	8.87	8.96	8.79	8.70	8.54	8.70	8.23	8.16	8.87	7.98		8.79	8.68	8.36
Reed, Gratt (USA) (2000)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Heat 2 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)															<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>			
date	24-Jun-24	time	2.63	3.70	4.76	5.84	6.93	8.02	9.12	10.20	11.30	12.43		13.95	5 / 8			
reaction time		interval	7 steps	1.07	1.06	1.08	1.09	1.09	1.10	1.08	1.10	1.13	1.52			3.21	3.28	3.31
wind	-0.3 m/s	velocity	5.22	8.54	8.62	8.46	8.39	8.39	8.31	8.46	8.31	8.09	9.22	7.89		8.54	8.36	8.28
Reese, Terry (USA) (1967)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 1997 IAAF World Championships (Athens, GRE)															<i>Hommel (1997) - biomechanical research project at the VI th world championships in athletics, Athens 1997</i>			
date	07-Aug-97	time	2.66	3.72	4.74	5.74	6.76	7.78	8.80	9.82	10.90	12.00		13.30	7 / 6			
reaction time	0.117	interval		1.06	1.02	1.00	1.02	1.02	1.02	1.08	1.10	1.30	1.30	NR		3.08	3.06	3.20
wind	0.0 m/s	velocity	5.16	8.62	8.96	9.14	8.96	8.96	8.96	8.96	8.46	8.31	10.78	8.27		8.90	8.96	8.57
Rezníček, Tomáš (CZE) (1995)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Heat 3 - 2014 Czech Republic National U20 Championships (Trinec, CZE) (99cm)															<i>Fehér (2014) - Final report from the U18 & U20 Czech Republic national championships</i>			
date	28-Jun-14	time	2.98	4.38	5.75	7.19	8.60	10.11	11.63	13.15	14.62	16.10		18.00	7 / 7			
reaction time	0.163	interval		1.40	1.37	1.44	1.41	1.51	1.52	1.52	1.47	1.48	1.90			4.21	4.44	4.47
wind	-2.5 m/s	velocity	4.60	6.53	6.67	6.35	6.48	6.05	6.01	6.01	6.22	6.18	7.38	6.11		6.51	6.18	6.13
Richard, Thierry (FRA) (1961)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 1986 French National Indoor Championships (Lieviv, FRA)															<i>Aubert (1986) - indoor - video - haies, etude des performances</i>			
date	26-Jan-86	time	2.59	3.66	4.75	5.84	7.00							8.09	1 / 5			
reaction time		interval		1.07	1.09	1.09	1.16						1.09			3.25		
		velocity	5.30	8.54	8.39	8.39	7.88						8.92	7.42		8.44		
Semi-Final ? - 1986 French National Indoor Championships (Lieviv, FRA)															<i>Aubert (1986) - indoor - video - haies, etude des performances</i>			
date	26-Jan-86	time	2.68	3.78	4.85	5.93	7.07							7.82	1 / 5			
reaction time		interval		1.10	1.07	1.08	1.14						0.75			3.25		
		velocity	5.12	8.31	8.54	8.46	8.02						12.96	7.67		8.44		
Richardson, Jason (USA) (1986)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2016 USA Olympic Trials (Eugene, OR) (TV Analysis)															<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>			
date	09-Jul-16	time	2.56	3.60	4.60	5.60	6.60	7.64	8.64	9.67	10.71	11.76		13.28	7 / 5			
reaction time	0.212	interval	7 steps	1.04	1.00	1.00	1.00	1.04	1.00	1.03	1.04	1.05	1.52			3.04	3.04	3.12

wind	1.0 m/s	velocity	5.36	8.79	9.14	9.14	9.14	8.79	9.14	8.87	8.79	8.70	9.22	8.28	9.02	9.02	8.79	
FINAL - 2016 Meeting International Mohammed VI D'Athletisme (Rabat, MAR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2016 year end hurdle report</i>				
date	22-May-16	time	2.58	3.64	4.66	5.68	6.70	7.74	8.80	9.86	10.92	12.02		13.54	4 / 6			
reaction time	0.159	interval	7 steps	1.06	1.02	1.02	1.02	1.04	1.06	1.06	1.10	1.52			3.10	3.12	3.22	
wind	1.4 m/s	velocity	5.32	8.62	8.96	8.96	8.96	8.79	8.62	8.62	8.62	8.31	9.22	8.12	8.85	8.79	8.52	
FINAL - 2016 Shanghai Golden Grand Prix (Shanghai, CHN)														<i>Henson (2021) - Athlete First: 2016 year end hurdle report</i>				
date	14-May-16	time	2.54	3.60	4.62	5.64	6.66	7.70	8.74	9.78	10.84	11.92		13.44	9 / 6			
reaction time	0.151	interval	7 steps	1.06	1.02	1.02	1.02	1.04	1.04	1.04	1.06	1.08	1.52		3.10	3.10	3.18	
wind	1.2 m/s	velocity	5.40	8.62	8.96	8.96	8.96	8.79	8.79	8.79	8.62	8.46	9.22	8.18	8.85	8.85	8.62	
FINAL - 2013 IAAF World Championships (Moscow, RUS) (TV Analysis)														<i>Henson (2021) - Athlete First: major championships report</i>				
date	12-Aug-13	time	2.56	3.56	4.56	5.58	6.58	7.58	8.60	9.62	10.64	11.68		13.27	7 / 4			
reaction time	0.158	interval	7 steps	1.00	1.00	1.02	1.00	1.00	1.02	1.02	1.02	1.04	1.59		3.02	3.02	3.08	
wind	0.3 m/s	velocity	5.36	9.14	9.14	8.96	9.14	9.14	8.96	8.96	8.96	8.79	8.82	8.29	9.08	9.08	8.90	
FINAL - 2012 Memorial Van Damme (Brussels, BEL) (TV Analysis)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>				
date	07-Sep-12	time	2.50	3.54	4.52	5.50	6.50	7.50	8.50	9.50	10.54	11.58		13.05	5 / 2			
reaction time	0.147	interval	7 steps	1.04	0.98	0.98	1.00	1.00	1.00	1.00	1.04	1.04	1.47		3.00	3.00	3.08	
wind	0.3 m/s	velocity	5.49	8.79	9.33	9.33	9.14	9.14	9.14	9.14	8.79	8.79	9.54	8.43	9.14	9.14	8.90	
FINAL - 2012 AIVIA Grand Prix (Birmingham, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>				
date	26-Aug-12	time	2.48	3.52	4.52	5.52	6.52	7.50	8.48	9.48	10.50	11.52		12.98	2 / 2			
reaction time	0.165	interval	7 steps	1.04	1.00	1.00	1.00	0.98	0.98	1.00	1.02	1.02	1.46	=PB	3.04	2.96	3.04	
wind	-0.9 m/s	velocity	5.53	8.79	9.14	9.14	9.14	9.33	9.33	9.14	8.96	8.96	9.60	8.47	9.02	9.26	9.02	
FINAL - 2012 Olympic Games (London, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>				
date	08-Aug-12	time	2.54	3.54	4.54	5.54	6.56	7.58	8.58	9.58	10.58	11.62		13.04	4 / 2			
reaction time	0.194	interval	7 steps	1.00	1.00	1.00	1.02	1.02	1.00	1.00	1.00	1.04	1.42		3.00	3.04	3.04	
wind	-0.3 m/s	velocity	5.40	9.14	9.14	9.14	8.96	8.96	9.14	9.14	9.14	8.79	9.87	8.44	9.14	9.02	9.02	
Semi-Final 1 - 2012 Olympic Games (London, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>				
date	08-Aug-12	time	2.46	3.50	4.50	5.48	6.46	7.44	8.44	9.46	10.50	11.54		13.13	5 / 1			
reaction time	0.160	interval	7 steps	1.04	1.00	0.98	0.98	0.98	1.00	1.02	1.04	1.04	1.59		3.02	2.96	3.10	
wind	-0.5 m/s	velocity	5.58	8.79	9.14	9.33	9.33	9.33	9.14	8.96	8.79	8.79	8.82	8.38	9.08	9.26	8.85	
FINAL - 2012 Herculis Meeting International D'Athlétisme (Monaco, MON) (TV Analysis)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>				
date	20-Jul-12	time	2.50	3.52	4.52	5.52	6.50	7.50	8.48	9.48	10.52	11.56		13.07	4 / 2			
reaction time	0.162	interval	7 steps	1.02	1.00	1.00	0.98	1.00	0.98	1.00	1.04	1.04	1.51		3.02	2.96	3.08	
wind	0.0 m/s	velocity	5.49	8.96	9.14	9.14	9.33	9.14	9.33	9.14	8.79	8.79	9.28	8.42	9.08	9.26	8.90	
FINAL - 2012 AVIVA Grand Prix (Birmingham, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>				
date	13-Jul-12	time	2.48	3.50	4.50	5.50	6.50	7.50	8.48	9.48	10.54	11.58		13.06	3 / 2			
reaction time	0.166	interval	7 steps	1.02	1.00	1.00	1.00	1.00	0.98	1.00	1.06	1.04	1.48		3.02	2.98	3.10	
wind	0.6 m/s	velocity	5.53	8.96	9.14	9.14	9.14	9.14	9.33	9.14	8.62	8.79	9.47	8.42	9.08	9.20	8.85	
Heat 2 - 2012 AVIVA Grand Prix (Birmingham, GBR) (TV Analysis)														<i>Henson (2021) - Athlete First: 2012 Aries Merritt world record season</i>				
date	13-Jul-12	time	2.48	3.54	4.56	5.58	6.60	7.62	8.64	9.66	10.68	11.76		13.23	3 / 2			
reaction time	0.161	interval	7 steps	1.06	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.08	1.47		3.10	3.06	3.12	
wind	-0.9 m/s	velocity	5.53	8.62	8.96	8.96	8.96	8.96	8.96	8.96	8.96	8.46	9.54	8.31	8.85	8.96	8.79	
FINAL - 2012 USA Olympic Trials (Eugene, OR)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>				
date	30-Jun-12	time	2.42	3.44	4.44	5.44	6.45	7.44	8.44	9.44	10.44	11.44		12.98	6 / 2			
reaction time	0.185	interval	7 steps	1.02	1.00	1.00	1.01	0.99	1.00	1.00	1.00	1.00	1.54	=PB	3.02	3.00	3.00	
wind	1.2 m/s	velocity	5.67	8.96	9.14	9.14	9.05	9.23	9.14	9.14	9.14	9.14	9.10	8.47	9.08	9.14	9.14	
FINAL - 2012 Prefontaine Classic (Eugene, OR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>				
date	02-Jun-12	time	2.52	3.56	4.56	5.56	6.56	7.56	8.56	9.58	10.62	11.66		13.11	4 / 3			
reaction time	0.159	interval	7 steps	1.04	1.00	1.00	1.00	1.00	1.00	1.02	1.04	1.04	1.45		3.04	3.00	3.10	
wind	2.4 m/s	velocity	5.44	8.79	9.14	9.14	9.14	9.14	9.14	8.96	8.79	8.79	9.67	8.39	9.02	9.14	8.85	
FINAL - 2012 Golden Grand Prix (Shanghai, CHN) (TV Analysis)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>				
date	19-May-12	time	2.48	3.52	4.54	5.54	6.52	7.54	8.56	9.56	10.60	11.66		13.16	4 / 3			
reaction time	0.168	interval	7 steps	1.04	1.02	1.00	0.98	1.02	1.02	1.00	1.04	1.06	1.50		3.06	3.02	3.10	
wind	0.4 m/s	velocity	5.53	8.79	8.96	9.14	9.33	8.96	8.96	9.14	8.79	8.62	9.35	8.36	8.96	9.08	8.85	
FINAL - 2012 Colorful Daegu Meeting (Daegu, KOR) (TV Analysis)														<i>Henson (2021) - Athlete First: 2012 Aries Merritt world record season</i>				
date	16-May-12	time	2.65	3.70	4.70	5.72	6.74	7.77	8.77	9.79				13.34	4 / 3			
reaction time	0.234	interval	7 steps	1.05	1.00	1.02	1.02	1.03	1.00	1.02					3.07	3.05		
wind	-0.4 m/s	velocity	5.18	8.70	9.14	8.96	8.96	8.87	9.14	8.96				8.25	8.93	8.99		
FINAL - 2011 IAAF World Championships (Daegu, KOR) (TV Analysis)														<i>Henson (2021) - Athlete First: major championships report</i>				

date	29-Aug-11	time	2.50	3.53	4.55	5.54	6.54	7.54	8.55	9.57	10.61	11.66	13.16	3 / 2 1			
reaction time	0.178	interval	7 steps	1.03	1.02	0.99	1.00	1.00	1.01	1.02	1.04	1.05	1.50		3.04	3.01	3.11
wind	-1.1 m/s	velocity	5.49	8.87	8.96	9.23	9.14	9.14	9.05	8.96	8.79	8.70	9.35	8.36	9.02	9.11	8.82

Ridgeon, Jon (GBR) (1967)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 1988 Olympic Games (Seoul, KOR)																	
<i>Brüggemann (1990) - scientific research project at the games of the XXXIV Olympiad, Seoul 1988</i>																	
date	26-Sep-88	time	2.58	3.66	4.70	5.73	6.80	7.86	8.91	9.99	11.06	12.13	13.52	7 / 5			
reaction time	0.150	interval		1.08	1.04	1.03	1.07	1.06	1.05	1.08	1.07	1.07	1.39		3.15	3.18	3.22
wind	1.5 m/s	velocity	5.32	8.46	8.79	8.87	8.54	8.62	8.70	8.46	8.54	8.54	10.09	8.14	8.70	8.62	8.52

Semi-Final 1 - 1988 Olympic Games (Seoul, KOR)

<i>Brüggemann (1990) - scientific research project at the games of the XXXIV Olympiad, Seoul 1988</i>																	
date	26-Sep-88	time	2.60	3.73	4.77	5.84	6.89	7.97	9.05	10.13	11.20	12.31	13.68	1 / 4			
reaction time	0.170	interval		1.13	1.04	1.07	1.05	1.08	1.08	1.08	1.07	1.11	1.37		3.24	3.21	3.26
wind	0.0 m/s	velocity	5.28	8.09	8.79	8.54	8.70	8.46	8.46	8.46	8.54	8.23	10.23	8.04	8.46	8.54	8.41

FINAL - 1987 IAAF World Championships (Rome, ITA)

<i>Susanka (1988) - time analysis of the sprint hurdle events at the II World Championships in Athletics</i>																	
date	03-Sep-87	time	2.60	3.64	4.70	5.72	6.76	7.79	8.82	9.88	10.93	11.96	13.29	6 / 2			
reaction time		interval		1.04	1.06	1.02	1.04	1.03	1.03	1.06	1.05	1.03	1.33		3.12	3.10	3.14
wind	0.5 m/s	velocity	5.28	8.79	8.62	8.96	8.79	8.87	8.87	8.62	8.70	8.87	10.54	8.28	8.79	8.85	8.73

Semi-Final 1 - 1987 IAAF World Championships (Rome, ITA)

<i>Susanka (1988) - time analysis of the sprint hurdle events at the II World Championships in Athletics</i>																	
date	01-Sep-87	time	2.60	3.65	4.72	5.73	6.75	7.78	8.85	9.89	10.93	11.98	13.34	3 / 1			
reaction time		interval		1.05	1.07	1.01	1.02	1.03	1.07	1.04	1.04	1.05	1.36		3.13	3.12	3.13
wind	-0.5 m/s	velocity	5.28	8.70	8.54	9.05	8.96	8.87	8.54	8.79	8.79	8.70	10.31	8.25	8.76	8.79	8.76

Heat 3 - 1987 IAAF World Championships (Rome, ITA)

<i>Susanka (1988) - time analysis of the sprint hurdle events at the II World Championships in Athletics</i>																	
date	01-Sep-87	time	2.72	3.77	4.81	5.85	6.88	7.94	8.98	10.02	11.06	12.15	13.46	1 / 1			
reaction time		interval		1.05	1.04	1.04	1.03	1.06	1.04	1.04	1.04	1.09	1.31		3.13	3.13	3.17
wind	0.2 m/s	velocity	5.04	8.70	8.79	8.87	8.87	8.62	8.79	8.79	8.79	8.39	10.70	8.17	8.76	8.76	8.65

FINAL - 1986 IAAF World Junior Championships (Athens, GRE) (1.07m)

<i>Miskos (1986) - IAAF biomechanical research - Athens 1986 - hurdle races</i>																	
date	19-Jul-86	time	2.62	3.73	4.79	5.89	6.93	8.04	9.14	10.24	11.33	12.49	13.91	1 / 2			
reaction time		interval		1.11	1.06	1.10	1.04	1.11	1.10	1.10	1.09	1.16	1.42		3.27	3.25	3.35
wind	-0.8 m/s	velocity	5.24	8.23	8.62	8.31	8.79	8.23	8.31	8.31	8.39	7.88	9.87	7.91	8.39	8.44	8.19

FINAL - 1985 European Junior Championships (Cottbus, GDR) (99cm)

<i>Warburton (1985) - 1985 european junior championships - hurdles</i>																	
date	23-Aug-85	time	2.32	3.39	4.40	5.39	6.42	7.46	8.53	9.60	10.65	11.72	13.46	1 / 1			
reaction time		interval		1.07	1.01	0.99	1.03	1.04	1.07	1.07	1.05	1.07	1.74	PB	3.07	3.14	3.19
wind	1.8 m/s	velocity	5.91	8.54	9.05	9.23	8.87	8.79	8.54	8.54	8.70	8.54	8.06	8.17	8.93	8.73	8.60

Semi-Final 1 - 1985 European Junior Championships (Cottbus, GDR) (99cm)

<i>Warburton (1985) - 1985 european junior championships - hurdles</i>																	
date	23-Aug-85	time	2.41	3.54	4.55	5.65	6.65	7.76	8.83	9.89	10.89	12.02	13.75	1 / 1			
reaction time		interval		1.13	1.01	1.10	1.00	1.11	1.07	1.06	1.00	1.13	1.73		3.24	3.18	3.19
wind	1.1 m/s	velocity	5.69	8.09	9.05	8.31	9.14	8.23	8.54	8.62	9.14	8.09	8.10	8.00	8.46	8.62	8.60

Heat 3 - 1985 European Junior Championships (Cottbus, GDR) (99cm)

<i>Warburton (1985) - 1985 european junior championships - hurdles</i>																	
date	23-Aug-85	time	2.47	3.52	4.58	5.70	6.75	7.82	8.89	10.05	11.09	12.23	14.09	1 / 1			
reaction time		interval		1.05	1.06	1.12	1.05	1.07	1.07	1.16	1.04	1.14	1.86		3.23	3.19	3.34
wind	1.9 m/s	velocity	5.55	8.70	8.62	8.16	8.70	8.54	8.54	7.88	8.79	8.02	7.54	7.81	8.49	8.60	8.21

Riha, Michal (CZE) (1994)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2014 Czech Republic National Championships (Ostrava, CZE)																	
<i>Fehér (2014) - Final report from the Czech Republic national championships</i>																	
date	02-Aug-14	time	2.66	3.85	5.02	6.15	7.28	8.45	9.61	10.75	11.91	13.09	14.66	6 / 3			
reaction time	0.159	interval		1.19	1.17	1.13	1.13	1.17	1.16	1.14	1.16	1.18	1.57		3.49	3.46	3.48
wind	-1.2 m/s	velocity	5.16	7.68	7.81	8.09	8.09	7.81	7.88	8.02	7.88	7.75	8.93	7.50	7.86	7.92	7.88

Heat 1 - 2014 Czech Republic National Championships (Ostrava, CZE)

<i>Fehér (2014) - Final report from the Czech Republic national championships</i>																	
date	02-Aug-14	time	2.70	3.86	5.02	6.15	7.31	8.47	9.65	10.82	12.00	13.20	14.74	3 / 2			
reaction time	0.171	interval		1.16	1.16	1.13	1.16	1.16	1.18	1.17	1.18	1.20	1.54		3.45	3.50	3.55
wind	-1.6 m/s	velocity	5.08	7.88	7.88	8.09	7.88	7.88	7.75	7.81	7.75	7.62	9.10	7.46	7.95	7.83	7.72

Riley, Andrew (JAM) (1988)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Semi-Final 3 - 2019 IAAF World Championships (Doha, QAT)																	
<i>CAA Hurdle Development (2019)</i>																	
date	02-Oct-19	time	2.57	3.60	4.66	5.68	6.76	7.82	8.88	9.94	11.02	12.13	13.57	8 / 5			
reaction time	0.136	interval		1.03	1.06	1.02	1.08	1.06	1.06	1.06	1.08	1.11	1.44		3.11	3.20	3.25
wind	0.6 m/s	velocity	5.34	8.87	8.62	8.96	8.46	8.62	8.62	8.62	8.46	8.23	9.74	8.11	8.82	8.57	8.44

FINAL - 2017 István Gyulai Memorial (Székesfehérvár, HUN) (TV Analysis)

<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>																	
date	04-Jul-17	time	2.54	3.62	4.64	5.66	6.70	7.74	8.78	9.84	10.88	11.96	13.39	1 / 6			
reaction time	0.150	interval	7 steps	1.08	1.02	1.02	1.04	1.04	1.04	1.06	1.04	1.08	1.43		3.12	3.12	3.18
wind	0.3 m/s	velocity	5.40	8.46	8.96	8.96	8.79	8.79	8.79	8.62	8.79	8.46	9.80	8.22	8.79	8.79	8.62

FINAL - 2017 Drake Relays (Des Moines, IA) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date	29-Apr-17	time	2.60	3.70	4.76	5.76	6.80	7.83	8.88	9.93	11.00	12.06		13.53	7 / 5			
reaction time		interval	7 steps	1.10	1.06	1.00	1.04	1.03	1.05	1.05	1.07	1.06	1.47			3.16	3.12	3.18
wind	1.8 m/s	velocity	5.28	8.31	8.62	9.14	8.79	8.87	8.70	8.70	8.54	8.62	9.54	8.13		8.68	8.79	8.62
FINAL - 2013 IAAF World Championships (Moscow, RUS) (TV Analysis)														<i>Henson (2021) - Athlete First: major championships report</i>				
date	12-Aug-13	time	2.48	3.52	4.54	5.54	6.56	7.56	8.58	9.56	10.74	11.92		13.51	3 / 8			
reaction time	0.135	interval	7 steps	1.04	1.02	1.00	1.02	1.00	1.02	0.98	1.18	1.18	1.59			3.06	3.04	3.34
wind	0.3 m/s	velocity	5.53	8.79	8.96	9.14	8.96	9.14	8.96	9.33	7.75	7.75	8.82	8.14		8.96	9.02	8.21
FINAL - 2012 Herculis Meeting International D'Athlétisme (Monaco, MON) (TV Analysis)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>				
date	20-Jul-12	time	2.46	3.50	4.53	5.55	6.57	7.64	8.67	9.71	10.72	11.81		13.28	8 / 7			
reaction time	0.138	interval		1.04	1.03	1.02	1.02	1.07	1.03	1.04	1.01	1.09	1.47			3.09	3.12	3.14
wind	0.0 m/s	velocity	5.58	8.79	8.87	8.96	8.96	8.54	8.87	8.79	9.05	8.39	9.54	8.28		8.87	8.79	8.73
Roberts, Daniel (USA) (1998)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2024 Memorial van damme (Brussels, BEL)														<i>Omega Timing (2024) - diamond league race analysis</i>				
date	13-Sep-24	time	2.34	3.39	4.42	5.42	6.46	7.50	8.55	9.63	10.71	11.81		13.44	5 / 8			
reaction time	0.145	interval	7 steps	1.05	1.03	1.00	1.04	1.04	1.05	1.08	1.08	1.10	1.63			3.08	3.13	3.26
wind	0.4 m/s	velocity	5.86	8.70	8.87	9.14	8.79	8.79	8.70	8.46	8.46	8.31	8.60	8.18		8.90	8.76	8.41
FINAL - 2024 Weltklasse (Zürich, SUI)														<i>Omega Timing (2024) - diamond league race analysis</i>				
date	05-Sep-24	time	2.36	3.41	4.43	5.44	6.45	7.48	8.50	9.53	10.56	11.61		13.18	5 / 5			
reaction time	0.154	interval	7 steps	1.05	1.02	1.01	1.01	1.03	1.02	1.03	1.03	1.05	1.57			3.08	3.06	3.11
wind	-0.3 m/s	velocity	5.81	8.70	8.96	9.05	9.05	8.87	8.96	8.87	8.87	8.70	8.93	8.35		8.90	8.96	8.82
FINAL - 2024 Kamila Skolimowska Memorial (Silesia, POL)														<i>Omega Timing (2024) - diamond league race analysis</i>				
date	25-Aug-24	time	2.32	3.40	4.40	5.40	6.42	7.43	8.47	9.51	10.57	11.65		13.24	8 / 3			
reaction time	0.154	interval	7 steps	1.08	1.00	1.00	1.02	1.01	1.04	1.04	1.06	1.08	1.59			3.08	3.07	3.18
wind	1.1 m/s	velocity	5.91	8.46	9.14	9.14	8.96	9.05	8.79	8.79	8.62	8.46	8.82	8.31		8.90	8.93	8.62
FINAL - 2024 Athletissima (Lausanne, SUI)														<i>Omega Timing (2024) - diamond league race analysis</i>				
date	22-Aug-24	time	2.32	3.36	4.37	5.38	6.38	7.40	8.42	9.46	10.51	11.61		13.26	5 / 4			
reaction time	0.164	interval	7 steps	1.04	1.01	1.01	1.00	1.02	1.02	1.04	1.05	1.10	1.65			3.06	3.04	3.19
wind	-0.1 m/s	velocity	5.91	8.79	9.05	9.05	9.14	8.96	8.96	8.79	8.70	8.31	8.50	8.30		8.96	9.02	8.60
FINAL - 2024 Olympic Games (Paris, FRA)														<i>Paris 2024 Olympc Games - Results Book (2024)</i>				
date	08-Aug-24	time	2.31	3.36	4.39	5.40	6.43	7.45	8.47	9.49	10.51	11.56		13.09	4 / 2			
reaction time	0.139	interval	7 steps	1.05	1.03	1.01	1.03	1.02	1.02	1.02	1.02	1.05	1.53			3.09	3.07	3.09
wind	-0.1 m/s	velocity	5.94	8.70	8.87	9.05	8.87	8.96	8.96	8.96	8.96	8.70	9.16	8.40		8.87	8.93	8.87
Semi-Final 3 - 2024 Olympic Games (Paris, FRA)														<i>Paris 2024 Olympc Games - Results Book (2024)</i>				
date	07-Aug-24	time	2.29	3.34	4.36	5.37	6.37	7.38	8.40	9.43	10.46	11.52		13.10	8 / 2			
reaction time	0.143	interval	7 steps	1.05	1.02	1.01	1.00	1.01	1.02	1.03	1.03	1.06	1.58			3.08	3.03	3.12
wind	0.6 m/s	velocity	5.99	8.70	8.96	9.05	9.14	9.05	8.96	8.87	8.87	8.62	8.87	8.40		8.90	9.05	8.79
Heat 3 - 2024 Olympic Games (Paris, FRA)														<i>Paris 2024 Olympc Games - Results Book (2024)</i>				
date	04-Aug-24	time	2.38	3.45	4.49	5.50	6.53	7.57	8.62	9.68	10.73	11.81		13.43	3 / 3			
reaction time	0.164	interval	7 steps	1.07	1.04	1.01	1.03	1.04	1.05	1.06	1.05	1.08	1.62			3.12	3.12	3.19
wind	1.1 m/s	velocity	5.76	8.54	8.79	9.05	8.87	8.79	8.70	8.62	8.70	8.46	8.65	8.19		8.79	8.79	8.60
FINAL - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)														<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>				
date	28-Jun-24	time	2.46	3.48	4.48	5.47	6.48	7.50	8.51	9.53	10.55	11.58		12.96	4 / 3			
reaction time		interval	7 steps	1.02	1.00	0.99	1.01	1.02	1.01	1.02	1.02	1.03	1.38	PB		3.01	3.04	3.07
wind	2.0 m/s	velocity	5.58	8.96	9.14	9.23	9.05	8.96	9.05	8.96	8.96	8.87	10.16	8.49		9.11	9.02	8.93
Heat 4 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)														<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>				
date	24-Jun-24	time	2.47	3.53	4.57	5.56	6.56	7.56	8.58	9.62	10.66	11.72		13.14	5 / 2			
reaction time		interval	7 steps	1.06	1.04	0.99	1.00	1.00	1.02	1.04	1.04	1.06	1.42			3.09	3.02	3.14
wind	1.2 m/s	velocity	5.55	8.62	8.79	9.23	9.14	9.14	8.96	8.79	8.79	8.62	9.87	8.37		8.87	9.08	8.73
FINAL - 2024 Prefontaine Classic (Eugene, OR)														<i>Omega Timing (2024) - diamond league race analysis</i>				
date	25-May-24	time	2.36	3.43	4.45	5.46	6.46	7.48	8.51	9.54	10.57	11.62		13.13	4 / 2			
reaction time	0.148	interval	7 steps	1.07	1.02	1.01	1.00	1.02	1.03	1.03	1.03	1.05	1.51			3.10	3.05	3.11
wind	-0.1 m/s	velocity	5.81	8.54	8.96	9.05	9.14	8.96	8.87	8.87	8.87	8.70	9.28	8.38		8.85	8.99	8.82
FINAL - 2024 Yangtze River Delta Athletics Diamond Gala (Suzhou, CHN) (TV Analysis)														<i>Omega Timing (2024) - diamond league race analysis</i>				
date	27-Apr-24	time	2.49	3.53	4.55	5.55	6.55	7.55	8.56	9.62	10.67	11.71		13.12	4 / 1			
reaction time	0.147	interval	7 steps	1.04	1.02	1.00	1.00	1.00	1.01	1.06	1.05	1.04	1.41			3.06	3.01	3.15
wind	0.8 m/s	velocity	5.51	8.79	8.96	9.14	9.14	9.14	9.05	8.62	8.70	8.79	9.94	8.38		8.96	9.11	8.70
FINAL - 2024 Xiamen Diamond League (Xiamen, CHN)														<i>Omega Timing (2024) - diamond league race analysis</i>				
date	20-Apr-24	time	2.38	3.42	4.44	5.45	6.47	7.48	8.49	9.51	10.53	11.59		13.11	6 / 1			
reaction time	0.156	interval	7 steps	1.04	1.02	1.01	1.02	1.01	1.01	1.02	1.02	1.06	1.52			3.07	3.04	3.10

wind	-0.3 m/s	velocity	5.76	8.79	8.96	9.05	8.96	9.05	9.05	8.96	8.96	8.62	9.22	8.39	8.93	9.02	8.85				
FINAL - 2024 USATF National Indoor Championships (Albuquerque, NM) (Altitude) (TV Analysis) (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record																					
date	16-Feb-24	time	2.52	3.56	4.57	5.57	6.60								7.48	7.48	2 / 3				
reaction time	0.154	interval	7 steps	1.04	1.01	1.00	1.03								7.48	8.02	3.05				
		velocity	5.44	8.79	9.05	9.14	8.87								1.87	8.02	8.99				
Heat 1 - 2024 USATF National Indoor Championships (Albuquerque, NM) (Altitude) (TV Analysis) (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record																					
date	16-Feb-24	time	2.50	3.54	4.55	5.54	6.62								7.58	7.58	4 / 3				
reaction time	0.150	interval	7 steps	1.04	1.01	0.99	1.08								7.58	8.02	3.04				
		velocity	5.49	8.79	9.05	9.23	8.46								1.85	7.92	9.02				
FINAL - 2024 New Balance Indoor Grand Prix (Boston, MA) (TV Analysis) Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record																					
date	04-Feb-24	time	2.50	3.54	4.57	5.58	6.60								7.49	7.49	3 / 3				
reaction time	0.167	interval	7 steps	1.04	1.03	1.01	1.02								7.49	8.01	3.08				
		velocity	5.49	8.79	8.87	9.05	8.96								1.87	8.01	8.90				
FINAL - 2023 Prefontaine Classic (Eugene, OR) Omega Timing (2023) - diamond league race analysis																					
date	17-Sep-23	time	2.34	3.37	4.37	5.38	6.39	7.40	8.42	9.46	10.50	11.55				13.07	3 / 3				
reaction time	0.149	interval			1.03	1.00	1.01	1.01	1.01	1.02	1.04	1.04	1.05	1.52				3.04	3.04	3.13	
wind	0.9 m/s	velocity	5.86	8.87	9.14	9.05	9.05	9.05	8.96	8.79	8.79	8.70	9.22	8.42				9.02	9.02	8.76	
FINAL - 2023 Xiamen Diamond League (Xiamen, CHN) Omega Timing (2023) - diamond league race analysis																					
date	02-Sep-23	time	2.33	3.37	4.37	5.35	6.35	7.35	8.36	9.39	10.43	11.48				13.03	4 / 2				
reaction time	0.140	interval			1.04	1.00	0.98	1.00	1.00	1.01	1.03	1.04	1.05	1.55				3.02	3.01	3.12	
wind	0.0 m/s	velocity	5.89	8.79	9.14	9.33	9.14	9.14	9.05	8.87	8.79	8.70	9.05	8.44				9.08	9.11	8.79	
FINAL - 2023 World Athletics Championships (Budapest, HUN) Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season																					
date	21-Aug-23	time	2.48	3.52	4.52	5.53	6.52	7.56	8.57	9.61	10.65	11.70				13.09	3 / 3				
reaction time	0.143	interval			1.04	1.00	1.01	0.99	1.04	1.01	1.04	1.04	1.05	1.39				3.05	3.04	3.13	
wind	0.0 m/s	velocity	5.53	8.79	9.14	9.05	9.23	8.79	9.05	8.79	8.79	8.70	10.09	8.40				8.99	9.02	8.76	
Semi-Final 1 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis) Henson (2023) - Athlete First: 2023 year end hurdle report																					
date	21-Aug-23	time	2.46	3.48	4.52	5.54	6.56	7.60	8.62	9.63	10.66	11.70				13.19	5 / 2				
reaction time	0.144	interval			1.02	1.04	1.02	1.02	1.04	1.02	1.01	1.03	1.04	1.49				3.08	3.08	3.08	
wind	-0.2 m/s	velocity	5.58	8.96	8.79	8.96	8.96	8.79	8.96	9.05	8.87	8.79	9.41	8.34				8.90	8.90	8.90	
Heat 5 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis) Henson (2023) - Athlete First: 2023 year end hurdle report																					
date	20-Aug-23	time	2.53	3.55	4.57	5.60	6.62	7.70	8.74	9.79	10.88	11.94				13.36	5 / 3				
reaction time	0.155	interval			1.02	1.02	1.03	1.02	1.08	1.04	1.05	1.09	1.06	1.42				3.07	3.14	3.20	
wind	-0.9 m/s	velocity	5.42	8.96	8.96	8.87	8.96	8.46	8.79	8.70	8.39	8.62	9.87	8.23				8.93	8.73	8.57	
FINAL - 2023 Kamila Skolimowska Memorial (Silesia, POL) Omega Timing (2023) - diamond league race analysis																					
date	16-Jul-23	time	2.33	3.39	4.43	5.45	6.48	7.50	8.57	9.73	10.92	12.10				13.90	6 / 7				
reaction time	0.159	interval			1.06	1.04	1.02	1.03	1.02	1.07	1.16	1.19	1.18	1.80				3.12	3.12	3.53	
wind	0.3 m/s	velocity	5.89	8.62	8.79	8.96	8.87	8.96	8.54	7.88	7.68	7.75	7.79	7.91				8.79	8.79	7.77	
Heat 2 - 2023 Kamila Skolimowska Memorial (Silesia, POL) Omega Timing (2023) - diamond league race analysis																					
date	16-Jul-23	time	2.33	3.39	4.42	5.44	6.46	7.49	8.51	9.55	10.59	11.64				13.24	5 / 1				
reaction time	0.146	interval			1.06	1.03	1.02	1.02	1.03	1.02	1.04	1.04	1.05	1.60				3.11	3.07	3.13	
wind	-0.2 m/s	velocity	5.89	8.62	8.87	8.96	8.96	8.87	8.96	8.79	8.79	8.70	8.76	8.31				8.82	8.93	8.76	
FINAL - 2023 USATF National Championships (Eugene, OR) (TV Analysis) Henson (2023) - Athlete First: 2023 year end hurdle report																					
date	09-Jul-23	time	2.46	3.47	4.47	5.47	6.47	7.47	8.48	9.51	10.55	11.63				13.05	6 / 1				
reaction time		interval			1.01	1.00	1.00	1.00	1.00	1.01	1.03	1.04	1.08	1.42				3.01	3.01	3.15	
wind	-0.2 m/s	velocity	5.58	9.05	9.14	9.14	9.14	9.14	9.05	8.87	8.79	8.46	9.87	8.43				9.11	9.11	8.70	
FINAL - 2023 USATF New York City Grand Prix (Randalls Island, NY) (TV Analysis) Henson (2023) - Athlete First: 2023 year end hurdle report																					
date	24-Jun-23	time	2.47	3.50	4.50	5.50	6.54	7.54	8.56	9.58	10.60	11.61				13.01	3 / 1				
reaction time	0.159	interval			1.03	1.00	1.00	1.04	1.00	1.02	1.02	1.01	1.40				3.03	3.06	3.05		
wind	1.6 m/s	velocity	5.55	8.87	9.14	9.14	8.79	9.14	8.96	8.96	8.96	9.05	10.01	8.46				9.05	8.96	8.99	
FINAL - 2023 Meeting de Paris (Paris, FRA) Omega Timing (2023) - diamond league race analysis																					
date	09-Jun-23	time	2.30	3.34	4.34	5.34	6.35	7.39	8.42	9.46	10.49	11.54				13.14	4 / 3				
reaction time	0.154	interval			1.04	1.00	1.00	1.01	1.04	1.03	1.04	1.03	1.05	1.60				3.04	3.08	3.12	
wind	-0.5 m/s	velocity	5.97	8.79	9.14	9.14	9.05	8.79	8.87	8.79	8.87	8.70	8.76	8.37				9.02	8.90	8.79	
Heat 1 - 2023 Meeting de Paris (Paris, FRA) Omega Timing (2023) - diamond league race analysis																					
date	09-Jun-23	time	2.32	3.39	4.42	5.45	6.48	7.51	8.54	9.58	10.63	11.71				13.32	3 / 1				
reaction time	0.153	interval			1.07	1.03	1.03	1.03	1.03	1.03	1.04	1.05	1.08	1.61				3.13	3.09	3.17	
wind	-2.0 m/s	velocity	5.91	8.54	8.87	8.87	8.87	8.87	8.87	8.87	8.79	8.70	8.46	8.71	8.26				8.76	8.87	8.65
FINAL - 2022 ISTAF (Berlin, GER) (TV Analysis) Henson (2022) - Athlete First: 2022 year end hurdle report																					

date	04-Sep-22	time	2.50	3.52	4.54	5.56	6.56	7.60	8.62	9.66	10.70	11.78	13.25	6 / 3			
reaction time	0.145	interval		1.02	1.02	1.02	1.00	1.04	1.02	1.04	1.04	1.08	1.47		3.06	3.06	3.16
wind	0.6 m/s	velocity	5.49	8.96	8.96	8.96	9.14	8.79	8.96	8.79	8.79	8.46	9.54	8.30	8.96	8.96	8.68
FINAL - 2022 Herculis Meeting International d'Athlétisme (Monaco, MON) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>			
date	10-Aug-22	time	2.43	3.46	4.50	5.50	6.53	7.53	8.56	9.56	10.63	11.73	13.20	3 / 4			
reaction time	0.157	interval		1.03	1.04	1.00	1.03	1.00	1.03	1.00	1.07	1.10	1.47		3.07	3.06	3.17
wind	0.6 m/s	velocity	5.65	8.87	8.79	9.14	8.87	9.14	8.87	9.14	8.54	8.31	9.54	8.33	8.93	8.96	8.65
Heat 3 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>			
date	16-Jul-22	time	2.50	3.50	4.50	5.50	6.53	7.56	8.60					dnf	4 / --		
reaction time	0.179	interval		1.00	1.00	1.00	1.03	1.03	1.04					DQ		3.00	3.10
wind	-0.3 m/s	velocity	5.49	9.14	9.14	9.14	8.87	8.87	8.79						9.14	8.85	
FINAL - 2022 USATF National Championships (Eugene, OR) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>			
date	26-Jun-22	time	2.43	3.47	4.47	5.47	6.47	7.47	8.50	9.52	10.54	11.61	13.03	7 / 1			
reaction time		interval		1.04	1.00	1.00	1.00	1.00	1.03	1.02	1.02	1.07	1.42		3.04	3.03	3.11
wind	1.2 m/s	velocity	5.65	8.79	9.14	9.14	9.14	9.14	8.87	8.96	8.96	8.54	9.87	8.44	9.02	9.05	8.82
Semi-Final 1 - 2022 USATF National Championships (Eugene, OR)														<i>USATF (2022) - Results powered by Karmarush.com</i>			
date	26-Jun-22	time	2.40	3.45	4.55	5.43	6.46	7.52	8.54	9.57	10.60	11.65	13.17	13.17	6 / 2		
reaction time		interval		1.05	1.10	0.88	1.03	1.06	1.02	1.03	1.03	1.05	1.52		3.03	3.11	3.11
wind	0.4 m/s	velocity	5.72	8.70	8.31	10.39	8.87	8.62	8.96	8.87	8.87	8.70	9.22	8.35	9.05	8.82	8.82
FINAL - 2022 New York Grand Prix (New York, NY) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>			
date	12-Jun-22	time	2.40	3.43	4.45	5.47	6.50	7.52	8.52	9.56	10.60	11.67	13.17	4 / 3			
reaction time	0.156	interval		1.03	1.02	1.02	1.03	1.02	1.00	1.04	1.04	1.07	1.50	PB	3.07	3.05	3.15
wind	1.6 m/s	velocity	5.72	8.87	8.96	8.96	8.87	8.96	9.14	8.79	8.79	8.54	9.35	8.35	8.93	8.99	8.70
FINAL - 2022 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)														<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>			
date	17-Feb-22	time	2.43	3.46	4.53	5.55	6.60						7.67	7 / 7			
reaction time	0.172	interval	7 steps	1.03	1.07	1.02	1.05						1.07			3.12	
		velocity	5.65	8.87	8.54	8.96	8.70						9.08	7.82		8.79	
Heat 2 - 2022 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)														<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>			
date	17-Feb-22	time	2.37	3.40	4.44	5.48	6.54						7.58	3 / 3			
reaction time	0.149	interval	7 steps	1.03	1.04	1.04	1.06						1.04			3.11	
		velocity	5.79	8.87	8.79	8.79	8.62						9.35	7.92		8.82	
FINAL - 2022 New Balance Indoor Grand Prix (Staten Island, NY) (TV Analysis)														<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>			
date	06-Feb-22	time	2.47	3.54	4.60	5.61	6.65						7.60	6 / 4			
reaction time	0.175	interval	7 steps	1.07	1.06	1.01	1.04						0.95			3.14	
		velocity	5.55	8.54	8.62	9.05	8.79						10.23	7.89		8.73	
FINAL - 2021 Weltklasse (Zürich, SUI) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>			
date	09-Sep-21	time	2.46	3.52	4.54	5.56	6.58	7.60	8.64	9.68	10.74	11.80	13.31	3 / 4			
reaction time	0.173	interval		1.06	1.02	1.02	1.02	1.02	1.04	1.04	1.06	1.06	1.51		3.10	3.08	3.16
wind	0.6 m/s	velocity	5.58	8.62	8.96	8.96	8.96	8.96	8.79	8.79	8.62	8.62	9.28	8.26	8.85	8.90	8.68
FINAL - 2021 Meeting de Paris (Paris, FRA) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>			
date	28-Aug-21	time	2.46	3.50	4.52	5.54	6.52	7.56	8.58	9.58	10.62	11.68	13.16	2 / 3			
reaction time	0.169	interval		1.04	1.02	1.02	0.98	1.04	1.02	1.00	1.04	1.06	1.48		3.08	3.04	3.10
wind	0.7 m/s	velocity	5.58	8.79	8.96	8.96	9.33	8.79	8.96	9.14	8.79	8.62	9.47	8.36	8.90	9.02	8.85
FINAL - 2021 Athletissima (Lausanne, SUI) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>			
date	26-Aug-21	time	2.48	3.52	4.56	5.56	6.58	7.60	8.62	9.66	10.72	11.78	13.23	7 / 4			
reaction time	0.178	interval		1.04	1.04	1.00	1.02	1.02	1.02	1.04	1.06	1.06	1.45		3.08	3.06	3.16
wind	2.5 m/s	velocity	5.53	8.79	8.79	9.14	8.96	8.96	8.96	8.79	8.62	8.62	9.67	8.31	8.90	8.96	8.68
FINAL - 2020 USA Olympic Trials (Eugene, OR) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>			
date	26-Jun-21	time	2.43	3.47	4.47	5.47	6.47	7.49	8.51	9.53	10.56	11.61	13.11	6 / 3			
reaction time	0.201	interval		1.04	1.00	1.00	1.00	1.02	1.02	1.02	1.03	1.05	1.50		3.04	3.04	3.10
wind	0.4 m/s	velocity	5.65	8.79	9.14	9.14	9.14	8.96	8.96	8.96	8.87	8.70	9.35	8.39	9.02	9.02	8.85
Semi-Final 2 - 2020 USA Olympic Trials (Eugene, OR) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>			
date	26-Jun-21	time	2.46	3.53	4.53	5.53	6.55	7.56	8.55	9.61	10.63	11.72	13.25	4 / 2			
reaction time	0.179	interval		1.07	1.00	1.00	1.02	1.01	0.99	1.06	1.02	1.09	1.53		3.07	3.02	3.17
wind	1.2 m/s	velocity	5.58	8.54	9.14	9.14	8.96	9.05	9.23	8.62	8.96	8.39	9.16	8.30	8.93	9.08	8.65
Heat 2 - 2020 USA Olympic Trials (Eugene, OR) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>			
date	25-Jun-21	time	2.46	3.50	4.53	5.53	6.53	7.53	8.56	9.60	10.63	11.70	13.22	1 / 1			
reaction time	0.182	interval		1.04	1.03	1.00	1.00	1.00	1.03	1.04	1.03	1.07	1.52		3.07	3.03	3.14
wind	1.5 m/s	velocity	5.58	8.79	8.87	9.14	9.14	9.14	8.87	8.79	8.87	8.54	9.22	8.32	8.93	9.05	8.73

FINAL - 2020 Millrose Games (New York, NY) (TV Analysis)

date	08-Feb-20	time	2.47	3.54	4.57	5.61	6.67
reaction time	0.194	interval	7 steps	1.07	1.03	1.04	1.06
		velocity	5.55	8.54	8.87	8.79	8.62

Henson (2020) - Athlete First: 2020 year end hurdle report

	7.64	5 / 1
	0.97	3.14
	10.02	7.85
		8.73

Heat 3 - 2019 IAAF World Championships (Doha, QAT) (TV Analysis)

date	30-Sep-19	time	2.42	3.46	4.48	5.48	6.48	7.52	8.54	9.58	10.62	11.76
reaction time	0.186	interval		1.04	1.02	1.00	1.00	1.04	1.02	1.04	1.04	1.14
wind	-0.4 m/s	velocity	5.67	8.79	8.96	9.14	9.14	8.79	8.96	8.79	8.79	8.02

Henson (2021) - Athlete First: 2019 year end hurdle report

	13.38	4 / 4
		DQ
		3.06
		3.06
		3.22
		8.96
		8.96
		8.52

FINAL - 2019 Meeting de Paris (Paris, FRA) (TV Analysis)

date	24-Aug-19	time	2.46	3.48	4.50	5.52	6.52	7.52	8.54	9.56	10.58	11.66
reaction time	0.161	interval		1.02	1.02	1.02	1.00	1.00	1.02	1.02	1.02	1.08
wind	0.8 m/s	velocity	5.58	8.96	8.96	8.96	9.14	9.14	8.96	8.96	8.96	8.46

Henson (2020) - Athlete First: 2019 year end hurdle report

	13.08	3 / 1
		3.06
		3.02
		3.12
		8.96
		9.08
		8.79

FINAL - 2019 Müller Grand Prix (Birmingham, GBR) (TV Analysis)

date	18-Aug-19	time	2.54	3.56	4.61	5.64	6.62	7.64	8.66	9.69	10.77	11.87
reaction time	0.200	interval		1.02	1.05	1.03	0.98	1.02	1.02	1.03	1.08	1.10
wind	-0.2 m/s	velocity	5.40	8.96	8.70	8.87	9.33	8.96	8.96	8.87	8.46	8.31

Henson (2020) - Athlete First: 2019 year end hurdle report

	13.48	6 / 4
		3.10
		3.02
		3.21
		8.85
		9.08
		8.54

FINAL - 2019 USATF National Championships (Des Moines, IA) (TV Analysis)

date	28-Jul-19	time	2.46	3.50	4.54	5.57	6.57	7.60	8.61	9.64	10.67	11.73
reaction time		interval		1.04	1.04	1.03	1.00	1.03	1.01	1.03	1.03	1.06
wind	-0.8 m/s	velocity	5.58	8.79	8.79	8.87	9.14	8.87	9.05	8.87	8.87	8.62

Henson (2020) - Athlete First: 2019 year end hurdle report

	13.23	4 / 1
		3.11
		3.04
		3.12
		8.82
		9.02
		8.79

FINAL - 2019 Athletissima (Lausanne, SUI) (TV Analysis)

date	05-Jul-19	time	2.50	3.54	4.56	5.58	6.58	7.58	8.60	9.62	10.64	11.66
reaction time	0.204	interval		1.04	1.02	1.02	1.00	1.00	1.02	1.02	1.02	1.02
wind	1.0 m/s	velocity	5.49	8.79	8.96	8.96	9.14	9.14	8.96	8.96	8.96	8.96

Henson (2020) - Athlete First: 2019 year end hurdle report

	13.11	5 / 2
		3.08
		3.02
		3.06
		8.90
		9.08
		8.96

FINAL - 2019 NCAA National Championships (Austin, TX) (TV Analysis)

date	07-Jun-19	time	2.50	3.53	4.53	5.53	6.51	7.51	8.51	9.54	10.55	11.60
reaction time	0.191	interval		1.03	1.00	1.00	0.98	1.00	1.00	1.03	1.01	1.05
wind	0.8 m/s	velocity	5.49	8.87	9.14	9.14	9.33	9.14	9.14	8.87	9.05	8.70

Henson (2020) - Athlete First: 2019 year end hurdle report

	13.00	4 / 2
		PB
		3.03
		2.98
		3.09
		9.05
		9.20
		8.87

Semi-Final 1 - 2019 NCAA National Championships (Austin, TX) (TV Analysis)

date	05-Jun-19	time	2.33	3.35	4.35	5.35	6.35	7.38	8.41	9.43	10.46	11.50
reaction time	0.203	interval		1.02	1.00	1.00	1.00	1.03	1.03	1.02	1.03	1.04
wind	0.9 m/s	velocity	5.89	8.96	9.14	9.14	9.14	8.87	8.87	8.96	8.87	8.79

Henson (2020) - Athlete First: 2019 year end hurdle report

	13.06	6 / 1
		PB
		3.02
		3.06
		3.09
		9.08
		8.96
		8.87

Quarter-Final 3 - 2019 NCAA Championships - East Preliminary Round (Jacksonville, FL) (TV Analysis)

date	25-May-19	time	2.36	3.40	4.40	5.44	6.48	7.48	8.50	9.54	10.56	11.62
reaction time		interval		1.04	1.00	1.04	1.04	1.00	1.02	1.04	1.02	1.06
wind	1.5 m/s	velocity	5.81	8.79	9.14	8.79	8.79	9.14	8.96	8.79	8.96	8.62

Henson (2020) - Athlete First: 2019 year end hurdle report

	13.13	5 / 1
		3.08
		3.06
		3.12
		8.90
		8.96
		8.79

FINAL - 2019 South Eastern Conference Championships (Fayetteville, AR) (TV Analysis)

date	11-May-19	time	2.53	3.56	4.58	5.60	6.60	7.58	8.60	9.62	10.66	11.72
reaction time		interval		1.03	1.02	1.02	1.00	0.98	1.02	1.02	1.04	1.06
wind	1.0 m/s	velocity	5.42	8.87	8.96	8.96	9.14	9.33	8.96	8.96	8.79	8.62

Henson (2020) - Athlete First: 2019 year end hurdle report

	13.07	4 / 1
		PB
		3.07
		3.00
		3.12
		8.93
		9.14
		8.79

FINAL - 2019 NCAA National Indoor Championships (Birmingham, AL) (TV Analysis)

date	9-Mar-19	time	2.53	3.54	4.54	5.54	6.57
reaction time	0.181	interval		1.01	1.00	1.00	1.03
		velocity	5.42	9.05	9.14	9.14	8.87

Henson (2020) - Athlete First: 2019 year end hurdle report

	7.41	3 / 2
	0.84	PB
		3.01
	11.57	8.10
		9.11

FINAL - 2019 South Eastern Conference Indoor Championships (Fayetteville, AR) (TV Analysis)

date	23-Feb-19	time	2.55	3.60	4.61	5.60	6.62
reaction time		interval		1.05	1.01	0.99	1.02
		velocity	5.38	8.70	9.05	9.23	8.96

Henson (2020) - Athlete First: 2019 year end hurdle report

	7.48	5 / 2
	0.86	3.05
	11.30	8.02
		8.99

Roberts, Giano (JAM) (2000)

FINAL - 2023 NCAA Championships (Austin, TX) (TV Analysis)

date	09-Jun-23	time	2.50	3.57	4.60	5.63	6.64	7.68	8.72	9.77	10.80	11.83
reaction time		interval		1.07	1.03	1.03	1.01	1.04	1.04	1.05	1.03	1.03
wind	1.8 m/s	velocity	5.49	8.54	8.87	8.87	9.05	8.79	8.79	8.70	8.87	8.87

Henson (2023) - Athlete First: 2023 year end hurdle report

	13.31	7 / 5
	1.48	PB
		3.13
		3.09
		3.11
	9.47	8.26
		8.76
		8.87
		8.82

FINAL - 2022 NCAA Championships (Eugene, OR) (TV Analysis)

date	10-Jun-22	time	2.50	3.59	4.64	5.67	6.69	7.74	8.77	9.82	10.86	11.91
reaction time		interval		1.09	1.05	1.03	1.02	1.05	1.03	1.05	1.04	1.05
wind	0.0 m/s	velocity	5.49	8.39	8.70	8.87	8.96	8.70	8.87	8.70	8.79	8.70

Henson (2022) - Athlete First: 2022 year end hurdle report

	13.45	1 / 4
		3.17
		3.10
		3.14
		8.65
		8.85
		8.73

FINAL - 2021 NCAA Championships (Eugene, OR) (TV Analysis)

Henson (2021) - Athlete First: 2021 year end hurdle report

date	11-Jun-21	time	2.57	3.63	4.70	5.73	6.75	7.79	8.83	9.95	11.07	12.13	13.65	3 / 7			
reaction time	0.152	interval		1.06	1.07	1.03	1.02	1.04	1.04	1.12	1.12	1.06	1.52		3.16	3.10	3.30
wind	-0.6 m/s	velocity	5.34	8.62	8.54	8.87	8.96	8.79	8.79	8.16	8.16	8.62	9.22	8.06	8.68	8.85	8.31

Robles, Dayron (CUB) (1986)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2012 Olympic Games (London, GBR) (TV Analysis)													<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>				
date	08-Aug-12	time	2.46	3.48	4.50	5.50	6.50	7.72				42.86	5 / --				
reaction time	0.159	interval	7 steps	1.02	1.02	1.00	1.00	1.22				DQ		3.04			
wind	-0.3 m/s	velocity	5.58	8.96	8.96	9.14	9.14	7.49				2.57		9.02			

Semi-Final 3 - 2012 Olympic Games (London, GBR) (TV Analysis)

Semi-Final 3 - 2012 Olympic Games (London, GBR) (TV Analysis)													<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>				
date	08-Aug-12	time	2.48	3.48	4.48	5.46	6.46	7.46	8.50	9.54	10.58	11.62	13.10	7 / 1			
reaction time	0.162	interval	7 steps	1.00	1.00	0.98	1.00	1.00	1.04	1.04	1.04	1.04	1.48		2.98	3.04	3.12
wind	0.1 m/s	velocity	5.53	9.14	9.14	9.33	9.14	9.14	8.79	8.79	8.79	9.47	8.40		9.20	9.02	8.79

FINAL - 2011 IAAF World Championships (Daegu, KOR) (TV Analysis)

FINAL - 2011 IAAF World Championships (Daegu, KOR) (TV Analysis)													<i>Henson (2021) - Athlete First: major championships report</i>				
date	29-Aug-11	time	2.40	3.45	4.47	5.47	6.47	7.47	8.47	9.51	10.54	11.64	13.14	5 / 4			
reaction time	0.150	interval	7 steps	1.05	1.02	1.00	1.00	1.00	1.04	1.03	1.10	1.50	DQ		3.07	3.00	3.17
wind	-1.1 m/s	velocity	5.72	8.70	8.96	9.14	9.14	9.14	9.14	8.79	8.87	8.31	9.35	8.37	8.93	9.14	8.65

FINAL - 2010 Colorful Daegu Meeting (Daegu, KOR)

FINAL - 2010 Colorful Daegu Meeting (Daegu, KOR)													<i>Hong (2018) - performance of men's 110m hurdles using rhythmic units</i>				
date	19-May-10	time	2.69	3.76	4.76	5.74	6.76	7.76	8.76	9.78	10.83	11.88	13.26	/ 2			
reaction time	0.216	interval	7 steps	1.07	1.00	0.98	1.02	1.00	1.00	1.02	1.05	1.05	1.38		3.05	3.02	3.12
wind	-0.2 m/s	velocity	5.10	8.54	9.14	9.33	8.96	9.14	9.14	8.96	8.70	8.70	10.16	8.30	8.99	9.08	8.79

FINAL - 2010 IAAF World Indoor Championships (Doha, QAT)

FINAL - 2010 IAAF World Indoor Championships (Doha, QAT)													<i>Kuitunen (2010) - biomechanical analysis of the 14th IAAF World Indoor championships</i>				
date	14-Mar-10	time	2.54	3.54	4.52	5.49	6.47						7.34	6 / 1			
reaction time	0.196	interval	7 steps	1.00	0.98	0.97	0.98					0.87	CR		2.95		
		velocity	5.40	9.14	9.33	9.42	9.33					11.17	8.17		9.29		

FINAL - 2010 GE Galan (Stockholm, SWE)

FINAL - 2010 GE Galan (Stockholm, SWE)													<i>Blomkvist (2010) - www.sub13.se</i>				
date	10-Feb-10	time	2.35	3.39	4.39	5.37	6.38						7.49	/ 1			
reaction time		interval	7 steps	1.04	1.00	0.98	1.01					1.11			3.02		
		velocity	5.84	8.79	9.14	9.33	9.05					8.76	8.01		9.08		

Heat 2 - 2009 IAAF World Championships (Berlin, GER)

Heat 2 - 2009 IAAF World Championships (Berlin, GER)													<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>				
date	19-Aug-09	time	2.71	3.81	4.91	5.99	7.03	8.08	9.11	10.14	11.17	12.21	13.67	2 / 3			
reaction time	0.178	interval	7 steps	1.10	1.10	1.08	1.04	1.05	1.03	1.03	1.03	1.04	1.46		3.28	3.12	3.10
wind	-0.2 m/s	velocity	5.06	8.31	8.31	8.46	8.79	8.70	8.87	8.87	8.87	8.79	9.60	8.05	8.36	8.79	8.85

Time Trial - 2009 University of Barcelona Hurdle Analysis (Barcelona, ESP)

Time Trial - 2009 University of Barcelona Hurdle Analysis (Barcelona, ESP)													<i>Padullés (2010) - valoración funcional / análisis técnico biomecánico de dayron robles</i>				
date	38503	time	2.34	3.39	4.42	5.44	6.49	7.54	8.60	9.64	10.70	11.80	13.51	5 /			
reaction time	0.184	interval	7 steps	1.05	1.03	1.02	1.05	1.05	1.06	1.04	1.06	1.10	1.71		3.10	3.16	3.20
wind	-0.4 m/s	velocity	5.86	8.70	8.87	8.96	8.70	8.70	8.62	8.79	8.62	8.31	8.20	8.14	8.85	8.68	8.57

FINAL - 2008 Olympic Games (Beijing, CHN)

FINAL - 2008 Olympic Games (Beijing, CHN)													<i>Tsiokanos (2018) - race pattern of men's 110m hurdles - time analysis of olympic hurdle performance</i>				
date	21-Aug-08	time	2.50	3.53	4.50	5.49	6.48	7.48	8.48	9.50	10.53	11.56	12.93	6 / 1			
reaction time	0.183	interval	7 steps	1.03	0.97	0.99	0.99	1.00	1.00	1.02	1.03	1.03	1.37		2.99	2.99	3.08
wind	0.1 m/s	velocity	5.49	8.87	9.42	9.23	9.23	9.14	9.14	8.96	8.87	8.87	10.23	8.51	9.17	9.17	8.90

FINAL - 2008 Golden Spike (Ostrava, CZE) (TV Analysis)

FINAL - 2008 Golden Spike (Ostrava, CZE) (TV Analysis)													<i>Graubner (2009) - http://www.fgs.uni-halle.de</i>					
date	12-Jun-08	time	2.47	3.48	4.46	5.46	6.44	7.43	8.42	9.44	10.46	11.49	12.87	6 / 1				
reaction time		interval	7 steps	1.01	0.98	1.00	0.98	0.99	0.99	1.02	1.02	1.03	1.38	WR		2.99	2.96	3.07
wind	0.9 m/s	velocity	5.55	9.05	9.33	9.14	9.33	9.23	9.23	8.96	8.96	8.87	10.16	8.55	9.17	9.26	8.93	

FINAL - 2007 Golden Grand Prix (Shanghai, CHN)

FINAL - 2007 Golden Grand Prix (Shanghai, CHN)													<i>Ma (2008) - analysis of Liu Xiang's time characteristic in men's 110m hurdles during golden grand prix in Shanghai</i>				
date	28-Sep-07	time	2.27	3.24	4.26	5.33	6.31	7.30	8.24	9.17	10.28	11.35	13.01	/ 1			
reaction time	0.186	interval	7 steps	0.97	1.02	1.07	0.98	0.99	0.94	0.93	1.11	1.07	1.66		3.06	2.91	3.11
wind	-0.4 m/s	velocity	6.04	9.42	8.96	8.54	9.33	9.23	9.72	9.83	8.23	8.54	8.45	8.46	8.96	9.42	8.82

FINAL - 2007 IAAF World Athletics Final (Stuttgart, GER)

FINAL - 2007 IAAF World Athletics Final (Stuttgart, GER)													<i>Graubner (2007) - http://www.fgs.uni-halle.de</i>					
date	23-Sep-07	time	2.51	3.55	4.54	5.53	6.53	7.51	8.51	9.51	10.53	11.57	12.92	4 / 1				
reaction time	0.158	interval	7 steps	1.04	0.99	0.99	1.00	0.98	1.00	1.00	1.02	1.04	1.35	CR / AR		3.02	2.98	3.06
wind	0.0 m/s	velocity	5.47	8.79	9.23	9.23	9.14	9.33	9.14	9.14	8.96	8.79	10.39	8.51	9.08	9.20	8.96	

Rodrigues, Eduardo (BRA) (1995)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Semi-Final 3 - 2024 Olympic Games (Paris, FRA)													<i>Paris 2024 Olympic Games - Results Book (2024)</i>				
date	07-Aug-24	time	2.45	3.52	4.54	5.56	6.57	7.59	8.62	9.66	10.72	11.81	13.44	6 / 6			
reaction time	0.159	interval		1.07	1.02	1.02	1.01	1.02	1.03	1.04	1.06	1.09	1.63		3.11	3.06	3.19
wind	0.6 m/s	velocity	5.60	8.54	8.96	8.96	9.05	8.96	8.87	8.79	8.62	8.39	8.60	8.18	8.82	8.96	8.60

Heat 1 - 2024 Olympic Games (Paris, FRA)

Heat 1 - 2024 Olympic Games (Paris, FRA)													<i>Paris 2024 Olympic Games - Results Book (2024)</i>				
date	04-Aug-24	time	2.48	3.57	4.59	5.60	6.60	7.60	8.61	9.63	10.69	11.77	13.37	4 / 3			

reaction time	0.165	interval	1.09	1.02	1.01	1.00	1.00	1.01	1.02	1.06	1.08	1.60			3.12	3.01	3.16
wind	0.1 m/s	velocity	5.53	8.39	8.96	9.05	9.14	9.14	9.05	8.96	8.62	8.46	8.76	8.23	8.79	9.11	8.68

Semi-Final 2 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)*Henson (2023) - Athlete First: 2023 year end hurdle report*

date	21-Aug-23	time	2.66	3.75	4.80	5.80	6.82	7.83	8.83	9.86	10.93	12.03			13.52	8 / 6			
reaction time	0.142	interval	7 steps	1.09	1.05	1.00	1.02	1.01	1.00	1.03	1.07	1.10	1.49				3.14	3.03	3.20
wind	-0.2 m/s	velocity	5.16	8.39	8.70	9.14	8.96	9.05	9.14	8.87	8.54	8.31	9.41	8.14			8.73	9.05	8.57

Heat 4 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)*Henson (2023) - Athlete First: 2023 year end hurdle report*

date	20-Aug-23	time	2.63	3.68	4.70	5.70	6.70	7.72	8.74	9.77	10.83	11.88			13.37	1 / 3			
reaction time	0.150	interval	7 steps	1.05	1.02	1.00	1.00	1.02	1.02	1.03	1.06	1.05	1.49				3.07	3.04	3.14
wind	-0.6 m/s	velocity	5.22	8.70	8.96	9.14	9.14	8.96	8.96	8.87	8.62	8.70	9.41	8.23			8.93	9.02	8.73

FINAL - 2023 FBK Games (Hengelo, NED) (TV Analysis)*Henson (2023) - Athlete First: 2023 year end hurdle report*

date	04-Jun-23	time	2.65	3.74	4.77	5.78	6.79	7.81	8.83	9.93	10.98	12.10			13.51	7 / 6			
reaction time	0.149	interval	7 steps	1.09	1.03	1.01	1.01	1.02	1.02	1.10	1.05	1.12	1.41				3.13	3.05	3.27
wind	0.4 m/s	velocity	5.18	8.39	8.87	9.05	9.05	8.96	8.96	8.31	8.70	8.16	9.94	8.14			8.76	8.99	8.39

Semi-Final 2 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)*Henson (2022) - Athlete First: 2022 year end hurdle report*

date	17-Jul-22	time	2.63	3.70	4.73	5.76	6.86	7.90	8.93	10.00	11.03	12.13			13.62	7 / 8			
reaction time	0.130	interval	7 steps	1.07	1.03	1.03	1.10	1.04	1.03	1.07	1.03	1.10	1.49				3.13	3.17	3.20
wind	0.3 m/s	velocity	5.22	8.54	8.87	8.87	8.31	8.79	8.87	8.54	8.87	8.31	9.41	8.08			8.76	8.65	8.57

Heat 2 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)*Henson (2022) - Athlete First: 2022 year end hurdle report*

date	16-Jul-22	time	2.56	3.63	4.70	5.73	6.73	7.73	8.76	9.80	10.90	11.96			13.46	8 / 4			
reaction time	0.134	interval	7 steps	1.07	1.07	1.03	1.00	1.00	1.03	1.04	1.10	1.06	1.50				3.17	3.03	3.20
wind	0.4 m/s	velocity	5.36	8.54	8.54	8.87	9.14	9.14	8.87	8.79	8.31	8.62	9.35	8.17			8.65	9.05	8.57

Rollins, Louis (USA) (1996)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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Semi-Final 1 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)*Henson (2024) - Athlete First: 2024 year end hurdle report*

date	27-Jun-24	time	2.50	3.55	4.60	5.64	6.67	7.71	8.75	9.81	10.85	11.94			13.33	3 / 4			
reaction time		interval		1.05	1.05	1.04	1.03	1.04	1.04	1.06	1.04	1.09	1.39				3.14	3.11	3.19
wind	0.3 m/s	velocity	5.49	8.70	8.70	8.79	8.87	8.79	8.79	8.62	8.79	8.39	10.09	8.25			8.73	8.82	8.60

Heat 4 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)*Henson (2024) - Athlete First: 2024 year end hurdle report*

date	24-Jun-24	time	2.53	3.60	4.65	5.68	6.70	7.72	8.76	9.83	10.90	11.96			13.38	3 / 5			
reaction time		interval		1.07	1.05	1.03	1.02	1.02	1.04	1.07	1.07	1.06	1.42	PB			3.15	3.08	3.20
wind	1.2 m/s	velocity	5.42	8.54	8.70	8.87	8.96	8.96	8.79	8.54	8.54	8.62	9.87	8.22			8.70	8.90	8.57

FINAL - 2024 Atlanta City Games (Atlanta, GA) (Street Race) (TV Analysis)*Henson (2024) - Athlete First: 2024 year end hurdle report*

date	18-May-24	time	2.56	3.61	4.65	5.68	6.72	7.80	8.85	9.92	10.98	12.06			13.55	2 / 4			
reaction time		interval		1.05	1.04	1.03	1.04	1.08	1.05	1.07	1.06	1.08	1.49				3.12	3.17	3.21
wind	-0.7 m/s	velocity	5.36	8.70	8.79	8.87	8.79	8.46	8.70	8.54	8.62	8.46	9.41	8.12			8.79	8.65	8.54

FINAL - 2024 USATF National Indoor Championships (Albuquerque, NM) (Altitude) (TV Analysis)*Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record*

date	16-Feb-24	time	2.52	3.58	4.63	5.65	6.67								7.56	6 / 4		
reaction time	0.154	interval		1.06	1.05	1.02	1.02								7.56	=PB		3.13
		velocity	5.44	8.62	8.70	8.96	8.96								1.85	7.94		8.76

FINAL - 2024 New Balance Indoor Grand Prix (Boston, MA) (TV Analysis)*Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record*

date	04-Feb-24	time	2.52	3.60	4.64	5.72	6.75								7.70	7 / 8		
reaction time	0.182	interval		1.08	1.04	1.08	1.03								7.70			3.20
		velocity	5.44	8.46	8.79	8.46	8.87								1.82	7.79		8.57

FINAL - 2023 USATF Bermuda Grand Prix (Devonshire, BER) (TV Analysis)*Henson (2023) - Athlete First: 2023 year end hurdle report*

date	21-May-23	time	2.60	3.70	4.75	5.83	6.87	7.92	8.97	10.04	11.13	12.25			13.67	1 / 7			
reaction time	0.179	interval		1.10	1.05	1.08	1.04	1.05	1.05	1.07	1.09	1.12	1.42				3.23	3.14	3.28
wind	4.0 m/s	velocity	5.28	8.31	8.70	8.46	8.79	8.70	8.70	8.54	8.39	8.16	9.87	8.05			8.49	8.73	8.36

Semi-Final 1 - 2022 USATF National Championships (Eugene, OR)*USATF (2022) - Results powered by Karmarush.com*

date	26-Jun-22	time	2.47	3.51	4.60	5.61	6.69	7.72	8.77	9.82	10.95	12.03			13.58	9 / 8			
reaction time		interval		1.04	1.09	1.01	1.08	1.03	1.05	1.05	1.13	1.08	1.55				3.14	3.16	3.26
wind	0.4 m/s	velocity	5.55	8.79	8.39	9.05	8.46	8.87	8.70	8.70	8.09	8.46	9.05	8.10			8.73	8.68	8.41

Rooney, Taylor (USA) (1999)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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Heat 2 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)*CAA Hurdle Development (2020)*

date	14-Feb-20	time	2.70	3.82	4.89	5.99	7.09								8.06	5 / 5	
reaction time	0.219	interval	7 Steps	1.12	1.07	1.10	1.10								0.97		3.29
		velocity	5.08	8.16	8.54	8.31	8.31								10.02	7.44	8.33

Roosen, Sven (NED) (2001)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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Decathlon - Heat 3 - 2024 Olympic Games (Paris, FRA)*Paris 2024 Olympc Games - Results Book (2024)*

date	03-Aug-24	time	2.50	3.60	4.70	5.77	6.84	7.91	8.99	10.10	11.21	12.32			13.99	6 / 4	
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reaction time	0.148	interval	1.10	1.10	1.07	1.07	1.07	1.08	1.11	1.11	1.11	1.67			3.27	3.22	3.33
wind	0.7 m/s	velocity	5.49	8.31	8.31	8.54	8.54	8.54	8.46	8.23	8.23	8.23	8.40	7.86	8.39	8.52	8.23
Rooth, Markus (NOR) (2001)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Decathlon - Heat 1 - 2024 Olympic Games (Paris, FRA)																	
date	03-Aug-24	time	2.46	3.60	4.71	5.80	6.91	8.01	9.15	10.25	11.38	12.55		Paris 2024 Olympic Games - Results Book (2024)			
reaction time	0.143	interval	1.14	1.11	1.09	1.11	1.10	1.14	1.10	1.13	1.17	1.70		14.25	6 / 1	3.34 3.35 3.40	
wind	0.2 m/s	velocity	5.58	8.02	8.23	8.39	8.23	8.31	8.02	8.31	8.09	7.81	8.25	7.72	8.21	8.19	8.06
Rosenquist, Fabian (SWE) (1991)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Heptathlon - Heat 1 - 2013 European Indoor Championships (Göteborg, SWE)																	
date	03-Mar-13	time	2.72	3.85	4.97	6.07	7.21							Blomkvist (2013) - www.elitlandslag.se/SprintHäck/KortHäck.aspx			
reaction time	0.138	interval	1.13	1.12	1.10	1.14						1.09		8.30	7 / 3	3.35	
wind		velocity	5.04	8.09	8.16	8.31	8.02					8.92	7.23		8.19		
Ross, Duane (USA) (1972)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 1999 IAAF World Championships (Sevilla, ESP)																	
date	25-Aug-99	time	2.47	3.49	4.51	5.53	6.52	7.54	8.56	9.58	10.61	11.68		Sanchez (1999) - Sevilla '99: análisis de la carreras con villas			
reaction time	0.141	interval	1.02	1.02	1.02	0.99	1.02	1.02	1.02	1.03	1.07	1.44		13.12	4 / 3	3.06 3.03 3.12	
wind	1.0 m/s	velocity	5.55	8.96	8.96	8.96	9.23	8.96	8.96	8.96	8.87	8.54	9.74	8.38	8.96	9.05	8.79
Semi-Final 1 - 1999 IAAF World Championships (Sevilla, ESP)																	
date	24-Aug-99	time	2.53	3.56	4.56	5.58	6.57	7.56	8.59	9.60	10.63	11.68		Sanchez (1999) - Sevilla '99: análisis de la carreras con villas			
reaction time	0.151	interval	1.03	1.00	1.02	0.99	0.99	1.03	1.01	1.03	1.05	1.46		13.14	3 / 1	3.05 3.01 3.09	
wind	0.0 m/s	velocity	5.42	8.87	9.14	8.96	9.23	9.23	8.87	9.05	8.87	8.70	9.60	8.37	8.99	9.11	8.87
Quarter-Final 1 - 1999 IAAF World Championships (Sevilla, ESP)																	
date	23-Aug-99	time	2.52	3.55	4.56	5.57	6.56	7.58	8.58	9.59	10.63	11.68		Sanchez (1999) - Sevilla '99: análisis de la carreras con villas			
reaction time	0.139	interval	1.03	1.01	1.01	0.99	1.02	1.00	1.01	1.04	1.05	1.45		13.13	5 / 1	3.05 3.01 3.10	
wind	-0.4 m/s	velocity	5.44	8.87	9.05	9.05	9.23	8.96	9.14	9.05	8.79	8.70	9.67	8.38	8.99	9.11	8.85
Heat 1 - 1999 IAAF World Championships (Sevilla, ESP)																	
date	23-Aug-99	time	2.53	3.55	4.57	5.58	6.59	7.64	8.69	9.77	10.82	11.89		Sanchez (1999) - Sevilla '99: análisis de la carreras con villas			
reaction time	0.162	interval	1.02	1.02	1.01	1.01	1.05	1.05	1.08	1.05	1.07	1.50		13.39	1 / 1	3.05 3.11 3.20	
wind	0.6 m/s	velocity	5.42	8.96	8.96	9.05	9.05	8.70	8.70	8.46	8.70	8.54	9.35	8.22	8.99	8.82	8.57
Russell, Dejour (JAM) (2000)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2017 Jamaican National Championships (Kingston, JAM) (TV Analysis)																	
date	24-Jun-17	time	2.43	3.47	4.50	5.53	6.58	7.63	8.67	9.70	10.75	11.80		Henson (2020) - Athlete First: 2017 year end hurdle report			
reaction time		interval	1.04	1.03	1.03	1.05	1.05	1.04	1.03	1.05	1.05	1.52		13.32	6 / 4	3.10 3.14 3.13	
wind	0.7 m/s	velocity	5.65	8.79	8.87	8.87	8.70	8.70	8.79	8.87	8.70	8.70	9.22	8.26	8.85	8.73	8.76
Ružička, Martin (CZE) (1995)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Heat 1 - 2014 Czech Republic National U20 Championships (Trinec, CZE) (99cm)																	
date	28-Jun-14	time	2.95	4.18	5.41	6.62	7.85	9.15	10.39	11.70	12.97	14.26		Feher (2014) - Final report from the U18 & U20 Czech Republic national championships			
reaction time	0.244	interval	1.23	1.23	1.21	1.23	1.30	1.24	1.31	1.27	1.29	1.73		15.99	2 / 6	3.67 3.77 3.87	
wind	-1.6 m/s	velocity	4.65	7.43	7.43	7.55	7.43	7.03	7.37	6.98	7.20	7.09	8.10	6.88	7.47	7.27	7.09
Rykl, Radoš (CZE) (1995)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2014 Czech Republic National U20 Championships (Trinec, CZE) (99cm)																	
date	28-Jun-14	time	2.77	3.93	5.06	6.19	7.32	8.50	9.65	10.80	11.97	13.13		Feher (2014) - Final report from the U18 & U20 Czech Republic national championships			
reaction time	0.177	interval	1.16	1.13	1.13	1.13	1.18	1.15	1.15	1.17	1.16	1.62		14.75	7 / 5	3.42 3.46 3.48	
wind	-2.2 m/s	velocity	4.95	7.88	8.09	8.09	8.09	7.75	7.95	7.95	7.81	7.88	8.65	7.46	8.02	7.92	7.88
Heat 3 - 2014 Czech Republic National U20 Championships (Trinec, CZE) (99cm)																	
date	28-Jun-14	time	2.85	4.00	5.17	6.34	7.48	8.68	9.83	11.00	12.22	13.39		Feher (2014) - Final report from the U18 & U20 Czech Republic national championships			
reaction time	0.253	interval	1.15	1.17	1.17	1.14	1.20	1.15	1.17	1.22	1.17	1.65		15.04	6 / 2	3.49 3.49 3.56	
wind	-2.5 m/s	velocity	4.81	7.95	7.81	7.81	8.02	7.62	7.95	7.81	7.49	7.81	8.50	7.31	7.86	7.86	7.70
Sáenz, Martín (CHI) (2001)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Repechage 3 - 2024 Olympic Games (Paris, FRA)																	
date	06-Aug-24	time	2.50	3.62	4.69	5.73	6.80	7.90	9.01	10.08	11.19	12.29		Paris 2024 Olympic Games - Results Book (2024)			
reaction time	0.149	interval	1.12	1.07	1.04	1.07	1.10	1.11	1.07	1.11	1.10	1.66		13.95	8 / 6	3.23 3.28 3.28	
wind	-1.1 m/s	velocity	5.49	8.16	8.54	8.79	8.54	8.31	8.23	8.54	8.23	8.31	8.45	7.89	8.49	8.36	8.36
Heat 1 - 2024 Olympic Games (Paris, FRA)																	
date	04-Aug-24	time	2.48	3.60	4.66	5.68	6.72	7.76	8.83	9.93	11.06	12.17		Paris 2024 Olympic Games - Results Book (2024)			
reaction time	0.144	interval	1.12	1.06	1.02	1.04	1.04	1.07	1.10	1.13	1.11	1.66		13.83	2 / 8	3.20 3.15 3.34	
wind	0.1 m/s	velocity	5.53	8.16	8.62	8.96	8.79	8.79	8.54	8.31	8.09	8.23	8.45	7.95	8.57	8.70	8.21
Sajdok, Stanislav (CZE) (1983)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2014 Czech Republic National Championships (Ostrava, CZE)																	
date	02-Aug-14	time	2.68	3.85	4.99	6.15	7.34	8.50	9.70	10.93	12.15	13.43		Feher (2014) - Final report from the Czech Republic national championships			
														15.24	2 / 7		

reaction time	0.124	interval	1.17	1.14	1.16	1.19	1.16	1.20	1.23	1.22	1.28	1.81		3.47	3.55	3.73	
wind	-1.2 m/s	velocity	5.12	7.81	8.02	7.88	7.68	7.88	7.62	7.43	7.49	7.14	7.75	7.22	7.90	7.72	7.35

Heat 2 - 2014 Czech Republic National Championships (Ostrava, CZE)*Feher (2014) - Final report from the Czech Republic national championships*

date	02-Aug-14	time	2.70	3.87	4.98	6.14	7.28	8.45	9.63	10.81	12.03	13.29	14.96	3 / 4			
reaction time	0.159	interval	1.17	1.11	1.16	1.14	1.17	1.18	1.18	1.22	1.26	1.67		3.44	3.49	3.66	
wind	0.8 m/s	velocity	5.08	7.81	8.23	7.88	8.02	7.81	7.75	7.75	7.49	7.25	8.40	7.35	7.97	7.86	7.49

Sakimoto, Kazuma (JPN) (1996)**Heat 1 - 2017 Mito Invitational (Mito, JPN)** *(2017) - tfdata-store.com/2017/05/06/post-423/*

date	05-May-17	time	2.71	3.84	4.99	6.14	7.27	8.41	9.56	10.72	11.88	13.07	14.62	2 / 4			
reaction time		interval	1.13	1.15	1.15	1.13	1.14	1.15	1.16	1.16	1.19	1.55		3.43	3.42	3.51	
wind	0.3 m/s	velocity	5.06	8.09	7.95	7.95	8.09	8.02	7.95	7.88	7.88	7.68	9.05	7.52	7.99	8.02	7.81

Sala, Carles (ESP) (1960)**Semi-Final 1 - 1988 Olympic Games (Seoul, KOR)** *Brüggemann (1990) - scientific research project at the games of the XXXIV Olympiad, Seoul 1988*

date	26-Sep-88	time	2.60	3.73	4.81	5.85	6.90	7.97	9.05	10.15	11.25	12.37	13.85	7 / 6			
reaction time	0.127	interval	1.13	1.08	1.04	1.05	1.07	1.08	1.10	1.10	1.12	1.48		3.25	3.20	3.32	
wind	0.0 m/s	velocity	5.28	8.09	8.46	8.79	8.70	8.54	8.46	8.31	8.31	8.16	9.47	7.94	8.44	8.57	8.26

Sands, Shamar (BAH) (1985)**Semi-Final 3 - 2009 IAAF World Championships (Berlin, GER)** *Graubner (2009) - biomechanical analyses at the 12th IAAF world championships*

date	20-Aug-09	time	2.51	3.58	4.62	5.64	6.68	7.73	8.78	9.86	10.94	12.04	13.47	1 / 4			
reaction time	0.144	interval	1.07	1.04	1.02	1.04	1.05	1.05	1.08	1.08	1.10	1.43		3.13	3.14	3.26	
wind	0.1 m/s	velocity	5.47	8.54	8.79	8.96	8.79	8.70	8.70	8.46	8.46	8.31	9.80	8.17	8.76	8.73	8.41

Heat 5 - 2009 IAAF World Championships (Berlin, GER)*Graubner (2009) - biomechanical analyses at the 12th IAAF world championships*

date	19-Aug-09	time	2.63	3.69	4.75	5.79	6.81	7.86	8.90	9.95	11.03	12.13	13.57	4 / 5			
reaction time	0.243	interval	1.06	1.06	1.04	1.02	1.05	1.04	1.05	1.08	1.10	1.44		3.16	3.11	3.23	
wind	0.0 m/s	velocity	5.22	8.62	8.62	8.79	8.96	8.70	8.79	8.70	8.46	8.31	9.74	8.11	8.68	8.82	8.49

FINAL - 2009 ISTAF (Berlin, GER)*Graubner (2009) - http://www.fgs.uni-halle.de*

date	14-Jun-09	time	2.59	3.65	4.69	5.71	6.73	7.77	8.81	9.87	10.93	12.09	13.56	8 / 4			
reaction time	0.234	interval	1.06	1.04	1.02	1.02	1.04	1.04	1.06	1.06	1.06	1.16	1.47		3.12	3.10	3.28
wind	0.7 m/s	velocity	5.30	8.62	8.79	8.96	8.96	8.79	8.79	8.62	8.62	7.88	9.54	8.11	8.79	8.85	8.36

FINAL - 2009 Osaka Grand Prix (Osaka, JPN)*Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdles*

date	09-May-09	time	2.55	3.59	4.60	5.63	6.62	7.65	8.71	9.76	10.84	11.94	13.40	/ 1			
reaction time		interval	1.04	1.01	1.03	0.99	1.03	1.06	1.05	1.08	1.10	1.46	NR		3.08	3.08	3.23
wind	0.2 m/s	velocity	5.38	8.79	9.05	8.87	9.23	8.87	8.62	8.70	8.46	8.31	9.60	8.21	8.90	8.90	8.49

Santos, Miguel (ESP) (1973)**FINAL - 1998 Spanish National Championships (San Sebastián, ESP)** *Ruiz (1998) - campeonato des españa absoluto: análisis de la carreras con villas*

date	02-Aug-98	time	2.66	3.75	4.85	5.98	7.04	8.16	9.28	10.38	11.50	12.63	14.17	6 / 2			
reaction time		interval	1.09	1.10	1.13	1.06	1.12	1.12	1.10	1.12	1.13	1.54		3.32	3.30	3.35	
wind	0.1 m/s	velocity	5.16	8.39	8.31	8.09	8.62	8.16	8.16	8.31	8.16	8.09	9.10	7.76	8.26	8.31	8.19

Santos Rrodrigues, Eduardo (BRA) (**FINAL - 2019 Pan American Games (Lima, PER) (TV Analysis)** *Henson (2020) - Athlete First: 2019 year end hurdle report*

date	10-Aug-19	time	2.70	3.74	4.77	5.77	6.80	7.80	8.84	9.88	10.92	12.03	13.48	8 / 3			
reaction time	0.193	interval	1.04	1.03	1.00	1.03	1.00	1.04	1.04	1.04	1.04	1.11	1.45		3.07	3.07	3.19
wind	1.8 m/s	velocity	5.08	8.79	8.87	9.14	8.87	9.14	8.79	8.79	8.79	8.23	9.67	8.16	8.93	8.93	8.60

FINAL - 2019 Meeting International Mohammed VI d'Athlétisme (Rabat, MAR) (TV Analysis)*Henson (2020) - Athlete First: 2019 year end hurdle report*

date	16-Jun-19	time	2.58	3.66	4.70	5.74	6.78	7.80	8.86	9.90	10.98	12.06	13.58	9 / 8			
reaction time	0.156	interval	1.08	1.04	1.04	1.04	1.02	1.06	1.04	1.08	1.08	1.52		3.16	3.12	3.20	
wind	0.3 m/s	velocity	5.32	8.46	8.79	8.79	8.79	8.96	8.62	8.79	8.46	8.46	9.22	8.10	8.68	8.79	8.57

Sasa, Atsuhiko (JPN) (2001)**FINAL - 2018 Japanese National High School Championships (Nagoya, JPN) (99cm)** *Yokota (2018) - 71st high school championships: JAF scientific committee - biomechanics data collection*

date	06-Aug-18	time	2.76	3.87	4.98	6.08	7.20	8.31	9.44	10.56	11.69	12.83	14.29	2 / 4			
reaction time		interval	1.11	1.11	1.10	1.12	1.11	1.13	1.12	1.13	1.14	1.46		3.32	3.36	3.39	
wind	1.6 m/s	velocity	4.97	8.23	8.23	8.31	8.16	8.23	8.09	8.16	8.09	8.02	9.60	7.70	8.26	8.16	8.09

Sasaki, Keito (JPN) (2003)**FINAL - 2022 Japanese U20 National Championships (Osaka, JPN) (99cm)** *Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season*

date	12-Jun-22	time	2.75	3.86	4.96	6.05	7.13	8.20	9.30	10.39	11.51	12.64	14.18	3 / 8			
reaction time	0.175	interval	1.11	1.10	1.09	1.08	1.07	1.10	1.09	1.12	1.13	1.54		3.30	3.25	3.34	
wind	1.1 m/s	velocity	4.99	8.23	8.31	8.39	8.46	8.54	8.31	8.39	8.16	8.09	9.10	7.76	8.31	8.44	8.21

Sato, Hiroyuki (JPN) (1990)**FINAL - 2019 Japanese National Championships (Fukuoka, JPN)** *Yamanaka (2019) - research on athlete performance and technique- 2019 data book*

date	30-Jun-19	time	2.58	3.68	4.75	5.84	6.92	8.00	9.10	10.21	11.44	12.63	14.16	5 / 8			
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reaction time	0.157	interval	1.10	1.07	1.09	1.08	1.08	1.10	1.11	1.23	1.19	1.53		3.26	3.26	3.53	
wind	-0.6 m/s	velocity	5.32	8.31	8.54	8.39	8.46	8.46	8.31	8.23	7.43	7.68	9.16	7.77	8.41	8.41	7.77
FINAL - 2019 Fuse Sprint (Tottori, JPN) <i>Kijima (2019) - research on athlete performance and technique- 2019 data book</i>																	
date	02-Jun-19	time	2.53	3.61	4.67	5.73	6.77	7.85	8.93	10.05	11.16	12.30		13.77	6 / 4		
reaction time	0.126	interval	1.08	1.06	1.06	1.04	1.08	1.08	1.08	1.12	1.11	1.14	1.47		3.20	3.20	3.37
wind	1.9 m/s	velocity	5.42	8.46	8.62	8.62	8.79	8.46	8.46	8.16	8.23	8.02	9.54	7.99	8.57	8.57	8.14
FINAL - 2019 Kinami Memorial (Osaka, JPN) <i>Matsubayashi (2019) - research on athlete performance and technique- 2019 data book</i>																	
date	06-May-19	time	2.58	3.64	4.71	5.78	6.86	7.92	9.01	10.11	11.22	12.35		13.81	2 / 6		
reaction time		interval	1.06	1.07	1.07	1.08	1.06	1.09	1.10	1.10	1.11	1.13	1.46		3.20	3.23	3.34
wind	0.3 m/s	velocity	5.32	8.62	8.54	8.54	8.46	8.62	8.39	8.31	8.23	8.09	9.60	7.97	8.57	8.49	8.21
B FINAL - 2019 Mikio Oda Memorial (Hiroshima, JPN) <i>Kobayashi (2019) - research on athlete performance and technique- 2019 data book</i>																	
date	28-Apr-19	time	2.59	3.69	4.76	5.84	6.93	8.03	9.13	10.28	11.47	12.65		14.21	2 / 4		
reaction time		interval	1.10	1.07	1.08	1.09	1.10	1.10	1.10	1.15	1.19	1.18	1.56		3.25	3.29	3.52
wind	1.4 m/s	velocity	5.30	8.31	8.54	8.46	8.39	8.31	8.31	7.95	7.68	7.75	8.99	7.74	8.44	8.33	7.79
FINAL - 2018 Kinami Michitaka Memorial (Osaka, JPN) <i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>																	
date	06-May-18	time	2.58	3.67	4.76	5.82	6.87	7.93	9.00	10.08	11.18	12.28		13.72	4 / 2		
reaction time		interval	1.09	1.09	1.06	1.05	1.06	1.07	1.08	1.10	1.10	1.44			3.24	3.18	3.28
wind	1.6 m/s	velocity	5.32	8.39	8.39	8.62	8.70	8.62	8.54	8.46	8.31	8.31	9.74	8.02	8.46	8.62	8.36
FINAL - 2018 Mikio Oda Memorial (Hiroshima, JPN) <i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>																	
date	29-Apr-18	time	2.64	3.72	4.79	5.84	6.90	7.97	9.05	10.15	11.27	12.39		13.82	8 / 6		
reaction time		interval	1.08	1.07	1.05	1.06	1.07	1.08	1.10	1.12	1.12	1.43			3.20	3.21	3.34
wind	2.6 m/s	velocity	5.20	8.46	8.54	8.70	8.62	8.54	8.46	8.31	8.16	8.16	9.80	7.96	8.57	8.54	8.21
FINAL - 2017 Japanese National Championships (Osaka, JPN) <i>(2017) - tfdata-store.com/2017/07/13/post-1040/</i>																	
date	25-Jun-17	time	2.58	3.68	4.72	5.77	6.82	7.88	8.94	10.02	11.11	12.23		13.69	7 / 4		
reaction time	0.159	interval	1.10	1.04	1.05	1.05	1.06	1.06	1.06	1.08	1.09	1.12	1.46		3.19	3.17	3.29
wind	-0.2 m/s	velocity	5.32	8.31	8.79	8.70	8.70	8.62	8.62	8.46	8.39	8.16	9.60	8.04	8.60	8.65	8.33
Semi-Final 1 - 2017 Japanese National Championships (Osaka, JPN) <i>(2017) - tfdata-store.com/2017/07/13/post-1040/</i>																	
date	24-Jun-17	time	2.59	3.63	4.67	5.73	6.77	7.83	8.89	9.98	11.08	12.18		13.59	5 / 2		
reaction time	0.169	interval	1.04	1.04	1.06	1.04	1.06	1.06	1.06	1.09	1.10	1.10	1.41	PB	3.14	3.16	3.29
wind	0.6 m/s	velocity	5.30	8.79	8.79	8.62	8.79	8.62	8.62	8.39	8.31	8.31	9.94	8.09	8.73	8.68	8.33
Heat 4 - 2017 Japanese National Championships (Osaka, JPN) <i>(2017) - tfdata-store.com/2017/07/13/post-1040/</i>																	
date	24-Jun-17	time	2.58	3.66	4.71	5.76	6.80	7.86	8.92	10.02	11.11	12.22		13.65	2 / 2		
reaction time	0.165	interval	1.08	1.05	1.05	1.04	1.06	1.06	1.10	1.09	1.11	1.43			3.18	3.16	3.30
wind	0.0 m/s	velocity	5.32	8.46	8.70	8.70	8.79	8.62	8.62	8.31	8.39	8.23	9.80	8.06	8.62	8.68	8.31
FINAL - 2017 Fuse Sprint (Tottori, JPN) <i>(2017) - tfdata-store.com/2017/06/04/post-848/</i>																	
date	04-Jun-17	time	2.59	3.66	4.75	5.83	6.89	7.97	9.04	10.14	11.24	12.35		13.79	7 / 5		
reaction time		interval	1.07	1.09	1.08	1.06	1.08	1.07	1.10	1.10	1.11	1.44			3.24	3.21	3.31
wind	3.2 m/s	velocity	5.30	8.54	8.39	8.46	8.62	8.46	8.54	8.31	8.31	8.23	9.74	7.98	8.46	8.54	8.28
Heat 5 - 2017 Fuse Sprint (Tottori, JPN) <i>(2017) - tfdata-store.com/2017/06/04/post-848/</i>																	
date	04-Jun-17	time	2.61	3.68	4.74	5.78	6.84	7.90	8.97	10.07	11.18	12.30		13.75	7 / 5		
reaction time		interval	1.07	1.06	1.04	1.06	1.06	1.07	1.10	1.11	1.12	1.45			3.17	3.19	3.33
wind	1.5 m/s	velocity	5.26	8.54	8.62	8.79	8.62	8.62	8.54	8.31	8.23	8.16	9.67	8.00	8.65	8.60	8.23
FINAL - 2017 East Japan Business Athletics Championships (Yuma, JPN) <i>(2017) - tfdata-store.com/2017/05/20/post-579/</i>																	
date	20-May-17	time	2.57	3.63	4.69	5.74	6.79	7.87	8.95	10.04	11.16	12.28		13.75	7 / 2		
reaction time		interval	1.06	1.06	1.05	1.05	1.08	1.08	1.09	1.12	1.12	1.47			3.17	3.21	3.33
wind	1.1 m/s	velocity	5.34	8.62	8.62	8.70	8.70	8.46	8.46	8.39	8.16	8.16	9.54	8.00	8.65	8.54	8.23
Open FINAL - 2017 Michitaka Memorial (Osaka, JPN) <i>(2017) - tfdata-store.com/2017/05/08/post-413/</i>																	
date	07-May-17	time	2.64	3.72	4.78	5.86	6.93	8.00	9.08	10.18	11.28	12.39		13.85	7 / 4		
reaction time		interval	1.08	1.06	1.08	1.07	1.07	1.08	1.10	1.10	1.11	1.46			3.22	3.22	3.31
wind	-1.5 m/s	velocity	5.20	8.46	8.62	8.46	8.54	8.54	8.46	8.31	8.31	8.23	9.60	7.94	8.52	8.52	8.28
FINAL - 2017 Michitaka Memorial (Osaka, JPN) <i>(2017) - tfdata-store.com/2017/05/08/post-413/</i>																	
date	07-May-17	time	2.68	3.75	4.81	5.88	6.95	8.01	9.10	10.19	11.29	12.41		13.87	3 / 5		
reaction time		interval	1.07	1.06	1.07	1.07	1.06	1.09	1.09	1.10	1.12	1.46			3.20	3.22	3.31
wind	-0.8 m/s	velocity	5.12	8.54	8.62	8.54	8.54	8.62	8.39	8.39	8.31	8.16	9.60	7.93	8.57	8.52	8.28
FINAL - 2017 Mito Invitational (Mito, JPN) <i>(2017) - tfdata-store.com/2017/05/06/post-423/</i>																	
date	05-May-17	time	2.62	3.69	4.77	5.84	6.94	8.00	9.09	10.17	11.27	12.41		13.88	5 / 1		
reaction time		interval	1.07	1.08	1.07	1.10	1.06	1.09	1.08	1.10	1.14	1.47			3.22	3.25	3.32
wind	-2.3 m/s	velocity	5.24	8.54	8.46	8.54	8.31	8.62	8.39	8.46	8.31	8.02	9.54	7.93	8.52	8.44	8.26

Heat 3 - 2017 Mito Invitational (Mito, JPN)(2017) - tfd-data-store.com/2017/05/06/post-423/

date	05-May-17	time	2.60	3.68	4.76	5.80	6.88	7.95	9.04	10.13	11.24	12.38		13.86		5 / 1			
reaction time		interval		1.08	1.08	1.04	1.08	1.07	1.09	1.09	1.11	1.14	1.48				3.20	3.24	3.34
wind	-2.5 m/s	velocity	5.28	8.46	8.46	8.79	8.46	8.54	8.39	8.39	8.23	8.02	9.47	7.94			8.57	8.46	8.21

B FINAL - 2017 Mikio Oda Memorial (Hiroshima, JPN)(2017) - tfd-data-store.com/2017/05/01/458/

date	29-Apr-17	time	2.60	3.67	4.74	5.83	6.93	8.03	9.12	10.25	11.37	12.54		14.08		3 / 3			
reaction time		interval		1.07	1.07	1.09	1.10	1.10	1.09	1.13	1.12	1.17	1.54				3.23	3.29	3.42
wind	-1.5 m/s	velocity	5.28	8.54	8.54	8.39	8.31	8.31	8.39	8.09	8.16	7.81	9.10	7.81			8.49	8.33	8.02

FINAL - 2016 Mito Invitational (Mito, JPN)(2016.05.27) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en

date	05-May-16	time	2.58	3.67	4.73	5.79	6.87	7.94	9.02	10.12	11.23	12.35		13.78		5 / 1			
reaction time		interval		1.09	1.06	1.06	1.08	1.07	1.08	1.10	1.11	1.12	1.43				3.21	3.23	3.33
wind	0.7 m/s	velocity	5.32	8.39	8.62	8.62	8.46	8.54	8.46	8.31	8.23	8.16	9.80	7.98			8.54	8.49	8.23

FINAL - 2015 Shizuoka International Athletics Meeting (Fukuroi, JPN)Takashima (2015) - [race analysis of 110m & 100m hurdles in Japan- results 2015 competitions](#)

date	03-May-15	time	2.62	3.77	4.85	5.94	7.00	8.09	9.16	10.28	11.38	12.52		13.97		/ 3			
reaction time		interval		1.15	1.08	1.09	1.06	1.09	1.07	1.12	1.10	1.14	1.45				3.32	3.22	3.36
wind	-0.8 m/s	velocity	5.24	7.95	8.46	8.39	8.62	8.39	8.54	8.16	8.31	8.02	9.67	7.87			8.26	8.52	8.16

FINAL - 2013 Japanese National Championships (Chofu, JPN)Kota (2013) - [race analysis of leading Japanese men's 110m hurdlers - from 2011-13](#)

date	09-Jun-13	time	2.60	3.67	4.72	5.77	6.83	7.88	8.93	10.01	11.09	12.20		13.61		8 / 2			
reaction time		interval		1.07	1.05	1.05	1.06	1.05	1.05	1.08	1.08	1.11	1.41	PB			3.17	3.16	3.27
wind	1.3 m/s	velocity	5.28	8.54	8.70	8.70	8.62	8.70	8.70	8.46	8.46	8.23	9.94	8.08			8.65	8.68	8.39

Semi-Final 2 - 2013 Japanese National Championships (Chofu, JPN)Kota (2013) - [race analysis of leading Japanese men's 110m hurdlers - from 2011-13](#)

date	09-Jun-13	time	2.60	3.68	4.73	5.79	6.86	7.91	8.98	10.06	11.20	12.29		13.71		4 / 3			
reaction time		interval		1.08	1.05	1.06	1.07	1.05	1.07	1.08	1.14	1.09	1.42				3.19	3.19	3.31
wind	1.2 m/s	velocity	5.28	8.46	8.70	8.62	8.54	8.70	8.54	8.46	8.02	8.39	9.87	8.02			8.60	8.60	8.28

Heat 1 - 2013 Japanese National Championships (Chofu, JPN)Kota (2013) - [race analysis of leading Japanese men's 110m hurdlers - from 2011-13](#)

date	08-Jun-13	time	2.65	3.72	4.79	5.86	6.93	8.00	9.08	10.19	11.29	12.41		13.87		4 / 1			
reaction time		interval		1.07	1.07	1.07	1.07	1.07	1.08	1.11	1.10	1.12	1.46				3.21	3.22	3.33
wind	-0.1 m/s	velocity	5.18	8.54	8.54	8.54	8.54	8.54	8.46	8.23	8.31	8.16	9.60	7.93			8.54	8.52	8.23

FINAL - 2013 Seiko Golden Grand Prix (Tokyo, JPN)Kota (2013) - [race analysis of leading Japanese men's 110m hurdlers - from 2011-13](#)

date	05-May-13	time	2.65	3.76	4.85	5.95	7.04	8.13	9.21	10.32	11.43	12.56		14.02		2 / 7			
reaction time		interval		1.11	1.09	1.10	1.09	1.09	1.08	1.11	1.11	1.13	1.46				3.30	3.26	3.35
wind	-1.4 m/s	velocity	5.18	8.23	8.39	8.31	8.39	8.39	8.46	8.23	8.23	8.09	9.60	7.85			8.31	8.41	8.19

FINAL - 2013 Mikio Oda Memorial (Hiroshima, JPN)Kota (2013) - [race analysis of leading Japanese men's 110m hurdlers - from 2011-13](#)

date	29-Apr-13	time	2.61	3.69	4.75	5.84	6.91	8.00	9.08	10.19	11.33	12.50		13.99		/ 6			
reaction time		interval		1.08	1.06	1.09	1.07	1.09	1.08	1.11	1.14	1.17	1.49				3.23	3.24	3.42
wind	0.7 m/s	velocity	5.26	8.46	8.62	8.39	8.54	8.39	8.46	8.23	8.02	7.81	9.41	7.86			8.49	8.46	8.02

Heat 2 - 2013 Mikio Oda Memorial (Hiroshima, JPN)Kota (2013) - [race analysis of leading Japanese men's 110m hurdlers - from 2011-13](#)

date	29-Apr-13	time	2.64	3.71	4.78	5.84	6.91	7.98	9.07	10.18	11.29	12.43		13.90		/ 2			
reaction time		interval		1.07	1.07	1.06	1.07	1.07	1.09	1.11	1.11	1.14	1.47				3.20	3.23	3.36
wind	0.4 m/s	velocity	5.20	8.54	8.54	8.62	8.54	8.54	8.39	8.23	8.23	8.02	9.54	7.91			8.57	8.49	8.16

FINAL - 2012 Japanese National Championships (Osaka, JPN)Kota (2013) - [race analysis of leading Japanese men's 110m hurdlers - from 2011-13](#)

date	10-Jun-12	time	2.62	3.74	4.84	5.92	6.99	8.07	9.18	10.28	11.39	12.53		13.99		4 / 6			
reaction time		interval		1.12	1.10	1.08	1.07	1.08	1.11	1.10	1.11	1.14	1.46				3.30	3.26	3.35
wind	-0.6 m/s	velocity	5.24	8.16	8.31	8.46	8.54	8.46	8.23	8.31	8.23	8.02	9.60	7.86			8.31	8.41	8.19

Semi-Final 2 - 2012 Japanese National Championships (Osaka, JPN)Kota (2013) - [race analysis of leading Japanese men's 110m hurdlers - from 2011-13](#)

date	10-Jun-12	time	2.60	3.68	4.74	5.80	6.85	7.91	9.00	10.08	11.20	12.32		13.78		6 / 2			
reaction time		interval		1.08	1.06	1.06	1.05	1.06	1.09	1.08	1.12	1.12	1.46				3.20	3.20	3.32
wind	0.5 m/s	velocity	5.28	8.46	8.62	8.62	8.70	8.62	8.39	8.46	8.16	8.16	9.60	7.98			8.57	8.57	8.26

Heat 4 - 2012 Japanese National Championships (Osaka, JPN)Kota (2013) - [race analysis of leading Japanese men's 110m hurdlers - from 2011-13](#)

date	09-Jun-12	time	2.61	3.68	4.73	5.80	6.84	7.92	8.99	10.08	11.19	12.31		13.78		7 / 1			
reaction time		interval		1.07	1.05	1.07	1.04	1.08	1.07	1.09	1.11	1.12	1.47				3.19	3.19	3.32
wind	-0.2 m/s	velocity	5.26	8.54	8.70	8.54	8.79	8.46	8.54	8.39	8.23	8.16	9.54	7.98			8.60	8.60	8.26

FINAL - 2012 Seiko Golden Grand Prix (Kawasaki, JPN)Kota (2013) - [race analysis of leading Japanese men's 110m hurdlers - from 2011-13](#)

date	06-May-12	time	2.62	3.71	4.76	5.84	6.90	7.97	9.06	10.14	11.25	12.38		13.83		6 / 6			
reaction time		interval		1.09	1.05	1.08	1.06	1.07	1.09	1.08	1.11	1.13	1.45				3.22	3.22	3.32
wind	0.2 m/s	velocity	5.24	8.39	8.70	8.46	8.62	8.54	8.39	8.46	8.23	8.09	9.67	7.95			8.52	8.52	8.26

FINAL - 2012 Mito Invitational Athletics Meeting (Mito, JPN)Kota (2013) - [race analysis of leading Japanese men's 110m hurdlers - from 2011-13](#)

date	04-May-12	time	2.60	3.67	4.74	5.81	6.87	7.95	9.02	10.09	11.19	12.31		13.77		/ 1			
reaction time		interval		1.07	1.07	1.07	1.06	1.08	1.07	1.07	1.10	1.12	1.46				3.21	3.21	3.29

wind	-0.3 m/s	velocity	5.28	8.54	8.54	8.54	8.62	8.46	8.54	8.54	8.31	8.16	9.60	7.99	8.54	8.54	8.33
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A FINAL - 2012 Mikio Oda Memorial (Hiroshima, JPN)*Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13*

date	29-Apr-12	time	2.61	3.66	4.71	5.74	6.79	7.84	8.91	9.99	11.07	12.17	13.59	3 / 2	3.13	3.17	3.26
reaction time		interval		1.05	1.05	1.03	1.05	1.05	1.07	1.08	1.08	1.10	1.42		8.76	8.65	8.41
wind	2.1 m/s	velocity	5.26	8.70	8.70	8.87	8.70	8.70	8.54	8.46	8.46	8.31	9.87	8.09			

Semi-Final 1 - 2011 Japanese National Championships (Kumagaya, JPN)*Hisashi (2012) - performance analysis of Japanese record holder Keisuke Ushiro*

date	11-Jun-11	time	2.65	3.75	4.84	5.94	7.03	8.12	9.23	10.35	11.49	12.65	14.17	1 / 7	3.29	3.29	3.42
reaction time		interval		1.10	1.09	1.10	1.09	1.09	1.11	1.12	1.14	1.16	1.52		8.33	8.33	8.02
wind	-2.0 m/s	velocity	5.18	8.31	8.39	8.31	8.39	8.39	8.23	8.16	8.02	7.88	9.22	7.76			

Heat 1 - 2011 Mikio Oda Memorial (Hiroshima, JPN)*Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13*

date	29-Apr-11	time	2.59	3.66	4.74	5.82	6.92	8.03	9.13	10.25	11.35	12.51	14.00	1 / 5	3.23	3.31	3.38
reaction time		interval		1.07	1.08	1.08	1.10	1.11	1.10	1.12	1.10	1.16	1.49		8.49	8.28	8.11
wind	0.7 m/s	velocity	5.30	8.54	8.46	8.46	8.31	8.23	8.31	8.16	8.31	7.88	9.41	7.86			

Schmöger, Martin (CZE) (1995)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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FINAL - 2014 Czech Republic National U20 Championships (Trinec, CZE) (99cm)*Fehér (2014) - Final report from the U18 & U20 Czech Republic national championships*

date	28-Jun-14	time	2.83	4.00	5.15	6.29	7.46	8.59	9.78	10.97	12.16	13.35	15.00	2 / 6	3.46	3.49	3.57
reaction time	0.174	interval		1.17	1.15	1.14	1.17	1.13	1.19	1.19	1.19	1.19	1.65		7.92	7.86	7.68
wind	-2.2 m/s	velocity	4.85	7.81	7.95	8.02	7.81	8.09	7.68	7.68	7.68	7.68	8.50	7.33			

Heat 1 - 2014 Czech Republic National U20 Championships (Trinec, CZE) (99cm)*Fehér (2014) - Final report from the U18 & U20 Czech Republic national championships*

date	28-Jun-14	time	2.81	3.94	5.13	6.27	7.43	8.58	9.68	10.94	12.16	13.38	15.02	5 / 2	3.46	3.41	3.70
reaction time	0.215	interval		1.13	1.19	1.14	1.16	1.15	1.10	1.26	1.22	1.22	1.64		7.92	8.04	7.41
wind	-1.6 m/s	velocity	4.88	8.09	7.68	8.02	7.88	7.95	8.31	7.25	7.49	7.49	8.55	7.32			

Schulman, Connor (USA) (2001)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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Heat 1 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)*Henson (2024) - Athlete First: 2024 year end hurdle report*

date	24-Jun-24	time	2.53	3.63	4.68	5.68	6.70	7.72	8.74	9.80	10.83	11.90	13.38	2 / 5	3.15	3.06	3.16
reaction time		interval	7 steps	1.10	1.05	1.00	1.02	1.02	1.02	1.06	1.03	1.07	1.48		8.70	8.96	8.68
wind	0.8 m/s	velocity	5.42	8.31	8.70	9.14	8.96	8.96	8.96	8.62	8.87	8.54	9.47	8.22			

Schwarthoff, Florian (GER) (1968)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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FINAL - 2002 IAAF World Cup (Madrid, ESP)*Sanchez (2002) - copa del mundo de Madrid '02: análisis de la carreras con villas*

date	21-Sep-02	time	2.59	3.65	4.70	5.72	6.77	7.83	8.93	10.02	11.10	12.20	13.79	4 / 6	3.13	3.21	3.27
reaction time	0.176	interval	7 steps	1.06	1.05	1.02	1.05	1.06	1.10	1.09	1.08	1.10	1.59		8.76	8.54	8.39
wind	-2.2 m/s	velocity	5.30	8.62	8.70	8.96	8.70	8.62	8.31	8.39	8.46	8.31	8.82	7.98			

FINAL - 2002 European Championships (Munich, GER)*Graubner (2009) - <http://www.fgs.uni-halle.de>*

date	10-Aug-02	time	2.61	3.67	4.69	5.71	6.71	7.75	8.77	9.81	10.85	11.93	13.37	1 / 4	3.10	3.06	3.16
reaction time	0.164	interval		1.06	1.02	1.02	1.00	1.04	1.02	1.04	1.04	1.08	1.44		8.85	8.96	8.68
wind	0.4 m/s	velocity	5.26	8.62	8.96	8.96	9.14	8.79	8.96	8.79	8.79	8.46	9.74	8.23			

Semi-Final 1 - 2002 European Championships (Munich, GER)*Graubner (2009) - <http://www.fgs.uni-halle.de>*

date	10-Aug-02	time	2.63	3.71	4.73	5.75	6.79	7.83	8.86	9.89	10.97	12.03	13.52	1 / 3	3.12	3.11	3.17
reaction time	0.149	interval		1.08	1.02	1.02	1.04	1.04	1.03	1.03	1.08	1.06	1.49		8.79	8.82	8.65
wind	-0.5 m/s	velocity	5.22	8.46	8.96	8.96	8.79	8.79	8.87	8.87	8.46	8.62	9.41	8.14			

Heat 1 - 2002 European Championships (Munich, GER)*Graubner (2009) - <http://www.fgs.uni-halle.de>*

date	09-Aug-02	time	2.62	3.69	4.74	5.75	6.75	7.80	8.85	9.89	10.97	12.05	13.53	1 / 2	3.13	3.10	3.20
reaction time	0.135	interval		1.07	1.05	1.01	1.00	1.05	1.05	1.04	1.08	1.08	1.48		8.76	8.85	8.57
wind	-0.9 m/s	velocity	5.24	8.54	8.70	9.05	9.14	8.70	8.70	8.79	8.46	8.46	9.47	8.13			

FINAL - 2001 ISTAF (Berlin, GER)*Graubner (2009) - <http://www.fgs.uni-halle.de>*

date	31-Aug-09	time	2.68	3.76	4.80	5.82	6.84	7.90	8.94	10.00	10.10	12.20	13.85	7 / 8	3.14	3.12	3.26
reaction time	0.161	interval	7 steps	1.08	1.04	1.02	1.02	1.06	1.04	1.06	0.10	2.10	1.65		8.73	8.79	8.41
wind	1.0 m/s	velocity	5.12	8.46	8.79	8.96	8.96	8.62	8.79	8.62	9.14	4.35	8.50	7.94			

FINAL - 2001 European Cup (Bremen, GER)*Graubner (2007) - <http://www.fgs.uni-halle.de>*

date	24-Jun-01	time	2.60	3.65	4.74	5.81	6.85	7.87	8.91	9.96	11.06	12.14	13.57	3 / 2	3.21	3.10	3.23
reaction time	0.129	interval	7 steps	1.05	1.09	1.07	1.04	1.02	1.04	1.05	1.10	1.08	1.43		8.54	8.85	8.49
wind	1.3 m/s	velocity	5.28	8.70	8.39	8.54	8.79	8.96	8.79	8.70	8.31	8.46	9.80	8.11			

FINAL - 2000 ISTAF (Berlin, GER)*Graubner (2009) - <http://www.fgs.uni-halle.de>*

date	01-Sep-00	time	2.56	3.62	4.68	5.70	6.70	7.75	8.78	9.82	10.86	11.96	13.40	1 / 3	3.14	3.08	3.18
reaction time	0.148	interval		1.06	1.06	1.02	1.00	1.05	1.03	1.04	1.04	1.10	1.44		8.73	8.90	8.62
wind	-0.4 m/s	velocity	5.36	8.62	8.62	8.96	9.14	8.70	8.87	8.79	8.79	8.31	9.74	8.21			

FINAL - 1999 IAAF World Championships (Sevilla, ESP)*Sanchez (1999) - Sevilla '99: análisis de la carreras con villas*

date	25-Aug-99	time	2.56	3.59	4.64	5.64	6.67	7.67	8.69	9.73	10.80	11.89	13.39	6 / 7	3.08	3.05	3.20
reaction time	0.132	interval	7 steps	1.03	1.05	1.00	1.03	1.00	1.02	1.04	1.07	1.09	1.50				

wind	1.0 m/s	velocity	5.36	8.87	8.70	9.14	8.87	9.14	8.96	8.79	8.54	8.39	9.35	8.22	8.90	8.99	8.57	
Semi-Final 1 - 1999 IAAF World Championships (Sevilla, ESP)														<i>Sanchez (1999) - Sevilla '99: análisis de la carreras con villas</i>				
date	24-Aug-99	time	2.52	3.56	4.59	5.59	6.60	7.61	8.61	9.64	10.67	11.75	13.30	8 / 2				
reaction time	0.135	interval	1.04	1.03	1.00	1.01	1.01	1.00	1.03	1.03	1.08	1.55			3.07	3.02	3.14	
wind	0.0 m/s	velocity	5.44	8.79	8.87	9.14	9.05	9.05	9.14	8.87	8.87	8.46	9.05	8.27	8.93	9.08	8.73	
FINAL - 1998 European Championships (Budapest, HUN)														<i>Sanchez (1998) - Budapest '98: análisis de la carreras con villas</i>				
date	22-Aug-98	time	2.59	3.64	4.68	5.68	6.70	7.70	8.71	9.75	10.78	11.83	13.23	4 / 4				
reaction time		interval	1.05	1.04	1.00	1.02	1.00	1.01	1.04	1.03	1.05	1.40			3.09	3.03	3.12	
wind	1.5 m/s	velocity	5.30	8.70	8.79	9.14	8.96	9.14	9.05	8.79	8.87	8.70	10.01	8.31	8.87	9.05	8.79	
FINAL - 1997 IAAF World Championships (Athens, GRE)														<i>Hommel (1997) - biomechanical research project at the VI th world championships in athletics, Athens 1997</i>				
date	07-Aug-97	time	2.58	3.64	4.64	5.66	6.68	7.70	8.72	9.74	10.78	11.84	13.20	3 / 4				
reaction time	0.141	interval	7 steps	1.06	1.00	1.02	1.02	1.02	1.02	1.04	1.06	1.36			3.08	3.06	3.12	
wind	0.2 m/s	velocity	5.32	8.62	9.14	8.96	8.96	8.96	8.96	8.79	8.62	10.31	8.33		8.90	8.96	8.79	
FINAL - 1997 European Cup (Munich, GER)														<i>Jung (2003) - http://www.fgs.uni-halle.de</i>				
date	22-Jun-97	time	2.56	3.62	4.63	5.63	6.63	7.66	8.69	9.70	10.74	11.80	13.20	/ 1				
reaction time		interval	7 steps	1.06	1.01	1.00	1.00	1.03	1.03	1.01	1.04	1.06	1.40		3.07	3.06	3.11	
wind	0.2 m/s	velocity	5.36	8.62	9.05	9.14	9.14	8.87	8.87	9.05	8.79	8.62	10.01	8.33	8.93	8.96	8.82	
FINAL - 1996 Olympic Games (Atlanta, GA)														<i>Butler (2016) - IAAF statistics handbook- special edition: Games of the XXXI Olympiad- Rio 2016</i>				
date	26-Jul-96	time	2.38	3.46	4.44	5.43	6.44	7.44	8.44	9.49	10.54	11.61	13.17	3 / 3				
reaction time	0.164	interval	7 steps	1.08	0.98	0.99	1.01	1.00	1.00	1.05	1.05	1.07	1.56		3.05	3.01	3.17	
wind	0.8 m/s	velocity	5.76	8.46	9.33	9.23	9.05	9.14	9.14	8.70	8.70	8.54	8.99	8.35	8.99	9.11	8.65	
FINAL - 1996 LIVE (Nurnberg, GER)														<i>Graubner (2009) - http://www.fgs.uni-halle.de</i>				
date	07-Jun-96	time	2.57	3.62	4.62	5.62	6.62	7.64	8.65	9.67	10.69	11.73	13.11	/ 1				
reaction time		interval	1.05	1.00	1.00	1.00	1.02	1.01	1.02	1.02	1.04	1.38			3.05	3.03	3.08	
wind	0.0 m/s	velocity	5.34	8.70	9.14	9.14	9.14	8.96	9.05	8.96	8.96	8.79	10.16	8.39	8.99	9.05	8.90	
FINAL - 1995 German National Championships (Bremen, GER)														<i>Graubner (2009) - http://www.fgs.uni-halle.de</i>				
date	02-Jul-95	time	2.54	3.59	4.61	5.60	6.59	7.60	8.58	9.59	10.61	11.65	13.05	/ 1				
reaction time		interval	1.05	1.02	0.99	0.99	1.01	0.98	1.01	1.02	1.04	1.40	NR		3.06	2.98	3.07	
wind	-0.8 m/s	velocity	5.40	8.70	8.96	9.23	9.23	9.05	9.33	9.05	8.96	8.79	10.01	8.43	8.96	9.20	8.93	
FINAL - 1992 Olympic Games (Barcelona, ESP)														<i>Knight (1992) - 1992 Olympic report: the hurdling events</i>				
date	03-Aug-92	time	2.56	3.57	4.61	5.61	6.61	7.64	8.69	9.74	10.81	11.87	13.29	5 / 5				
reaction time	0.175	interval	7 steps	1.01	1.04	1.00	1.00	1.03	1.05	1.05	1.07	1.06	1.42		3.05	3.08	3.18	
wind	0.8 m/s	velocity	5.36	9.05	8.79	9.14	9.14	8.87	8.70	8.70	8.54	8.62	9.87	8.28	8.99	8.90	8.62	
FINAL - 1991 European Cup (Frankfurt, GER)														<i>Federle (2003) - http://www.fgs.uni-halle.de</i>				
date	30-Jun-91	time	2.54	3.61	4.66	5.69	6.74	7.79	8.83	9.86	10.90	11.98	13.43	/ 2				
reaction time		interval	1.07	1.05	1.03	1.05	1.05	1.04	1.03	1.04	1.08	1.45			3.15	3.14	3.15	
wind	-0.9 m/s	velocity	5.40	8.54	8.70	8.87	8.70	8.70	8.79	8.87	8.79	8.46	9.67	8.19	8.70	8.73	8.70	
Schwarzer, Helge (GER) (1985)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Semi-Final 3 - 2009 IAAF World Championships (Berlin, GER)														<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>				
date	20-Aug-09	time	2.59	3.69	4.77	5.82	6.88	7.92	8.98	10.04	11.12	12.24	13.72	6 / 7				
reaction time	0.132	interval	1.10	1.08	1.05	1.06	1.04	1.06	1.06	1.08	1.12	1.48			3.23	3.16	3.26	
wind	0.1 m/s	velocity	5.30	8.31	8.46	8.70	8.62	8.79	8.62	8.62	8.46	8.16	9.47	8.02	8.49	8.68	8.41	
Heat 2 - 2009 IAAF World Championships (Berlin, GER)														<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>				
date	19-Aug-09	time	2.59	3.63	4.71	5.74	6.78	7.84	8.91	9.99	11.07	12.17	13.66	7 / 2				
reaction time	0.136	interval	1.04	1.08	1.03	1.04	1.06	1.07	1.08	1.08	1.10	1.49			3.15	3.17	3.26	
wind	-0.2 m/s	velocity	5.30	8.79	8.46	8.87	8.79	8.62	8.54	8.46	8.46	8.31	9.41	8.05	8.70	8.65	8.41	
Scott, Ja'Qualon (USA) (2001)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)														<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>				
date	28-Jun-24	time	2.54	3.59	4.61	5.61	6.62	7.64	8.65	9.66	10.68	11.70	13.09	8 / 5				
reaction time		interval	7 steps	1.05	1.02	1.00	1.01	1.02	1.01	1.01	1.02	1.02	1.39	PB		3.07	3.04	3.05
wind	2.0 m/s	velocity	5.40	8.70	8.96	9.14	9.05	8.96	9.05	9.05	8.96	8.96	10.09	8.40	8.93	9.02	8.99	
Semi-Final 2 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)														<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>				
date	27-Jun-24	time	2.57	3.60	4.62	5.62	6.63	7.65	8.67	9.70	10.72	11.78	13.23	6 / 2				
reaction time		interval	7 steps	1.03	1.02	1.00	1.01	1.02	1.02	1.03	1.02	1.06	1.45		3.05	3.05	3.11	
wind	-0.2 m/s	velocity	5.34	8.87	8.96	9.14	9.05	8.96	8.96	8.87	8.96	8.62	9.67	8.31	8.99	8.99	8.82	
Heat 4 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)														<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>				
date	24-Jun-24	time	2.55	3.60	4.63	5.66	6.66	7.66	8.65	9.68	10.73	11.80	13.15	2 / 3				
reaction time		interval	7 steps	1.05	1.03	1.03	1.00	1.00	0.99	1.03	1.05	1.07	1.35	PB		3.11	2.99	3.15
wind	1.2 m/s	velocity	5.38	8.70	8.87	8.87	9.14	9.14	9.23	8.87	8.70	8.54	10.39	8.37	8.82	9.17	8.70	

FINAL - 2024 NCAA Championships (Eugene, OR) (TV Analysis)*Henson (2024) - Athlete First: 2024 year end hurdle report*

date	07-Jun-24	time	2.60	3.67	4.70	5.74	6.77	7.81	8.84	9.86	10.88	11.91	13.27	3 / 3			
reaction time		interval	7 steps	1.07	1.03	1.04	1.03	1.04	1.03	1.02	1.02	1.03	1.36	PB	3.14	3.10	3.07
wind	0.1 m/s	velocity	5.28	8.54	8.87	8.79	8.87	8.79	8.87	8.96	8.96	8.87	10.31	8.29	8.73	8.85	8.93

Šebřle, Roman (CZE) (1974)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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Heat 2 - 2012 Czech Republic National Indoor Championships (Praha, CZE)*Feher (2012) - Czech Republic indoor national championships - men's 60m hurdles*

date	25-Feb-12	time	2.85	4.07	5.30	6.54	7.83					9.05	8 / 7			
reaction time	0.140	interval		1.22	1.23	1.24	1.29				1.22			3.69		
wind		velocity	4.81	7.49	7.43	7.37	7.09				7.97	6.63		7.43		

Decathlon - Heat 3 - 2009 IAAF World Championships (Berlin, GER)*Graubner (2009) - biomechanical analyses at the 12th IAAF world championships*

date	20-Aug-09	time	2.77	3.91	5.01	6.11	7.21	8.35	9.44	10.57	11.73	12.90	14.44	2 / 5			
reaction time	0.165	interval		1.14	1.10	1.10	1.14	1.09	1.13	1.16	1.17	1.54			3.34	3.33	3.46
wind	-0.1 m/s	velocity	4.95	8.02	8.31	8.31	8.31	8.02	8.39	8.09	7.88	7.81	9.10	7.62	8.21	8.23	7.92

Sedlák, Pavel (CZE) (1983)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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FINAL - 2012 Czech Republic National Indoor Championships (Praha, CZE)*Feher (2012) - Czech Republic indoor national championships - men's 60m hurdles*

date	25-Feb-12	time	2.67	3.80	4.89	6.02	7.16					8.23	8 / 7			
reaction time	0.149	interval		1.13	1.09	1.13	1.14				1.07			3.35		
wind		velocity	5.14	8.09	8.39	8.09	8.02				9.08	7.29		8.19		

Heat 1 - 2012 Czech Republic National Indoor Championships (Praha, CZE)*Feher (2012) - Czech Republic indoor national championships - men's 60m hurdles*

date	25-Feb-12	time	2.66	3.80	4.90	6.04	7.18					8.20	5 / 2			
reaction time	0.135	interval		1.14	1.10	1.14	1.14				1.02			3.38		
wind		velocity	5.16	8.02	8.31	8.02	8.02				9.53	7.32		8.11		

Sedlák, Václav (CZE) (1993)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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Heat 1 - 2014 Czech Republic National Championships (Ostrava, CZE)*Feher (2014) - Final report from the Czech Republic national championships*

date	02-Aug-14	time	2.73	3.88	5.00	6.13	7.24	8.35						5 / --			
reaction time	0.151	interval		1.15	1.12	1.13	1.11	1.11					DQ		3.40		
wind	-1.6 m/s	velocity	5.03	7.95	8.16	8.09	8.23	8.23							8.06		

FINAL - 2013 Czech Republic National Championships (Tábor, CZE)*Feher (2013) - Final report from the men's & women's Czech Republic national championships*

date	15-Jun-13	time	2.73	3.85	4.96	6.05	7.13	8.25	9.40	10.53	11.68	12.87	14.36	3 / 4			
reaction time	0.147	interval		1.12	1.11	1.09	1.08	1.12	1.15	1.13	1.15	1.19	1.49		3.32	3.35	3.47
wind	0.4 m/s	velocity	5.03	8.16	8.23	8.39	8.46	8.16	7.95	8.09	7.95	7.68	9.41	7.66	8.26	8.19	7.90

Heat 3 - 2013 Czech Republic National Championships (Tábor, CZE)*Feher (2013) - Final report from the men's & women's Czech Republic national championships*

date	15-Jun-13	time	2.75	3.91	5.03	6.13	7.26	8.38	9.52	10.67	11.84	13.00	14.56	4 / 1			
reaction time	0.131	interval		1.16	1.12	1.10	1.13	1.12	1.14	1.15	1.17	1.16	1.56		3.38	3.39	3.48
wind	-0.3 m/s	velocity	4.99	7.88	8.16	8.31	8.09	8.16	8.02	7.95	7.81	7.88	8.99	7.55	8.11	8.09	7.88

FINAL - 2012 Czech Republic National Indoor Championships (Praha, CZE)*Feher (2012) - Czech Republic indoor national championships - men's 60m hurdles*

date	25-Feb-12	time	2.67	3.78	4.85	5.93	7.00						7.89	5 / 2			
reaction time	0.141	interval		1.11	1.07	1.08	1.07				0.89				3.26		
wind		velocity	5.14	8.23	8.54	8.46	8.54				10.92	7.60			8.41		

Heat 3 - 2012 Czech Republic National Indoor Championships (Praha, CZE)*Feher (2012) - Czech Republic indoor national championships - men's 60m hurdles*

date	25-Feb-12	time	2.70	3.82	4.88	5.99	7.05						7.98	4 / 1			
reaction time	0.141	interval		1.12	1.06	1.11	1.06				0.93				3.29		
wind		velocity	5.08	8.16	8.62	8.23	8.62				10.45	7.52			8.33		

Sedoc, Gregory (NED) (1981)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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Semi-Final 2 - 2009 IAAF World Championships (Berlin, GER)*Graubner (2009) - biomechanical analyses at the 12th IAAF world championships*

date	20-Aug-09	time	2.63	3.66	4.70	5.73	6.77	7.80	8.84	9.90	10.95	12.03	13.45	8 / 5			
reaction time	0.162	interval		1.03	1.04	1.03	1.04	1.03	1.04	1.06	1.05	1.08	1.42		3.10	3.11	3.19
wind	0.6 m/s	velocity	5.22	8.87	8.79	8.87	8.79	8.87	8.79	8.62	8.70	8.46	9.87	8.18	8.85	8.82	8.60

Heat 5 - 2009 IAAF World Championships (Berlin, GER)*Graubner (2009) - biomechanical analyses at the 12th IAAF world championships*

date	19-Aug-09	time	2.63	3.69	4.74	5.77	6.79	7.83	8.90	9.95	11.03	12.14	13.54	7 / 3			
reaction time	0.145	interval		1.06	1.05	1.03	1.02	1.04	1.07	1.05	1.08	1.11	1.40		3.14	3.13	3.24
wind	0.0 m/s	velocity	5.22	8.62	8.70	8.87	8.96	8.79	8.54	8.70	8.46	8.23	10.01	8.12	8.73	8.76	8.46

Sekiguchi, Sekigori (JPN)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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FINAL - 2016 Gunma Prefecture High School Championships (Gunma, JPN)*(2016.10.25) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en*

date	24-Sep-16	time	2.79	4.04	5.22	6.41	7.61	8.80	10.00	11.19	12.39	13.62	15.22	4 / 1			
reaction time		interval		1.25	1.18	1.19	1.20	1.19	1.20	1.19	1.20	1.23	1.60		3.62	3.59	3.62
wind	0.3 m/s	velocity	4.92	7.31	7.75	7.68	7.62	7.68	7.62	7.68	7.62	7.43	8.76	7.23	7.57	7.64	7.57

Sekiguchi, Takane (JPN)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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Heat 1 - 2016 Japanese National Youth Championships (Mizuho, JPN) (91cm)*(2016.11.07) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en*

date	21-Oct-16	time	2.69	3.82	4.93	6.03	7.15	8.28	9.42	10.54	11.68	12.87	14.44	4 / 3			
reaction time		interval		1.13	1.11	1.10	1.12	1.13	1.14	1.12	1.14	1.19	1.57		3.34	3.39	3.45
wind	1.7 m/s	velocity	5.10	8.09	8.23	8.31	8.16	8.09	8.02	8.16	8.02	7.68	8.93	7.62	8.21	8.09	7.95
Sekyra, Daniel (CZE) (1996)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2015 Czech Republic National U20 Indoor Championships (Praha, CZE) (99cm)													<i>Feher (2015) - Final report U18 & U20 Czech Republic indoor national champs</i>				
date	14-Feb-15	time	2.84	4.00	5.19	6.37	7.57						8.61	1 / 6			
reaction time	0.191	interval		1.16	1.19	1.18	1.20					1.04			3.53		
wind		velocity	4.83	7.88	7.68	7.75	7.62					9.35	6.97		7.77		
Heat 3 - 2014 Czech Republic National U20 Championships (Trinec, CZE) (99cm)													<i>Feher (2014) - Final report from the U18 & U20 Czech Republic national championships</i>				
date	28-Jun-14	time	2.95	4.16	5.40	6.62	7.87	9.10	10.37	11.62	12.91	14.24	16.00	4 / 6			
reaction time	0.247	interval		1.21	1.24	1.22	1.25	1.23	1.27	1.25	1.29	1.33	1.76		3.67	3.75	3.87
wind	-2.5 m/s	velocity	4.65	7.55	7.37	7.49	7.31	7.43	7.20	7.31	7.09	6.87	7.97	6.88	7.47	7.31	7.09
Senryu, Asai (JPN)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2023 Japanese National High School Championships (Sapporo, JPN)													<i>Takashima (2023) - national high school sports festival - biomechanics data</i>				
date	06-Aug-23	time	2.77	3.91	5.01	6.11	7.21	8.31	9.46	10.59	11.75	12.89	14.38	9 / 6			
reaction time	0.212	interval		1.14	1.10	1.10	1.10	1.10	1.15	1.13	1.16	1.14	1.49		3.34	3.35	3.43
wind	0.8 m/s	velocity	4.95	8.02	8.31	8.31	8.31	8.31	7.95	8.09	7.88	8.02	9.41	7.65	8.21	8.19	7.99
Sevier, Mikdat (TUR) (1998)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Semi-Final 1 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)													<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>				
date	20-Mar-22	time	2.53	3.60	4.66	5.66	6.73						7.75	2 / 8			
reaction time	0.129	interval		1.07	1.06	1.00	1.07					1.02			3.13		
wind		velocity	5.42	8.54	8.62	9.14	8.54					9.53	7.74		8.76		
Shabanov, Georgiy (URS) (1960)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 1981 USSR vs. USA (Leningrad, URS)													<i>Chanon (1987) - analyse comparee des caracteristiques des courses de 100m haies et 110m haies</i>				
date	10-Jul-81	time	2.50	3.61	4.66	5.69	6.74	7.80	8.90	10.06	11.24	12.49	13.81	1 / 4			
reaction time		interval		1.11	1.05	1.03	1.05	1.06	1.10	1.16	1.18	1.25	1.32		3.19	3.21	3.59
wind	2.8 m/s	velocity	5.49	8.23	8.70	8.87	8.70	8.62	8.31	7.88	7.75	7.31	10.62	7.97	8.60	8.54	7.64
FINAL - 1981 USSR vs. GDR (Tbilisi, URS)													<i>Chanon (1987) - analyse comparee des caracteristiques des courses de 100m haies et 110m haies</i>				
date	26-Jun-81	time	2.48	3.61	4.69	5.72	6.74	7.81	8.90	10.00	11.20	12.44	13.82	1 / 2			
reaction time		interval		1.13	1.08	1.03	1.02	1.07	1.09	1.10	1.20	1.24	1.38		3.24	3.18	3.54
wind	???	velocity	5.53	8.09	8.46	8.87	8.96	8.54	8.39	8.31	7.62	7.37	10.16	7.96	8.46	8.62	7.75
Shabanov, Konstantin (RUS) (1989)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2013 European Indoor Championships (Göteborg, SWE)													<i>Blomkvist (2013) - www.elitlandslag.se/SprintHäck/KortHäck.aspx</i>				
date	01-Mar-13	time	2.59	3.64	4.67	5.71	6.77						7.66	7 / 8			
reaction time	0.137	interval		1.05	1.03	1.04	1.06					0.89			3.12		
wind		velocity	5.30	8.70	8.87	8.79	8.62					10.92	7.83		8.79		
FINAL - 2012 IAAF World Indoor Championships (Istanbul, TUR) (TV Analysis)													<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>				
date	11-Mar-12	time	2.58	3.60	4.62	5.64	6.66						7.60	2 / 5			
reaction time	0.202	interval		1.02	1.02	1.02	1.02					0.94			3.06		
wind		velocity	5.32	8.96	8.96	8.96	8.96					10.34	7.89		8.96		
FINAL - 2009 Seiko Super Grand Prix (Kawasaki, JPN)													<i>Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdles</i>				
date	23-Sep-09	time	2.61	3.69	4.75	5.79	6.85	7.91	9.02	10.14	11.26	12.41	13.96	1 / 3			
reaction time		interval		1.08	1.06	1.04	1.06	1.06	1.11	1.12	1.12	1.15	1.55		3.18	3.23	3.39
wind	-1.3 m/s	velocity	5.26	8.46	8.62	8.79	8.62	8.62	8.23	8.16	8.16	7.95	9.05	7.88	8.62	8.49	8.09
Shaker, Amir (SWE) (1989)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2013 Windsprint (Sundsvall, SWE)													<i>(2013) - www.ssg.se/windsprint/Splittider/</i>				
date	28-Jul-13	time	2.70	3.79	4.84	5.91	6.97	8.05	9.14	10.21	11.29	12.40	13.87	2 / 6			
reaction time		interval		1.09	1.05	1.07	1.06	1.08	1.09	1.07	1.08	1.11	1.47		3.21	3.23	3.26
wind	1.7 m/s	velocity	5.08	8.39	8.70	8.54	8.62	8.46	8.39	8.54	8.46	8.23	9.54	7.93	8.54	8.49	8.41
FINAL - 2012 Windsprint (Sundsvall, SWE)													<i>Blomkvist (2012) - www.sub13.se</i>				
date	17-Jun-12	time	2.76	3.87	4.97	6.06	7.15	8.28	9.42	10.58	11.74	12.91	14.52	8 / 7			
reaction time		interval		1.11	1.10	1.09	1.09	1.13	1.14	1.16	1.16	1.17	1.61		3.30	3.36	3.49
wind	1.1 m/s	velocity	4.97	8.23	8.31	8.39	8.39	8.09	8.02	7.88	7.88	7.81	8.71	7.58	8.31	8.16	7.86
Shaker, Amir (IRQ) (1989)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2011 Folksam GP (Göteborg, SWE)													<i>Blomkvist (2011) - www.sub13.se</i>				
date	11-Jun-11	time	2.64	3.72	4.84	5.90	6.96	8.05	9.16	10.26	11.38	12.56	14.27	1 / 6			
reaction time		interval		1.08	1.12	1.06	1.06	1.09	1.11	1.10	1.12	1.18	1.71		3.26	3.26	3.40
wind	0.6 m/s	velocity	5.20	8.46	8.16	8.62	8.62	8.39	8.23	8.31	8.16	7.75	8.20	7.71	8.41	8.41	8.06
FINAL - 2010 Swedish National Championships (Falun, SWE)													<i>Blomkvist (2010) - www.sub13.se</i>				
date	22-Aug-10	time	2.80	3.94	5.07	6.20	7.32	8.45	9.59	10.77	11.94	13.11	14.68	1 / 4			
reaction time		interval		1.14	1.13	1.13	1.12	1.13	1.14	1.18	1.17	1.17	1.57	PB	3.40	3.39	3.52

wind -0.7 m/s velocity 4.90 8.02 8.09 8.09 8.16 8.09 8.02 7.75 7.81 7.81 8.93 7.49 8.06 8.09 7.79

		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Sharman, William (GBR) (1984)																	
FINAL - 2013 IAAF World Championships (Moscow, RUS) (TV Analysis)		<i>Henson (2021) - Athlete First: major championships report</i>															
date	12-Aug-13	time	2.54	3.56	4.60	5.60	6.62	7.64	8.68	9.72	10.76	11.84	13.30	2 / 5			
reaction time	0.151	interval	7 steps	1.02	1.04	1.00	1.02	1.02	1.04	1.04	1.04	1.08	1.46		3.06	3.08	3.16
wind	0.3 m/s	velocity	5.40	8.96	8.79	9.14	8.96	8.96	8.79	8.79	8.79	8.46	9.60	8.27	8.96	8.90	8.68
FINAL - 2011 IAAF World Championships (Daegu, KOR) (TV Analysis)		<i>Henson (2021) - Athlete First: major championships report</i>															
date	29-Aug-11	time	2.52	3.62	4.68	5.74	6.77	7.81	8.86	9.92	11.00	12.11	13.67	8 / 5			
reaction time	0.178	interval	7 steps	1.10	1.06	1.06	1.03	1.04	1.05	1.06	1.08	1.11	1.56		3.22	3.12	3.25
wind	-1.1 m/s	velocity	5.44	8.31	8.62	8.62	8.87	8.79	8.70	8.62	8.46	8.23	8.99	8.05	8.52	8.79	8.44
FINAL - 2009 IAAF World Championships (Berlin, GER)		<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>															
date	20-Aug-09	time	2.54	3.60	4.62	5.64	6.65	7.68	8.73	9.78	10.84	11.91	13.30	6 / 4			
reaction time	0.125	interval	7 steps	1.06	1.02	1.02	1.01	1.03	1.05	1.05	1.06	1.07	1.39	PB	3.10	3.09	3.18
wind	0.1 m/s	velocity	5.40	8.62	8.96	8.96	9.05	8.87	8.70	8.70	8.62	8.54	10.09	8.27	8.85	8.87	8.62
Semi-Final 3 - 2009 IAAF World Championships (Berlin, GER)		<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>															
date	20-Aug-09	time	2.56	3.58	4.63	5.65	6.66	7.69	8.72	9.77	10.82	11.90	13.38	8 / 1			
reaction time	0.110	interval	7 steps	1.02	1.05	1.02	1.01	1.03	1.03	1.05	1.05	1.08	1.48	PB	3.09	3.07	3.18
wind	0.1 m/s	velocity	5.36	8.96	8.70	8.96	9.05	8.87	8.87	8.70	8.70	8.46	9.47	8.22	8.87	8.93	8.62
Heat 4 - 2009 IAAF World Championships (Berlin, GER)		<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>															
date	19-Aug-09	time	2.61	3.67	4.71	5.75	6.81	7.85	8.90	9.97	11.03	12.11	13.52	1 / 3			
reaction time	0.143	interval	7 steps	1.06	1.04	1.04	1.06	1.04	1.05	1.07	1.06	1.08	1.41		3.14	3.15	3.21
wind	0.5 m/s	velocity	5.26	8.62	8.79	8.79	8.62	8.79	8.70	8.54	8.62	8.46	9.94	8.14	8.73	8.70	8.54
Shi Dongpeng (CHN) (1984)																	
FINAL - 2012 Golden Grand Prix (Shanghai, CHN) (TV Analysis)		<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>															
date	19-May-12	time	2.52	3.60	4.66	5.70	6.74	7.78	8.82	9.86	10.96	12.06	13.60	1 / 7			
reaction time	0.155	interval		1.08	1.06	1.04	1.04	1.04	1.04	1.04	1.10	1.10	1.54		3.18	3.12	3.24
wind	0.4 m/s	velocity	5.44	8.46	8.62	8.79	8.79	8.79	8.79	8.79	8.31	8.31	9.10	8.09	8.62	8.79	8.46
Semi-Final 2 - 2009 IAAF World Championships (Berlin, GER)		<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>															
date	20-Aug-09	time	2.63	3.73	4.77	5.79	6.81	7.83	8.86	9.90	10.95	12.03	13.42	3 / 4			
reaction time	0.144	interval		1.10	1.04	1.02	1.02	1.02	1.03	1.04	1.05	1.08	1.39		3.16	3.07	3.17
wind	0.6 m/s	velocity	5.22	8.31	8.79	8.96	8.96	8.96	8.87	8.79	8.70	8.46	10.09	8.20	8.68	8.93	8.65
Heat 1 - 2009 IAAF World Chamionships (Berlin, GER)		<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>															
date	19-Aug-09	time	2.68	3.75	4.79	5.82	6.84	7.90	8.95	10.00	11.06	12.12	13.56	2 / 1			
reaction time	0.155	interval		1.07	1.04	1.03	1.02	1.06	1.05	1.05	1.06	1.06	1.44		3.14	3.13	3.17
wind	-0.4 m/s	velocity	5.12	8.54	8.79	8.87	8.96	8.62	8.70	8.70	8.62	8.62	9.74	8.11	8.73	8.76	8.65
FINAL - 2009 Osaka Grand Prix (Osaka, JPN)		<i>Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdles</i>															
date	09-May-09	time	2.64	3.70	4.74	5.79	6.83	7.84	8.88	9.95	11.00	12.09	13.48	/ 2			
reaction time		interval		1.06	1.04	1.05	1.04	1.01	1.04	1.07	1.05	1.09	1.39		3.15	3.09	3.21
wind	0.2 m/s	velocity	5.20	8.62	8.79	8.70	8.79	9.05	8.79	8.54	8.70	8.39	10.09	8.16	8.70	8.87	8.54
FINAL - 2007 IAAF World Championships (Osaka, JPN)		<i>Xiao (2014) - development process of the characterisitcs about 110m hurdle training in China</i>															
date	31-Aug-07	time	2.59	3.62	4.63	5.62	6.60	7.57	8.57	9.57	10.59	11.62	13.19	6 / 5			
reaction time	0.150	interval		1.03	1.01	0.99	0.98	0.97	1.00	1.00	1.02	1.03	1.57	PB	3.03	2.95	3.05
wind	1.7 m/s	velocity	5.30	8.87	9.05	9.23	9.33	9.42	9.14	9.14	8.96	8.87	8.93	8.34	9.05	9.29	8.99
Race 2 - 2007 Athletissima Meeting (Lausanne, SUI)		<i>Lu (2008) - 110m hurdle technical characteristics of Shi Dongpeng</i>															
date	10-Jul-07	time	2.63	3.71	4.76	5.79	6.80	7.80	8.82	9.85	10.90	11.97	13.42	/ 8			
reaction time		interval		1.08	1.05	1.03	1.01	1.00	1.02	1.03	1.05	1.07	1.45		3.16	3.03	3.15
wind	0.0 m/s	velocity	5.22	8.46	8.70	8.87	9.05	9.14	8.96	8.87	8.70	8.54	9.67	8.20	8.68	9.05	8.70
FINAL - 2007 National Grand Prix (Zhaoqing, CHN)		<i>Zhao (2009) - kinematic research on the 110m hurdle technique of Shi Dongpeng</i>															
date	19-May-07	time	2.63	3.70	4.73	5.75	6.77	7.79	8.82	9.86	10.92	11.99	13.47	/ 1			
reaction time		interval		1.07	1.03	1.02	1.02	1.02	1.03	1.04	1.06	1.07	1.48		3.12	3.07	3.17
wind	0.4 m/s	velocity	5.22	8.54	8.87	8.96	8.96	8.96	8.87	8.79	8.62	8.54	9.47	8.17	8.79	8.93	8.65
FINAL - 2005 Chinese National Games (Nanjing, CHN)		<i>Wang (2013) - analysis on the technical characteristics of Liu Xiang's and Shi Dongpeng's 110m Hurdles</i>															
date	20-Oct-05	time	2.70	3.75	4.77	5.78	6.78	7.81	8.84	9.89	10.93	11.98	13.44	/ 2			
reaction time		interval		1.05	1.02	1.01	1.00	1.03	1.03	1.05	1.04	1.05	1.46		3.08	3.06	3.14
wind	0.4 m/s	velocity	5.08	8.70	8.96	9.05	9.14	8.87	8.87	8.70	8.79	8.70	9.60	8.18	8.90	8.96	8.73
FINAL - 2001 Chinese National Grand Prix (Shanghai, CHN)		<i>Fang (2001) - analysis on technical characteristics in Liu Xiang's 110m hurdles</i>															
date	06-May-01	time	2.71	3.78	4.79	5.81	6.83	7.86	8.87	9.91	10.99	12.07	13.43	/ 3			
reaction time		interval		1.07	1.01	1.02	1.02	1.03	1.01	1.04	1.08	1.08	1.36	WYR NR PB	3.10	3.06	3.20
wind	1.9 m/s	velocity	5.06	8.54	9.05	8.96	8.96	8.87	9.05	8.79	8.46	8.46	10.31	8.19	8.85	8.96	8.57

Shi Guoxing (CHN) (2000)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2021 Chinese National Championships (Chongqing, CHN)															CAA Hurdle Development (2021)			
date	25-Jun-21	time	2.69	3.77	4.84	5.91	6.99	8.06	9.16	10.24	11.39	12.51	13.93	3 / 6				
reaction time	0.196	interval		1.08	1.07	1.07	1.08	1.07	1.10	1.08	1.15	1.12	1.42		PB	3.22	3.25	3.35
wind	1.6 m/s	velocity	5.10	8.46	8.54	8.54	8.46	8.54	8.31	8.46	7.95	8.16	9.87		7.90	8.52	8.44	8.19
Heat 3 - 2021 Chinese National Championships (Chongqing, CHN)															CAA Hurdle Development (2021)			
date	25-Jun-21	time	2.70	3.79	4.85	5.94	7.02	8.09	9.19	10.31	11.43	12.56	14.03	8 / 5				
reaction time	0.172	interval		1.09	1.06	1.09	1.08	1.07	1.10	1.12	1.12	1.13	1.47		PB	3.24	3.25	3.37
wind	0.5 m/s	velocity	5.08	8.39	8.62	8.39	8.46	8.54	8.31	8.16	8.16	8.09	9.54		7.84	8.46	8.44	8.14
Heat 2 - 2020 Chinese Olympic Trials (Shaoxing, CHN)															CAA Hurdle Development (2021)			
date	12-Jun-21	time	2.65	3.76	4.87	5.97	7.11	8.24	9.36	10.49	11.63	12.77	14.39	7 / 6				
reaction time	0.156	interval		1.11	1.11	1.10	1.14	1.13	1.12	1.13	1.14	1.14	1.62			3.32	3.39	3.41
wind	-0.8 m/s	velocity	5.18	8.23	8.23	8.31	8.02	8.09	8.16	8.09	8.02	8.02	8.65		7.64	8.26	8.09	8.04
Heat 1 - 2020 Chinese National Championships (Shaoxing, CHN)															CAA Hurdle Development (2020)			
date	16-Sep-20	time	2.72	3.86	5.00	6.11	7.24	8.37	9.50	10.63	11.76	12.90	14.34	9 / 7				
reaction time	0.169	interval		1.14	1.14	1.11	1.13	1.13	1.13	1.13	1.13	1.14	1.44		PB	3.39	3.39	3.40
wind	0.3 m/s	velocity	5.04	8.02	8.02	8.23	8.09	8.09	8.09	8.09	8.09	8.02	9.74		7.67	8.09	8.09	8.06
FINAL - 2019 Chinese National Grand Prix Final (Daqing, CHN)															CAA Hurdle Development (2019)			
date	24-Aug-19	time	2.78	3.89	4.99	6.10	7.19	8.32	9.44	10.56	11.72	12.88	14.36	3 / 6				
reaction time	0.201	interval		1.11	1.10	1.11	1.09	1.13	1.12	1.12	1.16	1.16	1.48		PB	3.32	3.34	3.44
wind	-0.1 m/s	velocity	4.94	8.23	8.31	8.23	8.39	8.09	8.16	8.16	7.88	7.88	9.47		7.66	8.26	8.21	7.97
Heat 2 - 2019 Chinese National Grand Prix Final (Daqing, CHN)															CAA Hurdle Development (2019)			
date	23-Aug-19	time	2.81	3.94	5.06	6.17	7.34	8.48	9.62	10.76	11.92	13.08	14.58	5 / 3				
reaction time	0.195	interval		1.13	1.12	1.11	1.17	1.14	1.14	1.14	1.16	1.16	1.50			3.36	3.45	3.46
wind	-0.2 m/s	velocity	4.88	8.09	8.16	8.23	7.81	8.02	8.02	8.02	7.88	7.88	9.35		7.54	8.16	7.95	7.92
U20 FINAL - 2019 Chinese National Youth Games (Taiyuan, CHN) (99cm)															CAA Hurdle Development (2019)			
date	14-Aug-19	time	2.67	3.76	4.81	5.85	6.87	7.91	8.96	10.00	11.07	12.13	13.52	8 / 3				
reaction time	0.144	interval		1.09	1.05	1.04	1.02	1.04	1.05	1.04	1.07	1.06	1.39		PB	3.18	3.11	3.17
wind	-0.3 m/s	velocity	5.14	8.39	8.70	8.79	8.96	8.79	8.70	8.79	8.54	8.62	10.09		8.14	8.62	8.82	8.65
U20 Heat 2 - 2019 Chinese National Youth Games (Taiyuan, CHN) (99cm)															CAA Hurdle Development (2019)			
date	14-Aug-19	time	2.72	3.81	4.86	5.91	6.97	8.04	9.11	10.19	11.26	12.34	13.77	5 / 2				
reaction time	0.179	interval		1.09	1.05	1.05	1.06	1.07	1.07	1.08	1.07	1.08	1.43			3.19	3.20	3.23
wind	-0.3 m/s	velocity	5.04	8.39	8.70	8.70	8.62	8.54	8.54	8.46	8.54	8.46	9.80		7.99	8.60	8.57	8.49
FINAL - 2018 Chinese National U20 Championships (Nanchang, CHN) (99.1cm)															Zhang (2019) - comparative analysis characteristics Chinese elite 110m hurdles in different age			
date	13-May-18	time	2.72	3.82	4.89	5.97	7.01	8.07	9.12	10.19	11.29	12.38	13.81	/ 2				
reaction time		interval		1.10	1.07	1.08	1.04	1.06	1.05	1.07	1.10	1.09	1.43			3.25	3.15	3.26
wind	1.0 m/s	velocity	5.04	8.31	8.54	8.46	8.79	8.62	8.70	8.54	8.31	8.39	9.80		7.97	8.44	8.70	8.41
Shibaya, Takumi (JPN) (2000)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Heat 6 - 2016 Japanese National Youth Championships (Mizuho, JPN) (91cm)															(2016.11.08) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en			
date	21-Oct-16	time	2.75	3.85	4.97	6.08	7.21	8.32	9.44	10.59	11.75	12.90	14.43	1 / 2				
reaction time		interval		1.10	1.12	1.11	1.13	1.11	1.12	1.15	1.16	1.15	1.53			3.33	3.36	3.46
wind	1.2 m/s	velocity	4.99	8.31	8.16	8.23	8.09	8.23	8.16	7.95	7.88	7.95	9.16		7.62	8.23	8.16	7.92
Shikata, Makoto (JPN) (2003)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2022 Japanese U20 National Championships (Osaka, JPN) (99cm)															Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season			
date	12-Jun-22	time	2.65	3.72	4.78	5.83	6.87	7.90	9.00	10.08	11.14	12.23	13.63	6 / 4				
reaction time	0.145	interval		1.07	1.06	1.05	1.04	1.03	1.10	1.08	1.06	1.09	1.40		PB	3.18	3.17	3.23
wind	1.1 m/s	velocity	5.18	8.54	8.62	8.70	8.79	8.87	8.31	8.46	8.62	8.39	10.01		8.07	8.62	8.65	8.49
Shimizu, Koichiro (JPN) (2000)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2021 Michitaka Kinami Memorial (Osaka, JPN)															Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season			
date	01-Jun-21	time	2.69	3.75	4.85	5.91	6.96	8.03	9.10	10.18	11.28	12.39	13.85	9 / 4				
reaction time	0.169	interval		1.06	1.10	1.06	1.05	1.07	1.07	1.08	1.10	1.11	1.46			3.22	3.19	3.29
wind	0.3 m/s	velocity	5.10	8.62	8.31	8.62	8.70	8.54	8.54	8.46	8.31	8.23	9.60		7.94	8.52	8.60	8.33
FINAL - 2019 Fuse Sprint (Tottori, JPN)															Kijima (2019) - research on athlete performance and technique- 2019 data book			
date	02-Jun-19	time	2.69	3.77	4.87	5.92	7.00	8.09	9.20	10.29	11.39	12.52	13.96	2 / 8				
reaction time	0.156	interval		1.08	1.10	1.05	1.08	1.09	1.11	1.09	1.10	1.13	1.44		PB	3.23	3.28	3.32
wind	1.9 m/s	velocity	5.10	8.46	8.31	8.70	8.46	8.39	8.23	8.39	8.31	8.09	9.74		7.88	8.49	8.36	8.26
Shimizu, Tsuyoshi (JPN) (1993)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Decathlon - Heat 2 - 2018 Tokyo Combined Event Meeting (Tokyo, JPN)															Matsubayashi (2018) - research on athlete performance and technique			
date	22-Apr-18	time	2.73	3.90	5.05	6.24	7.39	8.58	9.76	10.94	12.12	13.31	14.92	2 / 6				

reaction time	interval	1.17	1.15	1.19	1.15	1.19	1.18	1.18	1.18	1.19	1.61	PB	3.51	3.52	3.55		
wind	1.8 m/s	velocity	5.03	7.81	7.95	7.68	7.95	7.68	7.75	7.75	7.75	7.68	8.71	7.37	7.81	7.79	7.72

Shinyo, Morito (JPN)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2016 Chiba Prefecture High School Championships (Chiba, JPN)	<i>(2016.10.25) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en</i>																
date	22-Sep-16	time	2.82	3.97	5.10	6.22	7.35	8.46	9.61	10.75	11.88	13.06	14.52	5 / 1			
reaction time	interval	1.15	1.13	1.12	1.13	1.11	1.15	1.14	1.13	1.18	1.46			3.40	3.39	3.45	
wind	1.8 m/s	velocity	4.87	7.95	8.09	8.16	8.09	8.23	7.95	8.02	8.09	7.75	9.60	7.58	8.06	8.09	7.95

Shishkin, Vladimir (URS) (1964)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 1988 Olympic Games (Seoul, KOR)	<i>Brüggemann (1990) - scientific research project at the games of the XXXIV Olympiad, Seoul 1988</i>																
date	26-Sep-88	time	2.57	3.63	4.67	5.71	6.74	7.79	8.83	9.87	10.96	12.06	13.51	3 / 4			
reaction time	0.139	interval	7 steps	1.06	1.04	1.04	1.03	1.05	1.04	1.04	1.09	1.10	1.45		3.14	3.12	3.23
wind	1.5 m/s	velocity	5.34	8.62	8.79	8.79	8.87	8.70	8.79	8.79	8.39	8.31	9.67	8.14	8.73	8.79	8.49

Semi-Final 1 - 1988 Olympic Games (Seoul, KOR)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
date	26-Sep-88	time	2.60	3.67	4.70	5.73	6.75	7.78	8.81	9.87	10.93	12.01	13.46	5 / 1			
reaction time	0.160	interval	7 steps	1.07	1.03	1.03	1.02	1.03	1.03	1.06	1.06	1.08	1.45		3.13	3.08	3.20
wind	0.0 m/s	velocity	5.28	8.54	8.87	8.87	8.96	8.87	8.87	8.62	8.62	8.46	9.67	8.17	8.76	8.90	8.57

Shizuki, Kondo (JPN)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL B - 2016 Japanese Junior Olympics (Yokohama, JPN) (91cm)	<i>(2016.10.28) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en</i>																
date	30-Oct-16	time	2.72	3.88	4.99	6.12	7.24	8.38	9.54	10.73	11.97	13.20	14.89	5 / 2			
reaction time	interval	1.16	1.11	1.13	1.12	1.14	1.16	1.19	1.24	1.23	1.69			3.40	3.42	3.66	
wind	-0.8 m/s	velocity	5.04	7.88	8.23	8.09	8.16	8.02	7.88	7.68	7.37	7.43	8.30	7.39	8.06	8.02	7.49

Semi-Final 3 B - 2016 Japanese Junior Olympics (Yokohama, JPN) (91cm)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
date	30-Oct-16	time	2.75	3.91	5.03	6.16	7.33	8.49	9.66	10.87	12.10	13.38	15.14	7 / 1			
reaction time	interval	1.16	1.12	1.13	1.17	1.16	1.17	1.21	1.23	1.28	1.76			3.41	3.50	3.72	
wind	-0.8 m/s	velocity	4.99	7.88	8.16	8.09	7.81	7.88	7.81	7.55	7.43	7.14	7.97	7.27	8.04	7.83	7.37

Heat 1 B - 2016 Japanese Junior Olympics (Yokohama, JPN) (91cm)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
date	30-Oct-16	time	2.74	3.89	5.02	6.17	7.31	8.46	9.60	10.79	12.00	13.24	14.89	8 / 1			
reaction time	interval	1.15	1.13	1.15	1.14	1.15	1.14	1.19	1.21	1.24	1.65			3.43	3.43	3.64	
wind	-0.6 m/s	velocity	5.01	7.95	8.09	7.95	8.02	7.95	8.02	7.68	7.55	7.37	8.50	7.39	7.99	7.99	7.53

Shohei, Miyamoto (JPN)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2017 Osaka University Athletics Championships (Osaka, JPN)	<i>(2017) - ifdata-store.com/2017/04/07/post-249/</i>																
date	06-Apr-17	time	2.75	3.91	5.08	6.24	7.39	8.53	9.70	10.89	12.05	13.23	14.79	4 / 3			
reaction time	interval	7 steps	1.16	1.17	1.16	1.15	1.14	1.17	1.19	1.16	1.18	1.56		3.49	3.46	3.53	
wind	-1.8 m/s	velocity	4.99	7.88	7.81	7.88	7.95	8.02	7.81	7.68	7.88	7.75	8.99	7.44	7.86	7.92	7.77

Shubenkov, Sergey (ANA) (1990)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2021 István Gyulai Memorial (Székesfehérvár, HUN) (TV Analysis)	<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>																
date	06-Jul-21	time	2.50	3.53	4.54	5.56	6.55	7.54	8.54	9.57	10.61	11.64	13.19	6 / 3			
reaction time	0.150	interval	7 steps	1.03	1.01	1.02	0.99	0.99	1.00	1.03	1.04	1.03	1.55		3.06	2.98	3.10
wind	-0.1 m/s	velocity	5.49	8.87	9.05	8.96	9.23	9.23	9.14	8.87	8.79	8.87	9.05	8.34	8.96	9.20	8.85

FINAL - 2019 IAAF World Championships (Doha, QAT)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
date	02-Oct-19	time	2.62	3.66	4.66	5.66	6.65	7.66	8.67	9.68	10.74	11.79	13.15	9 / 2			
reaction time	0.150	interval	7 steps	1.04	1.00	1.00	0.99	1.01	1.01	1.01	1.06	1.05	1.36		3.04	3.01	3.12
wind	0.6 m/s	velocity	5.24	8.79	9.14	9.14	9.23	9.05	9.05	9.05	8.62	8.70	10.31	8.37	9.02	9.11	8.79

Semi-Final 1 - 2019 IAAF World Championships (Doha, QAT)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
date	02-Oct-19	time	2.62	3.66	4.68	5.68	6.68	7.68	8.68	9.70	10.74	11.78	13.18	6 / 2			
reaction time	0.129	interval	7 steps	1.04	1.02	1.00	1.00	1.00	1.00	1.02	1.04	1.04	1.40		3.06	3.00	3.10
wind	1.1 m/s	velocity	5.24	8.79	8.96	9.14	9.14	9.14	9.14	8.96	8.79	8.79	10.01	8.35	8.96	9.14	8.85

Heat 2 - 2019 IAAF World Championships (Doha, QAT) (TV Analysis)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
date	30-Sep-19	time	2.52	3.52	4.54	5.54	6.54	7.54	8.58	9.62	10.68	11.74	13.27	6 / 1			
reaction time	0.138	interval	7 steps	1.00	1.02	1.00	1.00	1.00	1.04	1.04	1.06	1.06	1.53		3.02	3.04	3.16
wind	0.5 m/s	velocity	5.44	9.14	8.96	9.14	9.14	9.14	8.79	8.79	8.62	8.62	9.16	8.29	9.08	9.02	8.68

FINAL - 2019 The Match - Europe v USA (Minsk, BLR) (TV Analysis)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
date	10-Sep-19	time	2.60	3.66	4.73	5.76	6.80	7.83	8.83	9.86	10.90	11.96	13.39	7 / 2			
reaction time	0.186	interval	7 steps	1.06	1.07	1.03	1.04	1.03	1.00	1.03	1.04	1.06	1.43		3.16	3.07	3.13
wind	0.1 m/s	velocity	5.28	8.62	8.54	8.87	8.79	8.87	9.14	8.87	8.79	8.62	9.80	8.22	8.68	8.93	8.76

FINAL - 2019 AG Memorial van Damme (Brussels, BEL) (TV Analysis)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
date	06-Sep-19	time	2.54	3.60	4.64	5.64	6.64	7.64	8.68	9.72	10.76	11.82	13.33	7 / 3			
reaction time	0.153	interval	7 steps	1.06	1.04	1.00	1.00	1.00	1.04	1.04	1.04	1.06	1.51		3.10	3.04	3.14
wind	0.0 m/s	velocity	5.40	8.62	8.79	9.14	9.14	9.14	8.79	8.79	8.79	8.62	9.28	8.25	8.85	9.02	8.73

FINAL - 2019 Meeting de Paris (Paris, FRA) (TV Analysis)

														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>			
date	24-Aug-19	time	2.56	3.64	4.72	5.76	6.80	7.88	8.94	10.00	11.12	12.26	13.88	4 / 8			
reaction time	0.144	interval	7 steps	1.08	1.08	1.04	1.04	1.08	1.06	1.06	1.12	1.14	1.62		3.20	3.18	3.32
wind	0.8 m/s	velocity	5.36	8.46	8.46	8.79	8.79	8.46	8.62	8.62	8.16	8.02	8.65	7.93	8.57	8.62	8.26

FINAL - 2019 Meeting International Mohammed VI d'Athlétisme (Rabat, MAR) (TV Analysis)

														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>			
date	16-Jun-19	time	2.50	3.54	4.56	5.58	6.58	7.60	8.60	9.62	10.66	11.70	13.12	6 / 1			
reaction time	0.135	interval	7 steps	1.04	1.02	1.02	1.00	1.02	1.00	1.02	1.04	1.04	1.42		3.08	3.02	3.10
wind	0.3 m/s	velocity	5.49	8.79	8.96	8.96	9.14	8.96	9.14	8.96	8.79	8.79	9.87	8.38	8.90	9.08	8.85

FINAL - 2019 Golden Gala Pietro Mennea (Rome, ITA) (TV Analysis)

														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>			
date	06-Jun-19	time	2.61	3.66	4.68	5.67	6.68	7.69	8.71	9.73	10.75	11.83	13.26	5 / 1			
reaction time	0.132	interval	7 steps	1.05	1.02	0.99	1.01	1.01	1.02	1.02	1.02	1.08	1.43		3.06	3.04	3.12
wind	0.4 m/s	velocity	5.26	8.70	8.96	9.23	9.05	9.05	8.96	8.96	8.96	8.46	9.80	8.30	8.96	9.02	8.79

FINAL - 2019 Nanjing World Challenge (Nanjing, CHN)

														<i>CAA Hurdle Development (2019)</i>			
date	21-May-19	time	2.62	3.66	4.68	5.68	6.71	7.73	8.76	9.79	10.85	11.94	13.37	7 / 4			
reaction time	0.165	interval	7 steps	1.04	1.02	1.00	1.03	1.02	1.03	1.03	1.06	1.09	1.43		3.06	3.08	3.18
wind	0.1 m/s	velocity	5.24	8.79	8.96	9.14	8.87	8.96	8.87	8.87	8.62	8.39	9.80	8.23	8.96	8.90	8.62

FINAL - 2019 Shanghai Diamond League (Shanghai, CHN)

														<i>CAA Hurdle Development (2019)</i>			
date	18-May-19	time	2.60	3.66	4.68	5.66	6.66	7.68	8.74	9.76	10.82	11.90	13.28	5 / 3			
reaction time	0.126	interval	7 steps	1.06	1.02	0.98	1.00	1.02	1.06	1.02	1.06	1.08	1.38		3.06	3.08	3.16
wind	0.7 m/s	velocity	5.28	8.62	8.96	9.33	9.14	8.96	8.62	8.96	8.62	8.46	10.16	8.28	8.96	8.90	8.68

FINAL - 2018 IAAF Continental Cup (Ostrava, CZE) (TV Analysis)

														<i>Henson (2021) - Athlete First: 2018 year end hurdle report</i>			
date	09-Sep-18	time	2.52	3.58	4.60	5.56	6.54	7.54	8.54	9.54	10.54	11.58	13.03	2 / 1			
reaction time	0.143	interval	7 steps	1.06	1.02	0.96	0.98	1.00	1.00	1.00	1.00	1.04	1.45		3.04	2.98	3.04
wind	0.9 m/s	velocity	5.44	8.62	8.96	9.52	9.33	9.14	9.14	9.14	9.14	8.79	9.67	8.44	9.02	9.20	9.02

FINAL - 2018 Meeting Città di Padova (Padova, ITA) (TV Analysis)

														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>			
date	02-Sep-18	time	2.56	3.58	4.60	5.58	6.56	7.56	8.56	9.56	10.56	11.60	13.09	4 / 1			
reaction time		interval	7 steps	1.02	1.02	0.98	0.98	1.00	1.00	1.00	1.00	1.04	1.49		3.02	2.98	3.04
wind	1.7 m/s	velocity	5.36	8.96	8.96	9.33	9.33	9.14	9.14	9.14	9.14	8.79	9.41	8.40	9.08	9.20	9.02

FINAL - 2018 AG Memorial van Damme (Brussels, BEL) (TV Analysis)

														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>			
date	31-Aug-18	time	2.54	3.56	4.58	5.58	6.56	7.54	8.52	9.52	10.54	11.56	12.97	5 / 1			
reaction time	0.168	interval	7 steps	1.02	1.02	1.00	0.98	0.98	0.98	1.00	1.02	1.02	1.41		3.04	2.94	3.04
wind	-0.1 m/s	velocity	5.40	8.96	8.96	9.14	9.33	9.33	9.33	9.14	8.96	8.96	9.94	8.48	9.02	9.33	9.02

FINAL - 2018 Herculis Meeting International d'Athlétisme (Monaco, MON) (TV Analysis)

														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>			
date	20-Jul-18	time	2.52	3.56	4.56	5.56	6.56	7.56	8.56	9.56	10.58	11.60	13.07	4 / 1			
reaction time	0.132	interval	7 steps	1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.02	1.02	1.47		3.04	3.00	3.04
wind	-0.2 m/s	velocity	5.44	8.79	9.14	9.14	9.14	9.14	9.14	9.14	8.96	8.96	9.54	8.42	9.02	9.14	9.02

FINAL - 2018 Athletissima (Lausanne, SUI) (TV Analysis)

														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>			
date	05-Jul-18	time	2.59	3.61	4.62	5.60	6.58	7.56	8.54	9.54	10.58	11.65	12.95	6 / 1			
reaction time	0.147	interval	7 steps	1.02	1.01	0.98	0.98	0.98	0.98	1.00	1.04	1.07	1.30		3.01	2.94	3.11
wind	0.6 m/s	velocity	5.30	8.96	9.05	9.33	9.33	9.33	9.33	9.14	8.79	8.54	10.78	8.49	9.11	9.33	8.82

FINAL - 2018 István Gyulai Memorial (Székesfehérvár, HUN) (TV Analysis)

														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>			
date	02-Jul-18	time	2.52	3.54	4.54	5.52	6.50	7.48	8.46	9.46	10.48	11.52	12.92	6 / 1			
reaction time	0.169	interval	7 steps	1.02	1.00	0.98	0.98	0.98	0.98	1.00	1.02	1.04	1.40	NR PB	3.00	2.94	3.06
wind	0.6 m/s	velocity	5.44	8.96	9.14	9.33	9.33	9.33	9.33	9.14	8.96	8.79	10.01	8.51	9.14	9.33	8.96

FINAL - 2018 Meeting International de Montreuil (Montreuil, FRA) (TV Analysis)

														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>			
date	19-Jun-18	time	2.62	3.64	4.64	5.62	6.60	7.58	8.56	9.56	10.58	11.62	12.99	5 / 1			
reaction time	0.143	interval	7 steps	1.02	1.00	0.98	0.98	0.98	0.98	1.00	1.02	1.04	1.37		3.00	2.94	3.06
wind	0.5 m/s	velocity	5.24	8.96	9.14	9.33	9.33	9.33	9.33	9.14	8.96	8.79	10.23	8.47	9.14	9.33	8.96

FINAL - 2018 Prefontaine Classic (Eugene, OR) (TV Analysis)

														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>			
date	26-May-18	time	2.56	3.58	4.58	5.56	6.56	7.56	8.56	9.58	10.62	11.66	13.08	6 / 2			
reaction time	0.173	interval	7 steps	1.02	1.00	0.98	1.00	1.00	1.00	1.02	1.04	1.04	1.42		3.00	3.00	3.10
wind	3.0 m/s	velocity	5.36	8.96	9.14	9.33	9.14	9.14	9.14	8.96	8.79	8.79	9.87	8.41	9.14	9.14	8.85

FINAL - 2018 Shanghai Diamond League (Shanghai, CHN) (TV Analysis)

														<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>			
date	12-May-18	time	2.52	3.58	4.62	5.66	6.68	7.70	8.72	9.76	10.78	11.82	13.27	6 / 3			
reaction time	0.148	interval	7 steps	1.06	1.04	1.04	1.02	1.02	1.02	1.04	1.02	1.04	1.45		3.14	3.06	3.10
wind	0.2 m/s	velocity	5.44	8.62	8.79	8.79	8.96	8.96	8.96	8.79	8.96	8.79	9.67	8.29	8.73	8.96	8.85

FINAL - 2017 Memorial van Damme (Brussels, BEL) (TV Analysis)

														<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>			
date	01-Sep-17	time	2.56	3.60	4.60	5.60	6.58	7.56	8.58	9.58	10.62	11.66	13.14	5 / 1			
reaction time	0.146	interval	7 steps	1.04	1.00	1.00	0.98	0.98	1.02	1.00	1.04	1.04	1.48		3.04	2.98	3.08

wind	0.5 m/s	velocity	5.36	8.79	9.14	9.14	9.33	9.33	8.96	9.14	8.79	8.79	9.47	8.37	9.02	9.20	8.90
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FINAL - 2017 Müller Grand Prix (Birmingham, GBR) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date	20-Aug-17	time	2.54	3.58	4.58	5.60	6.62	7.64	8.66	9.72	10.78	11.82	13.31	7 / 2			
reaction time	0.133	interval	7 steps	1.04	1.00	1.02	1.02	1.02	1.02	1.06	1.04	1.04	1.49		3.06	3.06	3.16
wind	-0.6 m/s	velocity	5.40	8.79	9.14	8.96	8.96	8.96	8.96	8.62	8.79	9.41	8.26		8.96	8.96	8.68

FINAL - 2017 IAAF World Championships (London, GBR)*Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles*

date	07-Aug-17	time	2.41	3.45	4.45	5.46	6.45	7.46	8.47	9.48	10.52	11.57	13.14	2 / 2			
reaction time	0.132	interval	7 steps	1.04	1.00	1.01	0.99	1.01	1.01	1.01	1.04	1.05	1.57		3.05	3.01	3.10
wind	0.0 m/s	velocity	5.69	8.79	9.14	9.05	9.23	9.05	9.05	9.05	8.79	8.70	8.93	8.37	8.99	9.11	8.85

Semi-Final 1 - 2017 IAAF World Championships (London, GBR)*Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles*

date	06-Aug-17	time	2.46	3.52	4.54	5.54	6.55	7.55	8.56	9.58	10.62	11.70	13.22	9 / 3			
reaction time	0.160	interval	7 steps	1.06	1.02	1.00	1.01	1.00	1.01	1.02	1.04	1.08	1.52		3.08	3.02	3.14
wind	0.2 m/s	velocity	5.58	8.62	8.96	9.14	9.05	9.14	9.05	8.96	8.79	8.46	9.22	8.32	8.90	9.08	8.73

FINAL - 2017 István Gyulai Memorial (Székesfehérvár, HUN) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date	04-Jul-17	time	2.56	3.58	4.60	5.56	6.54	7.54	8.54	9.56	10.58	11.60	13.01	6 / 2			
reaction time	0.177	interval	7 steps	1.02	1.02	0.96	0.98	1.00	1.00	1.02	1.02	1.02	1.41		3.00	2.98	3.06
wind	0.3 m/s	velocity	5.36	8.96	8.96	9.52	9.33	9.14	9.14	8.96	8.96	8.96	9.94	8.46	9.14	9.20	8.96

FINAL - 2017 Meeting de Paris (Paris, FRA) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date	01-Jul-17	time	2.56	3.60	4.58	5.58	6.56	7.58	8.58	9.60	10.66	11.76	13.18	4 / 4			
reaction time	0.125	interval	7 steps	1.04	0.98	1.00	0.98	1.02	1.00	1.02	1.06	1.10	1.42		3.02	3.00	3.18
wind	-0.1 m/s	velocity	5.36	8.79	9.33	9.14	9.33	8.96	9.14	8.96	8.62	8.31	9.87	8.35	9.08	9.14	8.62

FINAL - 2017 Bauhaus Athletics (Stockholm, SWE) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date	18-Jun-17	time	2.52	3.58	4.56	5.58	6.58	7.56	8.56	9.54	10.60	11.66	13.10	5 / 2			
reaction time	0.141	interval	7 steps	1.06	0.98	1.02	1.00	0.98	1.00	0.98	1.06	1.06	1.44		3.06	2.98	3.10
wind	3.5 m/s	velocity	5.44	8.62	9.33	8.96	9.14	9.33	9.14	9.33	8.62	8.62	9.74	8.40	8.96	9.20	8.85

FINAL - 2017 Golden Gala Pietro Mennea (Rome, ITA) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date	08-Jun-17	time	2.60	3.66	4.68	5.68	6.68	7.68	8.70	9.70	10.72	11.78	13.21	4 / 3			
reaction time	0.154	interval	7 steps	1.06	1.02	1.00	1.00	1.00	1.02	1.00	1.02	1.06	1.43		3.08	3.02	3.08
wind	-0.3 m/s	velocity	5.28	8.62	8.96	9.14	9.14	9.14	8.96	9.14	8.96	8.62	9.80	8.33	8.90	9.08	8.90

FINAL - 2017 Shanghai Diamond League (Shanghai, CHN) (TV Analysis)*Henson (2020) - Athlete First: 2017 year end hurdle report*

date	13-May-17	time	2.56	3.64	4.66	5.70	6.70	7.70	8.76	9.80	10.86	11.92	13.35	4 / 5			
reaction time	0.153	interval	7 steps	1.08	1.02	1.04	1.00	1.00	1.06	1.04	1.06	1.06	1.43		3.14	3.06	3.16
wind	0.5 m/s	velocity	5.36	8.46	8.96	8.79	9.14	9.14	8.62	8.79	8.62	8.62	9.80	8.24	8.73	8.96	8.68

*Shubenkov, Sergey (RUS) (1990)***FINAL** - 2015 IAAF World Championships (Beijing, CHN) (TV Analysis)*Henson (2021) - Athlete First: major championships report*

date	28-Aug-15	time	2.52	3.54	4.56	5.54	6.52	7.52	8.52	9.52	10.54	11.58	12.98	7 / 1			
reaction time	0.139	interval	7 steps	1.02	1.02	0.98	0.98	1.00	1.00	1.00	1.02	1.04	1.40	NR	3.02	2.98	3.06
wind	0.2 m/s	velocity	5.44	8.96	8.96	9.33	9.33	9.14	9.14	9.14	8.96	8.79	10.01	8.47	9.08	9.20	8.96

Heat 4 - 2014 European Championships (Zurich, SUI)*Incalza (2014) - <https://www.youtube.com/watch?v=wFOM-j9iZHE&list=UU7691fXeyNFIMROfkJ-WWUg>*

date	13-Aug-14	time	2.63	3.68	4.71	5.74	6.75	7.77	8.81	9.85	10.90	11.94	13.29	8 / 1			
reaction time	0.145	interval		1.05	1.03	1.03	1.01	1.02	1.04	1.04	1.05	1.04	1.35		3.11	3.07	3.13
wind	0.7 m/s	velocity	5.22	8.70	8.87	8.87	9.05	8.96	8.79	8.79	8.70	8.79	10.39	8.28	8.82	8.93	8.76

FINAL - 2013 IAAF World Championships (Moscow, RUS) (TV Analysis)*Henson (2021) - Athlete First: major championships report*

date	12-Aug-13	time	2.56	3.58	4.58	5.56	6.58	7.62	8.66	9.68	10.72	11.80	13.24	5 / 3			
reaction time	0.154	interval		1.02	1.00	0.98	1.02	1.04	1.04	1.02	1.04	1.08	1.44		3.00	3.10	3.14
wind	0.3 m/s	velocity	5.36	8.96	9.14	9.33	8.96	8.79	8.79	8.96	8.79	8.46	9.74	8.31	9.14	8.85	8.73

FINAL - 2013 European Indoor Championships (Göteborg, SWE)*Blomkvist (2013) - www.elitlandslag.se/SprintHäck/KortHäck.aspx*

date	01-Mar-13	time	2.58	3.62	4.62	5.62	6.64						7.49	6 / 1			
reaction time	0.161	interval		1.04	1.00	1.00	1.02						0.85	=PB	3.04		
		velocity	5.32	8.79	9.14	9.14	8.96						11.44	8.01	9.02		

FINAL - 2012 Memorial Van Damme (Brussels, BEL) (TV Analysis)*Henson (2020) - Athlete First: 2012 Aries Merritt world record season*

date	07-Sep-12	time	2.52	3.56	4.56	5.58	6.58	7.58	8.62	9.66	10.70	11.78	13.21	1 / 4			
reaction time	0.165	interval		1.04	1.00	1.02	1.00	1.00	1.04	1.04	1.04	1.08	1.43		3.06	3.04	3.16
wind	0.3 m/s	velocity	5.44	8.79	9.14	8.96	9.14	9.14	8.79	8.79	8.79	8.46	9.80	8.33	8.96	9.02	8.68

FINAL - 2012 Herculis Meeting International D'Athlétisme (Monaco, MON) (TV Analysis)*Henson (2020) - Athlete First: 2012 Aries Merritt world record season*

date	20-Jul-12	time	2.46	3.50	4.52	5.54	6.54	7.52	8.52	9.54	10.56	11.60	13.09	7 / 3			
reaction time	0.143	interval		1.04	1.02	1.02	1.00	0.98	1.00	1.02	1.02	1.04	1.49	NR	3.08	2.98	3.08
wind	0.0 m/s	velocity	5.58	8.79	8.96	8.96	9.14	9.33	9.14	8.96	8.96	8.79	9.41	8.40	8.90	9.20	8.90

Shulman, Connor (USA) (2001) H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

FINAL - 2023 NCAA Championships (Austin, TX) (TV Analysis)*Henson (2023) - Athlete First: 2023 year end hurdle report*

date	09-Jun-23	time	2.53	3.57	4.62	5.64	6.66	7.72	8.79	9.84	10.89	11.97	13.47	6 / 7				
reaction time		interval	7 steps	1.04	1.05	1.02	1.02	1.06	1.07	1.05	1.05	1.08	1.50		3.11	3.15	3.18	
wind	1.8 m/s	velocity	5.42	8.79	8.70	8.96	8.96	8.62	8.54	8.70	8.70	8.46	9.35	8.17	8.82	8.70	8.62	

Shuto, Takayuki (JPN) (1986)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2009 Nambu Chuhei Memorial (Sapporo, JPN)***Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdles*

date	09-Jul-09	time	2.73	3.83	4.91	5.99	7.08	8.16	9.25	10.36	11.45	12.57	13.94	/ 5				
reaction time		interval		1.10	1.08	1.08	1.09	1.08	1.09	1.11	1.09	1.12	1.37		3.26	3.26	3.32	
wind	1.2 m/s	velocity	5.03	8.31	8.46	8.46	8.39	8.46	8.39	8.23	8.39	8.16	10.23	7.89	8.41	8.41	8.26	

FINAL - 2009 Japanese National Championships (Hiroshima, JPN)*Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdles*

date	27-Jun-09	time	2.65	3.75	4.81	5.90	6.94	8.01	9.08	10.15	11.27	12.32	13.77	4 / 2				
reaction time		interval		1.10	1.06	1.09	1.04	1.07	1.07	1.07	1.12	1.05	1.45	PB	3.25	3.18	3.24	
wind	1.6 m/s	velocity	5.18	8.31	8.62	8.39	8.79	8.54	8.54	8.54	8.16	8.70	9.67	7.99	8.44	8.62	8.46	

Si Zhengdong (CHN) (1997)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Heat 3 - 2019 Chinese National Championships (Shenyang, CHN)***CAA Hurdle Development (2019)*

date	08-Jul-19	time	2.72	3.84	4.92	6.01	7.09	8.17	9.27	10.38	11.57	12.80	14.43	7 / 5				
reaction time	0.185	interval		1.12	1.08	1.09	1.08	1.08	1.10	1.11	1.19	1.23	1.63	PB	3.29	3.26	3.53	
wind	-0.5 m/s	velocity	5.04	8.16	8.46	8.39	8.46	8.46	8.31	8.23	7.68	7.43	8.60	7.62	8.33	8.41	7.77	

Heat 5 - 2019 Chinese National Grand Prix 2 (Huangshi, CHN)*CAA Hurdle Development (2019)*

date	13-Apr-19	time	2.72	3.86	5.00	6.14	7.24	8.34	9.46	10.59	11.76	12.94	14.55	5 / 3				
reaction time	0.197	interval		1.14	1.14	1.14	1.10	1.10	1.12	1.13	1.17	1.18	1.61		3.42	3.32	3.48	
wind	0.6 m/s	velocity	5.04	8.02	8.02	8.02	8.31	8.31	8.16	8.09	7.81	7.75	8.71	7.56	8.02	8.26	7.88	

A-FINAL - 2019 Chinese Indoor National Grand Prix 3 (Xi'an, CHN)*CAA Hurdle Development (2019)*

date	28-Feb-19	time	2.62											DQ	5 / --			
reaction time		interval																
		velocity	5.24															

Siebeck, Frank (GDR) (1949)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 1972 Olympic Games (Munich, FRG)***Kay (1972) - BAAB Munich Technical Report*

date	07-Sep-72	time	2.5	3.6	4.6	5.6	6.7	7.8	8.9	9.9	11.1	12.2	13.71	6 / 5				
reaction time		interval	7 steps	1.10	1.00	1.00	1.10	1.10	1.10	1.00	1.20	1.10	1.51		3.10	3.30	3.30	
wind	0.3 m/s	velocity	5.49	8.31	9.14	9.14	8.31	8.31	8.31	9.14	7.62	8.31	9.28	8.02	8.85	8.31	8.31	

Šilhavy, Václav (CZE) (1995)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Heat 2 - 2014 Czech Republic National U20 Championships (Trinec, CZE) (99cm)***Feher (2014) - Final report from the U18 & U20 Czech Republic national championships*

date	28-Jun-14	time	2.96	4.14	5.38	6.59	7.78	9.00	10.22	11.42	12.69	13.95	15.61	2 / 5				
reaction time	0.217	interval		1.18	1.24	1.21	1.19	1.22	1.22	1.20	1.27	1.26	1.66		3.63	3.63	3.73	
wind	-2.9 m/s	velocity	4.64	7.75	7.37	7.55	7.68	7.49	7.49	7.62	7.20	7.25	8.45	7.05	7.55	7.55	7.35	

Šimánek, Jindřich (CZE) (1979)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Heat 1 - 2012 Czech Republic National Indoor Championships (Praha, CZE)***Feher (2012) - Czech Republic indoor national championships - men's 60m hurdles*

date	25-Feb-12	time	2.85	4.01	5.19	6.35	7.52						8.55	7 / 6				
reaction time	0.189	interval		1.16	1.18	1.16	1.17						1.03		3.50			
		velocity	4.81	7.88	7.75	7.88	7.81						9.44	7.02	7.83			

Simonelli, Lorenzo Ndele (ITA) (2002)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2024 Memorial van damme (Brussels, BEL)***Omega Timing (2024) - diamond league race analysis*

date	13-Sep-24	time	2.39	3.44	4.46	5.49	6.49	7.51	8.52	9.55	10.60	11.65	13.22	4 / 2				
reaction time	0.136	interval	7 steps	1.05	1.02	1.03	1.00	1.02	1.01	1.03	1.05	1.05	1.57		3.10	3.03	3.13	
wind	0.4 m/s	velocity	5.74	8.70	8.96	8.87	9.14	8.96	9.05	8.87	8.70	8.70	8.93	8.32	8.85	9.05	8.76	

FINAL - 2024 Weltklasse (Zürich, SUI)*Omega Timing (2024) - diamond league race analysis*

date	05-Sep-24	time	2.42	3.49	4.51	5.53	6.55	7.57	8.62	9.69	10.76	11.84	13.45	4 / 8				
reaction time	0.158	interval	7 steps	1.07	1.02	1.02	1.02	1.02	1.05	1.07	1.07	1.08	1.61		3.11	3.09	3.22	
wind	-0.3 m/s	velocity	5.67	8.54	8.96	8.96	8.96	8.96	8.70	8.54	8.54	8.46	8.71	8.18	8.82	8.87	8.52	

FINAL - 2024 Golden Gala • Pietro Mennea (Roma, ITA)*Omega Timing (2024) - diamond league race analysis*

date	30-Aug-24	time	2.38	3.44	4.48	5.50	6.52	7.53	8.56	9.61	10.67	11.76	13.34	4 / 6				
reaction time	0.164	interval	7 steps	1.06	1.04	1.02	1.02	1.01	1.03	1.05	1.06	1.09	1.58		3.12	3.06	3.20	
wind	0.4 m/s	velocity	5.76	8.62	8.79	8.96	8.96	9.05	8.87	8.70	8.62	8.39	8.87	8.25	8.79	8.96	8.57	

FINAL - 2024 Kamila Skolimowska Memorial (Silesia, POL)*Omega Timing (2024) - diamond league race analysis*

date	25-Aug-24	time	2.42	3.48	4.52	5.53	6.55	7.58	8.62	9.67	10.73	11.84	13.48	7 / 8				
reaction time	0.178	interval	7 steps	1.06	1.04	1.01	1.02	1.03	1.04	1.05	1.06	1.11	1.64		3.11	3.09	3.22	
wind	1.1 m/s	velocity	5.67	8.62	8.79	9.05	8.96	8.87	8.79	8.70	8.62	8.23	8.55	8.16	8.82	8.87	8.52	

FINAL - 2024 Athletissima (Lausanne, SUI)*Omega Timing (2024) - diamond league race analysis*

date	22-Aug-24	time	2.37	3.43	4.46	5.48	6.50	7.51	8.54	9.58	10.63	11.69	13.26	4 / 5				
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reaction time	0.136	interval	7 steps	1.06	1.03	1.02	1.02	1.01	1.03	1.04	1.05	1.06	1.57		3.11	3.06	3.15
wind	-0.1 m/s	velocity	5.79	8.62	8.87	8.96	8.96	9.05	8.87	8.79	8.70	8.62	8.93	8.30	8.82	8.96	8.70
Semi-Final 2 - 2024 Olympic Games (Paris, FRA)														<i>Paris 2024 Olympc Games - Results Book (2024)</i>			
date	07-Aug-24	time	2.33	3.39	4.42	5.44	6.44	7.46	8.50	9.55	10.61	11.72		13.38	7 / 5		
reaction time	0.154	interval	7 steps	1.06	1.03	1.02	1.00	1.02	1.04	1.05	1.06	1.11	1.66		3.11	3.06	3.22
wind	-0.1 m/s	velocity	5.89	8.62	8.87	8.96	9.14	8.96	8.79	8.70	8.62	8.23	8.45	8.22	8.82	8.96	8.52
Heat 4 - 2024 Olympic Games (Paris, FRA)														<i>Paris 2024 Olympc Games - Results Book (2024)</i>			
date	04-Aug-24	time	2.36	3.43	4.46	5.44	6.44	7.46	8.48	9.55	10.60	11.68		13.27	7 / 2		
reaction time	0.151	interval	7 steps	1.07	1.03	0.98	1.00	1.02	1.02	1.07	1.05	1.08	1.59		3.08	3.04	3.20
wind	0.3 m/s	velocity	5.81	8.54	8.87	9.33	9.14	8.96	8.96	8.54	8.70	8.46	8.82	8.29	8.90	9.02	8.57
FINAL - 2024 Herculis Meeting International d'Athlétisme (Monaco, MON)														<i>Omega Timing (2024) - diamond league race analysis</i>			
date	12-Jul-24	time	2.38	3.44	4.46	5.46	6.46	7.47	8.47	9.49	10.51	11.56		13.08	3 / 2		
reaction time	0.140	interval	7 steps	1.06	1.02	1.00	1.00	1.01	1.00	1.02	1.02	1.05	1.52		3.08	3.01	3.09
wind	-0.7 m/s	velocity	5.76	8.62	8.96	9.14	9.14	9.05	9.14	8.96	8.96	8.70	9.22	8.41	8.90	9.11	8.87
Heat 2 - 2024 Meeting de Paris (Paris, FRA)														<i>Omega Timing (2024) - diamond league race analysis</i>			
date	07-Jul-24	time	2.34	3.40	4.42	5.44	6.46	7.49	8.53	9.58	10.64	11.72		13.33	4 / 5		
reaction time	0.140	interval	7 steps	1.06	1.02	1.02	1.02	1.03	1.04	1.05	1.06	1.08	1.61		3.10	3.09	3.19
wind	0.4 m/s	velocity	5.86	8.62	8.96	8.96	8.96	8.87	8.79	8.70	8.62	8.46	8.71	8.25	8.85	8.87	8.60
FINAL - 2024 European Athletics Championships (Roma, ITA) (TV Analysis)														<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>			
date	08-Jun-24	time	2.53	3.55	4.56	5.56	6.56	7.56	8.56	9.57	10.62	11.64		13.05	5 / 1		
reaction time	0.145	interval	7 steps	1.02	1.01	1.00	1.00	1.00	1.00	1.01	1.05	1.02	1.41	NR PB	3.03	3.00	3.08
wind	0.6 m/s	velocity	5.42	8.96	9.05	9.14	9.14	9.14	9.14	9.05	8.70	8.96	9.94	8.43	9.05	9.14	8.90
FINAL - 2024 World Athletics Indoor Championships (Glasgow, GBR) (TV Analysis)														<i>Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record</i>			
date	02-Mar-24	time	2.51	3.55	4.57	5.57	6.54							7.43	1 / 2		
reaction time	0.152	interval	7 steps	1.04	1.02	1.00	0.97						7.43	NR	3.06		
		velocity	5.47	8.79	8.96	9.14	9.42						1.89	8.08	8.96		
FINAL - 2024 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)														<i>Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record</i>			
date	10-Feb-24	time	2.42	3.46	4.49	5.50	6.50							7.52	3 / 4		
reaction time	0.157	interval	7 steps	1.04	1.03	1.01	1.00						7.52		3.08		
		velocity	5.67	8.79	8.87	9.05	9.14						1.86	7.98	8.90		
Heat 2 - 2024 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)														<i>Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record</i>			
date	10-Feb-24	time	2.48	3.52	4.56	5.58	6.58							7.51	4 / 2		
reaction time	0.165	interval	7 steps	1.04	1.04	1.02	1.00						7.51		3.10		
		velocity	5.53	8.79	8.79	8.96	9.14						1.87	7.99	8.85		
FINAL - 2023 Weltklasse (Zürich, SUI)														<i>Omega Timing (2023) - diamond league race analysis</i>			
date	31-Aug-23	time	2.43	3.50	4.50	5.50	6.50	7.56	8.60	9.60	10.70	11.80		13.60	4 / 5		
reaction time	0.142	interval	7 steps	1.07	1.00	1.00	1.00	1.06	1.04	1.00	1.10	1.10	1.80		3.07	3.10	3.20
wind	-0.1 m/s	velocity	5.65	8.54	9.14	9.14	9.14	8.62	8.79	9.14	8.31	8.31	7.79	8.09	8.93	8.85	8.57
Semi-Final 2 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>			
date	21-Aug-23	time	2.53	3.60	4.62	5.65	6.70	7.78	8.85	9.93	11.02	12.13		13.69	2 / 8		
reaction time	0.151	interval	7 steps	1.07	1.02	1.03	1.05	1.08	1.07	1.08	1.09	1.11	1.56		3.12	3.20	3.28
wind	-0.2 m/s	velocity	5.42	8.54	8.96	8.87	8.70	8.46	8.54	8.46	8.39	8.23	8.99	8.04	8.79	8.57	8.36
Heat 3 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>			
date	20-Aug-23	time	2.53	3.58	4.63	5.65	6.72	7.76	8.80	9.86	10.95	12.03		13.50	4 / 4		
reaction time	0.152	interval	7 steps	1.05	1.05	1.02	1.07	1.04	1.04	1.06	1.09	1.08	1.47		3.12	3.15	3.23
wind	0.0 m/s	velocity	5.42	8.70	8.70	8.96	8.54	8.79	8.79	8.62	8.39	8.46	9.54	8.15	8.79	8.70	8.49
FINAL - 2023 Athletissima (Lausanne, SUI)														<i>Omega Timing (2023) - diamond league race analysis</i>			
date	30-Jun-23	time	2.39	3.46	4.50	5.53	6.57	7.60	8.64	9.68	10.74	11.82		13.41	1 / 4		
reaction time	0.136	interval	7 steps	1.07	1.04	1.03	1.04	1.03	1.04	1.04	1.06	1.08	1.59		3.14	3.11	3.18
wind	-1.0 m/s	velocity	5.74	8.54	8.79	8.87	8.79	8.87	8.79	8.79	8.62	8.46	8.82	8.20	8.73	8.82	8.62
FINAL - 2023 Golden Gala Pietro Mennea (Firenze, ITA) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>			
date	02-Jun-23	time	2.54	3.58	4.66	5.74	6.78	7.84	8.86	9.92	11.00	12.10		13.57	8 / 8		
reaction time	0.153	interval	7 steps	1.04	1.08	1.08	1.04	1.06	1.02	1.06	1.08	1.10	1.47	PB	3.20	3.12	3.24
wind	-0.2 m/s	velocity	5.40	8.79	8.46	8.46	8.79	8.62	8.96	8.62	8.46	8.31	9.54	8.11	8.57	8.79	8.46
Sirota, Martin (CZE) (1995)																	
		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Heat 2 - 2014 Czech Republic National U20 Championships (Trinec, CZE) (99cm)														<i>Feher (2014) - Final report from the U18 & U20 Czech Republic national championships</i>			
date	28-Jun-14	time	2.88	4.07	5.27	6.44	7.66	8.86	10.07	11.31	12.53	13.81		15.48	8 / 3		
reaction time	0.249	interval		1.19	1.20	1.17	1.22	1.20	1.21	1.24	1.22	1.28	1.67		3.56	3.63	3.74
wind	-2.9 m/s	velocity	4.76	7.68	7.62	7.81	7.49	7.62	7.55	7.37	7.49	7.14	8.40	7.11	7.70	7.55	7.33

		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Sjöberg, Christian (SWE) (1984)																	
FINAL - 2007 Windsprint (Sundsvall, SWE)													<i>(2007) - www.ssg.se/en/Windsprint/Split-times/</i>				
date	24-Jul-07	time	3.90			7.29			10.72				14.84	1 / 7			
reaction time		interval			3.39				3.43			4.12					
wind	1.3 m/s	velocity	5.86		8.09				7.99			7.84	7.41				
Sjödin, Ludwig (SWE) (1995)																	
FINAL 2 - 2017 Windsprint (Sundsvall, SWE)													<i>(2017) - www.windsprint/Splittider/</i>				
date	30-Jul-17	time	2.68	3.86	5.00	6.18	7.40	8.62	9.83	11.12	12.34	13.62	15.29	1 / 4			
reaction time		interval	1.18	1.14	1.18	1.22	1.22	1.21	1.29	1.22	1.28	1.67			3.50	3.65	3.79
wind	1.0 m/s	velocity	5.12	7.75	8.02	7.75	7.49	7.49	7.55	7.09	7.49	7.14	8.40	7.19	7.83	7.51	7.23
FINAL - 2017 Windsprint (Sundsvall, SWE)													<i>(2017) - www.windsprint/Splittider/</i>				
date	30-Jul-17	time	2.76	3.96	5.11	6.32	7.56	8.78					15.68	1 / 5			
reaction time		interval		1.20	1.15	1.21	1.24	1.22				6.90			3.56		
wind	1.0 m/s	velocity	4.97	7.62	7.95	7.55	7.37	7.49				7.33	7.02		7.70		
Sklenár, David (CZE) (1997)																	
FINAL - 2015 Czech Republic National U20 Indoor Championships (Praha, CZE) (99cm)													<i>Feher (2015) - Final report U18 & U20 Czech Republic indoor national champs</i>				
date	14-Feb-15	time	2.71	3.81	4.89	5.95	7.05						8.01	6 / 2			
reaction time	0.184	interval	1.10	1.08	1.06	1.10						0.96	PB		3.24		
		velocity	5.06	8.31	8.46	8.62	8.31					10.13	7.49		8.46		
FINAL - 2014 Czech Republic National U18 Championships (Trinec, CZE) (91cm)													<i>Feher (2014) - Final report from the U18 & U20 Czech Republic national championships</i>				
date	28-Jun-14	time	2.67	3.77	4.86	5.94	7.02	8.11	9.22	10.35	11.49	12.66	14.25	5 / 2			
reaction time	0.159	interval	1.10	1.09	1.08	1.08	1.09	1.11	1.13	1.14	1.17	1.59			3.27	3.28	3.44
wind	-3.7 m/s	velocity	5.14	8.31	8.39	8.46	8.46	8.39	8.23	8.09	8.02	7.81	8.82	7.72	8.39	8.36	7.97
Heat 2 - 2014 Czech Republic National U18 Championships (Trinec, CZE) (91cm)													<i>Feher (2014) - Final report from the U18 & U20 Czech Republic national championships</i>				
date	28-Jun-14	time	2.73	3.83	4.93	6.04	7.12	8.21	9.33	10.44	11.50	12.65	14.30	3 / 1			
reaction time	0.197	interval	1.10	1.10	1.11	1.08	1.09	1.12	1.11	1.06	1.15	1.65			3.31	3.29	3.32
wind	-4.1 m/s	velocity	5.03	8.31	8.31	8.23	8.46	8.39	8.16	8.23	8.62	7.95	8.50	7.69	8.28	8.33	8.26
Skotheim, Sander (NOR) (2002)																	
Decathlon - Heat 2 - 2024 Olympic Games (Paris, FRA)													<i>Paris 2024 Olympic Games - Results Book (2024)</i>				
date	03-Aug-24	time	2.50	3.65	4.78	5.87	6.97	8.06	9.16	10.24	11.34	12.46	14.15	8 / 1			
reaction time	0.161	interval	1.15	1.13	1.09	1.10	1.09	1.10	1.08	1.10	1.12	1.69			3.37	3.29	3.30
wind	0.2 m/s	velocity	5.49	7.95	8.09	8.39	8.31	8.39	8.31	8.46	8.31	8.16	8.30	7.77	8.14	8.33	8.31
Slavíček, Lukáš (CZE) (1997)																	
Heat 3 - 2014 Czech Republic National U18 Championships (Trinec, CZE) (91cm)													<i>Feher (2014) - Final report from the U18 & U20 Czech Republic national championships</i>				
date	28-Jun-14	time	2.82	3.99	5.20	6.36	7.57	8.80	10.01	11.20	12.42	13.60	15.44	8 / 5			
reaction time	0.180	interval	1.17	1.21	1.16	1.21	1.23	1.21	1.19	1.22	1.18	1.84			3.54	3.65	3.59
wind	-1.6 m/s	velocity	4.87	7.81	7.55	7.88	7.55	7.43	7.55	7.68	7.49	7.75	7.62	7.12	7.75	7.51	7.64
Smet, Koen (BEL) (1992)																	
FINAL - 2023 FBK Games (Hengelo, NED) (TV Analysis)													<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>				
date	04-Jun-23	time	2.65	3.73	4.80	5.87	6.96	8.03	9.13	10.20	11.33	12.40	13.85	9 / 9			
reaction time	0.147	interval	1.08	1.07	1.07	1.09	1.07	1.10	1.07	1.13	1.07	1.45			3.22	3.26	3.27
wind	0.4 m/s	velocity	5.18	8.46	8.54	8.54	8.39	8.54	8.31	8.54	8.09	8.54	9.67	7.94	8.52	8.41	8.39
FINAL - 2021 Weltklasse (Zürich, SUI) (TV Analysis)													<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>				
date	09-Sep-21	time	2.56	3.62	4.66	5.70	6.78	7.84	8.94	10.02	11.10	12.22	13.77	1 / 7			
reaction time	0.132	interval	1.06	1.04	1.04	1.08	1.06	1.10	1.08	1.08	1.12	1.55			3.14	3.24	3.28
wind	0.6 m/s	velocity	5.36	8.62	8.79	8.79	8.46	8.62	8.31	8.46	8.46	8.16	9.05	7.99	8.73	8.46	8.36
FINAL - 2021 Athletissima (Lausanne, SUI) (TV Analysis)													<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>				
date	26-Aug-21	time	2.56	3.60	4.62	5.64	6.68	7.72	8.78	9.78	10.88	11.94	13.42	1 / 6			
reaction time	0.144	interval	1.04	1.02	1.02	1.04	1.04	1.06	1.00	1.10	1.06	1.48			3.08	3.14	3.16
wind	2.5 m/s	velocity	5.36	8.79	8.96	8.96	8.79	8.79	8.62	9.14	8.31	8.62	9.47	8.20	8.90	8.73	8.68
FINAL - 2021 European Indoor Championships (Toruń, POL) (TV Analysis)													<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>				
date	07-Mar-21	time	2.54	3.60	4.64	5.68	6.74						7.73	1 / 7			
reaction time	0.144	interval	1.06	1.04	1.04	1.06						0.99			3.14		
		velocity	5.40	8.62	8.79	8.79	8.62					9.82	7.76		8.73		
FINAL - 2021 Villa de Madrid (Madrid, ESP) (TV Analysis)													<i>Henson (2021) - men's 60m hurdles world record season - Grant Holloway</i>				
date	24-Feb-21	time	2.50	3.59	4.63	5.67	6.71						7.73	2 / 7			
reaction time		interval	1.09	1.04	1.04	1.04						1.02			3.17		
		velocity	5.49	8.39	8.79	8.79	8.79					9.53	7.76		8.65		
Smit, Louw (RSA) (1988)																	

FINAL - 2010 Folsam GP (Sollentuna, SWE)

date 01-Jul-10 time 2.53 3.65 4.73
 reaction time interval 1.12 1.08
 wind 0.4 m/s velocity 5.42 8.16 8.46

14.12
 8 / 6
 Blomkvist (2010) - www.sub13.se

7.79

Smith, Chad (USA) (1974)**Decathlon - Heat ?? - 2004 Mt. SAC Relays (Walnut, CA)**

date 18-Apr-04 time 2.55 3.67 4.75 5.83 6.92 8.02 9.12 10.22 11.37 12.52
 reaction time interval 1.12 1.08 1.08 1.09 1.10 1.10 1.10 1.15 1.15 1.67
 wind 2.8 m/s velocity 5.38 8.16 8.46 8.46 8.39 8.31 8.31 8.31 7.95 7.95 8.40

14.19
 / 1
 Henson (2004) - USATF OTC sport science

3.28 3.29 3.40
 8.36 8.33 8.06

Smith, Jayden (USA) (2003)**Semi-Final 1 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)**

date 27-Jun-24 time 2.49 3.55 4.60 5.64 6.67 7.71 8.75 9.81 10.88 11.96
 reaction time interval 7 steps 1.06 1.05 1.04 1.03 1.04 1.04 1.06 1.07 1.08 1.45
 wind 0.3 m/s velocity 5.51 8.62 8.70 8.79 8.87 8.79 8.79 8.62 8.54 8.46 9.67

13.41
 4 / 6
 Henson (2024) - Athlete First: 2024 year end hurdle report

3.15 3.11 3.21
 8.70 8.82 8.54

Heat 2 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)

date 24-Jun-24 time 2.50 3.53 4.56 5.58 6.62 7.66 8.72 9.76 10.82 11.92
 reaction time interval 7 steps 1.03 1.03 1.02 1.04 1.04 1.06 1.04 1.06 1.10 1.45
 wind -0.3 m/s velocity 5.49 8.87 8.87 8.96 8.79 8.79 8.62 8.79 8.62 8.31 9.67

13.37
 1 / 3
 Henson (2024) - Athlete First: 2024 year end hurdle report

PB 3.08 3.14 3.20
 8.23 8.90 8.73 8.57

Smith, Shakeem (BAH) (1997)**FINAL - 2020 Don Kirby Elite Invitational (Albuquerque, NM) (Altitude)**

date 14-Feb-20 time 2.65 3.75 4.84 5.91 6.99
 reaction time interval 1.10 1.09 1.07 1.08
 velocity 5.18 8.31 8.39 8.54 8.46

7.91
 6 / 3
 CAA Hurdle Development (2020)

0.92 3.26
 10.57 7.59 8.41

Smolka, Adam (CZE) (1998)**FINAL - 2015 Czech Republic National U18 Indoor Championships (Praha, CZE) (91cm)**

date 14-Feb-15 time 2.74 3.89 5.00 6.14 7.28
 reaction time 0.153 interval 1.15 1.11 1.14 1.14
 velocity 5.01 7.95 8.23 8.02 8.02

Feher (2015) - Final report U18 & U20 Czech Republic indoor national champs

8.29 3 / 6
 1.01 3.40
 9.62 7.24 8.06

Snell, Errik (USA)**Heat 3 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)**

date 14-Feb-20 time 2.65 3.77 4.90 5.98 7.11
 reaction time 0.159 interval 1.12 1.13 1.08 1.13
 velocity 5.18 8.16 8.09 8.46 8.09

8.08
 6 / 7
 CAA Hurdle Development (2020)

0.97 3.33
 10.02 7.43 8.23

Snow, Malachi (USA) ()**FINAL - 2024 NCAA Championships (Eugene, OR) (TV Analysis)**

date 07-Jun-24 time 2.57 3.60 4.67 5.71 6.74 7.77 8.81 9.88 10.91 11.98
 reaction time interval 7 steps 1.03 1.07 1.04 1.03 1.03 1.04 1.07 1.03 1.07 1.35
 wind 0.1 m/s velocity 5.34 8.87 8.54 8.79 8.87 8.87 8.79 8.54 8.87 8.54 10.39

13.33
 8 / 4
 Henson (2024) - Athlete First: 2024 year end hurdle report

PB 3.14 3.10 3.17
 8.25 8.73 8.85 8.65

Soga, Kentaro (JPN) (2001)**U20 FINAL - 2018 National Sports Festival (Fukui, JPN) (99cm)**

date 07-Oct-18 time 2.69 3.78 4.85 5.92 6.96 8.04 9.09 10.14 11.25 12.34
 reaction time 0.178 interval 1.09 1.07 1.07 1.04 1.08 1.05 1.05 1.11 1.09 1.45
 wind 1.5 m/s velocity 5.10 8.39 8.54 8.54 8.79 8.46 8.70 8.70 8.23 8.39 9.67

Joshi (2018) - research on athlete performance and technique- 2018 data book

13.79 2 / 6
 3.23 3.17 3.25
 7.98 8.49 8.65 8.44

Sophia, Matthew (NED) (2003)**FINAL - 2024 NCAA Championships (Eugene, OR) (TV Analysis)**

date 07-Jun-24 time 2.57 3.64 4.70 5.74 6.77 7.81 8.87 9.94 10.98 12.08
 reaction time interval 1.07 1.06 1.04 1.03 1.04 1.06 1.07 1.04 1.10 1.45
 wind 0.1 m/s velocity 5.34 8.54 8.62 8.79 8.87 8.79 8.62 8.54 8.79 8.31 9.67

13.53
 2 / 8
 Henson (2024) - Athlete First: 2024 year end hurdle report

8.13 3.17 3.13 3.21
 8.65 8.76 8.54

Sotono, Haru (JPN) (2004)**FINAL - 2022 Japanese National High School Championships (Naruto, JPN)**

date 07-Aug-22 time 2.66 3.80 4.94 6.08 7.19 8.35 9.51 10.68 11.89 13.09
 reaction time 0.150 interval 1.14 1.14 1.14 1.11 1.16 1.16 1.17 1.21 1.20 1.52
 wind -3.8 m/s velocity 5.16 8.02 8.02 8.02 8.23 7.88 7.88 7.81 7.55 7.62 9.22

Kishima (2022) - national high school championships biomechanics data collection

14.61 6 / 2
 PB 3.42 3.43 3.58
 7.53 8.02 7.99 7.66

Souza, Éder Antônio (BRA) (1986)**Semi-Final 3 - 2017 IAAF World Championships (London, GBR)**

date 06-Aug-17 time 2.44 3.53 4.57 5.63 6.66 7.71 8.75 9.82 10.91 12.03
 reaction time 0.133 interval 7 steps 1.09 1.04 1.06 1.03 1.05 1.04 1.07 1.09 1.12 1.67
 wind 0.3 m/s velocity 5.62 8.39 8.79 8.62 8.87 8.70 8.79 8.54 8.39 8.16 8.40

13.70
 3 / 6
 Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles

8.03 3.19 3.12 3.28
 8.60 8.79 8.36

Sparman, Markus (SWE) (1989)**Heat 2 - 2010 Samsung Galan (Göteborg, SWE)**

date 02-Feb-10 time 2.56 3.72 4.86 5.96 7.10

8.14
 / 5
 Blomkvist (2010) - www.sub13.se

reaction time	interval	1.16	1.14	1.10	1.14								1.04		3.40
	velocity	5.36	7.88	8.02	8.31	8.02							9.35	7.37	8.06

Špičák, Daniel (CZE) (1997)

		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2015 Czech Republic National U20 Indoor Championships (Praha, CZE) (99cm) <i>Feher (2015) - Final report U18 & U20 Czech Republic indoor national champs</i>																	
date	14-Feb-15	time	2.78	3.95	5.12	6.33	7.65							8.79	5 / 7		
reaction time	0.138	interval	1.17	1.17	1.21	1.32							1.14		3.55		
		velocity	4.94	7.81	7.81	7.55	6.92						8.53	6.83	7.72		

FINAL - 2014 Czech Republic National U18 Championships (Trinec, CZE) (91cm) <i>Feher (2014) - Final report from the U18 & U20 Czech Republic national championships</i>																	
date	28-Jun-14	time	2.96	4.11	5.29	6.48	7.65	8.80	9.95	11.15	12.34	13.55		15.09	8 / 5		
reaction time	0.288	interval	1.15	1.18	1.19	1.17	1.15	1.15	1.20	1.19	1.21	1.54			3.52	3.47	3.60
wind	-3.7 m/s	velocity	4.64	7.95	7.75	7.68	7.81	7.95	7.95	7.62	7.68	7.55	9.10	7.29	7.79	7.90	7.62

Heat 3 - 2014 Czech Republic National U18 Championships (Trinec, CZE) (91cm) <i>Feher (2014) - Final report from the U18 & U20 Czech Republic national championships</i>																	
date	28-Jun-14	time	2.83	4.04	5.21	6.39	7.56	8.74	9.92	11.16	12.37	13.61		15.18	1 / 3		
reaction time	0.170	interval	1.21	1.17	1.18	1.17	1.18	1.18	1.24	1.21	1.24	1.57			3.56	3.53	3.69
wind	-1.6 m/s	velocity	4.85	7.55	7.81	7.75	7.81	7.75	7.75	7.37	7.55	7.37	8.93	7.25	7.70	7.77	7.43

St. Gilles, Olivier (FRA) (1963)

		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Semi-Final ? - 1986 French National Indoor Championships (Lievin, FRA) <i>Aubert (1986) - indoor - video - haies, etude des performances</i>																	
date	26-Jan-86	time	2.68	3.81	4.90	5.98	7.07							8.03	1 / 4		
reaction time		interval	1.13	1.09	1.08	1.09							0.96		3.30		
		velocity	5.12	8.09	8.39	8.46	8.39						10.13	7.47	8.31		

Heat ? - 1986 French National Indoor Championships (Lievin, FRA) <i>Aubert (1986) - indoor - video - haies, etude des performances</i>																	
date	25-Jan-86	time	2.78	3.90	5.02	6.10	7.20							8.07	1 / 4		
reaction time		interval	1.12	1.12	1.08	1.10							0.87		3.32		
		velocity	4.94	8.16	8.16	8.46	8.31						11.17	7.43	8.26		

Štastny, Michal (CZE) (1992)

		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Heat 1 - 2013 Czech Republic National Championships (Tábor, CZE) <i>Feher (2013) - Final report from the men's & women's Czech Republic national championships</i>																	
date	15-Jun-13	time	2.88	4.15	5.43	6.75	8.07		10.73	12.09				16.54	7 / 5		
reaction time	0.193	interval	1.27	1.28	1.32	1.32			2.66	1.36					3.87	3.98	
wind	-0.6 m/s	velocity	4.76	7.20	7.14	6.92	6.92		6.87	6.72				6.65	7.09	6.89	

Stavang, Eivind (NOR) (1982)

		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2012 Windsprint (Sundsvall, SWE) <i>Blomkvist (2012) - www.sub13.se</i>																	
date	17-Jun-12	time	2.72	3.85	4.99	6.12	7.23	8.36	9.49	10.64	11.79	12.95		14.47	2 / 6		
reaction time		interval	1.13	1.14	1.13	1.11	1.13	1.13	1.15	1.15	1.16	1.52			3.40	3.37	3.46
wind	1.1 m/s	velocity	5.04	8.09	8.02	8.09	8.23	8.09	8.09	7.95	7.95	7.88	9.22	7.60	8.06	8.14	7.92

FINAL - 2011 Landskamp FIN-SWE-NOR (Tampere, FIN) <i>Blomkvist (2011) - www.sub13.se</i>																	
date	05-Feb-11	time	2.60	3.76	4.86	5.96	7.08							8.13	6 / 5		
reaction time		interval	1.16	1.10	1.10	1.12							1.05		3.36		
		velocity	5.28	7.88	8.31	8.31	8.16						9.26	7.38	8.16		

B FINAL - 2010 Folksam GP (Sollentuna, SWE) <i>Blomkvist (2010) - www.sub13.se</i>																	
date	01-Jul-10	time	2.45	3.64	4.80	5.95	7.09	8.22	9.42	10.58	11.79	12.99		14.81	1 / 2		
reaction time		interval	1.19	1.16	1.15	1.14	1.13	1.20	1.16	1.21	1.20	1.82			3.50	3.47	3.57
wind	0.8 m/s	velocity	5.60	7.68	7.88	7.95	8.02	8.09	7.62	7.88	7.55	7.62	7.70	7.43	7.83	7.90	7.68

Steinforth, Till (GER) (2002)

		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Decathlon - Heat 2 - 2024 Olympic Games (Paris, FRA) <i>Paris 2024 Olympic Games - Results Book (2024)</i>																	
date	03-Aug-24	time	2.48	3.63	4.75	5.86	6.97	8.08	9.21	10.34	11.49	12.65		14.37	6 / 4		
reaction time	0.103	interval	1.15	1.12	1.11	1.11	1.11	1.13	1.13	1.15	1.16	1.72			3.38	3.35	3.44
wind	0.2 m/s	velocity	5.53	7.95	8.16	8.23	8.23	8.09	8.09	7.95	7.88	8.15	7.65		8.11	8.19	7.97

Suárez, Leonel (CUB) (1987)

		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Decathlon - Heat 2 - 2009 IAAF World Championships (Berlin, GER) <i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>																	
date	20-Aug-09	time	2.65	3.78	4.89	6.01	7.13	8.25	9.39	10.51	11.68	12.85		14.45	8 / 7		
reaction time	0.139	interval	1.13	1.11	1.12	1.12	1.12	1.14	1.12	1.17	1.17	1.60			3.36	3.38	3.46
wind	0.3 m/s	velocity	5.18	8.09	8.23	8.16	8.16	8.16	8.02	8.16	7.81	7.81	8.76	7.61	8.16	8.11	7.92

Sugaya, Takumi (JPN) (2001)

		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2019 National Sports Festival (Hitachinaka, JPN) (99cm) <i>Enomoto (2019) - research on athlete performance and technique- 2019 data book</i>																	
date	06-Oct-19	time	2.68	3.76	4.82	5.88	6.93	7.98	9.04	10.13	11.20	12.28		13.79	8 / 8		
reaction time	0.150	interval	1.08	1.06	1.06	1.05	1.05	1.06	1.09	1.07	1.08	1.51			3.20	3.16	3.24
wind	2.7 m/s	velocity	5.12	8.46	8.62	8.62	8.70	8.70	8.62	8.39	8.54	8.46	9.28	7.98	8.57	8.68	8.46

FINAL - 2019 Japanese National High School Championships (Okinawa, JPN) (99cm) <i>Kota (2019) - 72nd high school champs: JAF scientific committee - biomechanics data</i>																	
date	08-Aug-19	time	2.74	3.86	4.99	6.12	7.24	8.37	9.50	10.63	11.75	12.91		14.40	7 / 3		
reaction time		interval	1.12	1.13	1.13	1.12	1.13	1.13	1.13	1.12	1.16	1.49		PB	3.38	3.38	3.41

wind -3.0 m/s velocity 5.01 8.16 8.09 8.09 8.16 8.09 8.09 8.09 8.16 7.88 9.41 7.64 8.11 8.11 8.04

														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Sun Haoru (CHN) (1998)																													
Heat 2 - 2021 Chinese National Championships (Chongqing, CHN)														CAA Hurdle Development (2021)															
date	25-Jun-21	time	2.75	3.89	5.00	6.11	7.25	8.38	9.51	10.64	11.88	13.09		14.69	8 / 5														
reaction time	0.166	interval	1.14	1.11	1.11	1.14	1.13	1.13	1.13	1.24	1.21	1.60				3.36	3.40	3.58											
wind	-1.2 m/s	velocity	4.99	8.02	8.23	8.23	8.02	8.09	8.09	8.09	7.37	7.55	8.76	7.49		8.16	8.06	7.66											
FINAL - 2021 Philippe Cup Athletics Invitational (Wuhan, CHN)																													
date	19-May-21	time	2.74	3.85	4.97	6.19								dnf	7 / --														
reaction time	0.156	interval	1.11	1.12	1.22											3.45													
wind	1.9 m/s	velocity	5.01	8.23	8.16	7.49										7.95													
FINAL - 2021 National Indoor Grand Prix (Jinan, CHN)																													
date	18-Mar-21	time	2.77	3.89	4.98	6.09	7.17							8.15	1 / 5														
reaction time	0.188	interval	1.12	1.09	1.11	1.08						0.98				3.32													
		velocity	4.95	8.16	8.39	8.23	8.46					9.92	7.36			8.26													
Heat 2 - 2020 Chinese National Championships (Shaoxing, CHN)																													
date	16-Sep-20	time	2.68	3.79	4.89	5.98	7.05	8.17	9.28	10.41	11.57	12.74		14.30	7 / 6														
reaction time	0.153	interval	1.11	1.10	1.09	1.07	1.12	1.11	1.13	1.16	1.17	1.56				3.30	3.30	3.46											
wind	-0.5 m/s	velocity	5.12	8.23	8.31	8.39	8.54	8.16	8.23	8.09	7.88	7.81	8.99	7.69		8.31	8.31	7.92											
Heat 2 - 2019 Chinese National Championships (Shenyang, CHN)																													
date	08-Jul-19	time	2.65	3.77	4.87	5.98	7.06	8.14	9.25	10.36	11.48	12.63		14.14	6 / 4														
reaction time	0.174	interval	1.12	1.10	1.11	1.08	1.08	1.11	1.11	1.12	1.15	1.51	PB			3.33	3.27	3.38											
wind	0.4 m/s	velocity	5.18	8.16	8.31	8.23	8.46	8.46	8.23	8.23	8.16	7.95	9.28	7.78		8.23	8.39	8.11											
FINAL - 2019 Chinese National Grand Prix 3 (Jinhau, CHN)																													
date	23-May-19	time	2.70	3.82	4.92	6.00	7.08	8.20	9.28	10.38	11.50	12.60		14.13	9 / 7														
reaction time	0.231	interval	1.12	1.10	1.08	1.08	1.12	1.08	1.10	1.12	1.10	1.53				3.30	3.28	3.32											
wind	2.5 m/s	velocity	5.08	8.16	8.31	8.46	8.46	8.16	8.46	8.31	8.16	8.31	9.16	7.78		8.31	8.36	8.26											
FINAL - 2019 Chinese National Grand Prix 2 (Huangshi, CHN)																													
date	13-Apr-19	time	2.70	3.81	4.92	6.02	7.12	8.20	9.29	10.42	11.54	12.70		14.25	3 / 8														
reaction time	0.181	interval	1.11	1.11	1.10	1.10	1.08	1.09	1.13	1.12	1.16	1.55	PB			3.32	3.27	3.41											
wind	-0.3 m/s	velocity	5.08	8.23	8.23	8.31	8.31	8.46	8.39	8.09	8.16	7.88	9.05	7.72		8.26	8.39	8.04											
Heat 1 - 2019 Chinese National Grand Prix 2 (Huangshi, CHN)																													
date	13-Apr-19	time	2.67	3.79	4.90	5.97	7.07	8.19	9.31	10.46	11.61	12.78		14.35	9 / 1														
reaction time	0.185	interval	1.12	1.11	1.07	1.10	1.12	1.12	1.15	1.15	1.17	1.57				3.30	3.34	3.47											
wind	0.0 m/s	velocity	5.14	8.16	8.23	8.54	8.31	8.16	8.16	7.95	7.95	7.81	8.93	7.67		8.31	8.21	7.90											
B-FINAL - 2019 Chinese Indoor National Grand Prix 4 (Xi'an, CHN)																													
date	4-Mar-19	time	2.65	3.75	4.85	5.93	7.02							7.97	2 / 1														
reaction time		interval	1.10	1.10	1.08	1.09						0.95	PB			3.28													
		velocity	5.18	8.31	8.31	8.46	8.39					10.23	7.53			8.36													
B-FINAL - 2019 Chinese Indoor National Grand Prix 3 (Xi'an, CHN)																													
date	28-Feb-19	time	2.70	3.80	4.90	5.96	7.06							8.00	5 / 3														
reaction time		interval	1.10	1.10	1.06	1.10						0.94	PB			3.26													
		velocity	5.08	8.31	8.31	8.62	8.31					10.34	7.50			8.41													
Sun Qihao (CHN) (2000)																													
Decathlon - Heat 3 - 2021 Chinese National Championships (Chongqing, CHN)														CAA Hurdle Development (2021)															
date	27-Jun-21	time	2.83	4.04	5.19	6.42	7.66	8.89	10.14	11.40	12.68	14.01		15.72	5 / 7														
reaction time	0.179	interval	1.21	1.15	1.23	1.24	1.23	1.25	1.26	1.28	1.33	1.71				3.59	3.72	3.87											
wind	-0.2 m/s	velocity	4.85	7.55	7.95	7.43	7.37	7.43	7.31	7.25	7.14	6.87	8.20	7.00		7.64	7.37	7.09											
Sun Zhenjiang (CHN) (1999)																													
FINAL - 2021 Chinese National Championships (Chongqing, CHN)														CAA Hurdle Development (2021)															
date	25-Jun-21	time	2.60	3.70	4.73	5.77	6.80	7.86	8.88	9.96	11.02	12.09		13.56	7 / 1														
reaction time	0.157	interval	7 steps	1.10	1.03	1.04	1.03	1.06	1.02	1.08	1.06	1.07	1.47	PB		3.17	3.11	3.21											
wind	1.6 m/s	velocity	5.28	8.31	8.87	8.79	8.87	8.62	8.96	8.46	8.62	8.54	9.54	8.11		8.65	8.82	8.54											
Heat 1 - 2021 Chinese National Championships (Chongqing, CHN)																													
date	25-Jun-21	time	2.58	3.66	4.72	5.79	6.85	7.91	9.00	10.09	11.21	12.33		13.91	4 / 1														
reaction time	0.150	interval	7 steps	1.08	1.06	1.07	1.06	1.06	1.09	1.09	1.12	1.12	1.58			3.21	3.21	3.33											
wind	-1.0 m/s	velocity	5.32	8.46	8.62	8.54	8.62	8.62	8.39	8.39	8.16	8.16	8.87	7.91		8.54	8.54	8.23											
FINAL - 2021 National Grand Prix (Chengdu, CHN)																													
date	02-Apr-21	time	2.62	3.72	4.78	5.82	6.88	7.93	9.01	10.10	11.24	12.36		13.98	5 / 2														
reaction time	0.168	interval	7 steps	1.10	1.06	1.04	1.06	1.05	1.08	1.09	1.14	1.12	1.62			3.20	3.19	3.35											

wind	-0.1 m/s	velocity	5.24	8.31	8.62	8.79	8.62	8.70	8.46	8.39	8.02	8.16	8.65	7.87	223 of 283	M110H athlete	8.57	8.60	8.19
Heat 1 - 2021 National Grand Prix (Chengdu, CHN)															<i>CAA Hurdle Development (2021)</i>				
date	02-Apr-21	time	2.66	3.74	4.80	5.88	6.92	7.96	9.04	10.14	11.24	12.36		13.88	4 / 1				
reaction time	0.189	interval	7 steps	1.08	1.06	1.08	1.04	1.04	1.08	1.10	1.10	1.12	1.52			3.22	3.16	3.32	
wind	0.5 m/s	velocity	5.16	8.46	8.62	8.46	8.79	8.79	8.46	8.31	8.31	8.16	9.22	7.93		8.52	8.68	8.26	
A FINAL - 2021 National Indoor Grand Prix (Chengdu, CHN)															<i>CAA Hurdle Development (2021)</i>				
date	13-Mar-21	time	2.62	3.70	4.78	5.83	6.88							7.81	5 / 2				
reaction time	0.187	interval	7 steps	1.08	1.08	1.05	1.05						0.93			3.21			
		velocity	5.24	8.46	8.46	8.70	8.70						10.45	7.68		8.54			
FINAL - 2020 Chinese National Championships (Shaoxing, CHN)															<i>CAA Hurdle Development (2020)</i>				
date	16-Sep-20	time	2.60	3.70	4.77	5.83	6.90	7.95	9.03	10.13	11.24	12.36		13.88	9 / 5				
reaction time	0.176	interval	7 steps	1.10	1.07	1.06	1.07	1.05	1.08	1.10	1.11	1.12	1.52			3.23	3.20	3.33	
wind	0.4 m/s	velocity	5.28	8.31	8.54	8.62	8.54	8.70	8.46	8.31	8.23	8.16	9.22	7.93		8.49	8.57	8.23	
Heat 2 - 2020 Chinese National Championships (Shaoxing, CHN)															<i>CAA Hurdle Development (2020)</i>				
date	16-Sep-20	time	2.59	3.71	4.76	5.82	6.88	7.95	9.03	10.11	11.23	12.34		13.86	3 / 2				
reaction time	0.152	interval	7 steps	1.12	1.05	1.06	1.06	1.07	1.08	1.08	1.12	1.11	1.52			3.23	3.21	3.31	
wind	-0.5 m/s	velocity	5.30	8.16	8.70	8.62	8.62	8.54	8.46	8.46	8.16	8.23	9.22	7.94		8.49	8.54	8.28	
FINAL - 2019 Chinese National Grand Prix Final (Daqing, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	24-Aug-19	time	2.60	3.68	4.76	5.80	6.89	8.00	9.09	10.19	11.31	12.46		13.96	7 / 2				
reaction time	0.181	interval	7 steps	1.08	1.08	1.04	1.09	1.11	1.09	1.10	1.12	1.15	1.50			3.20	3.29	3.37	
wind	-0.1 m/s	velocity	5.28	8.46	8.46	8.79	8.39	8.23	8.39	8.31	8.16	7.95	9.35	7.88		8.57	8.33	8.14	
Heat 1 - 2019 Chinese National Grand Prix Final (Daqing, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	23-Aug-19	time	2.62	3.72	4.80	5.90	6.99	8.09	9.21	10.33	11.46	12.64		14.20	7 / 2				
reaction time	0.177	interval	7 steps	1.10	1.08	1.10	1.09	1.10	1.12	1.12	1.13	1.18	1.56			3.28	3.31	3.43	
wind	-0.2 m/s	velocity	5.24	8.31	8.46	8.31	8.39	8.31	8.16	8.16	8.09	7.75	8.99	7.75		8.36	8.28	7.99	
Heat 2 - 2019 Chinese World Championship Trials (Shenyang, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	02-Aug-19	time	2.72											dnf	5 / --				
reaction time	0.166	interval	7 steps																
wind	-0.2 m/s	velocity	5.04																
FINAL - 2019 Chinese National Championships (Shenyang, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	08-Jul-19	time	2.58	3.64	4.69	5.72	6.77	7.82	8.88	9.96	11.04	12.13		13.60	5 / 2				
reaction time	0.164	interval	7 steps	1.06	1.05	1.03	1.05	1.05	1.06	1.08	1.08	1.09	1.47	PB		3.14	3.16	3.25	
wind	0.1 m/s	velocity	5.32	8.62	8.70	8.87	8.70	8.70	8.62	8.46	8.46	8.39	9.54	8.09		8.73	8.68	8.44	
Heat 1 - 2019 Chinese National Championships (Shenyang, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	08-Jul-19	time	2.60	3.70	4.76	5.86	6.94	8.05	9.13	10.24	11.34	12.47		13.96	5 / 1				
reaction time	0.163	interval	7 steps	1.10	1.06	1.10	1.08	1.11	1.08	1.11	1.10	1.13	1.49			3.26	3.27	3.34	
wind	0.1 m/s	velocity	5.28	8.31	8.62	8.31	8.46	8.23	8.46	8.23	8.31	8.09	9.41	7.88		8.41	8.39	8.21	
FINAL - 2019 Chinese National Grand Prix 4 (Luoyang, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	30-May-19	time	2.62	3.70	4.74	5.80	6.86	7.93	9.02	10.11	11.22	12.38		14.15	3 / 6				
reaction time	0.173	interval	7 steps	1.08	1.04	1.06	1.06	1.07	1.09	1.09	1.11	1.16	1.77			3.18	3.22	3.36	
wind	0.0 m/s	velocity	5.24	8.46	8.79	8.62	8.62	8.54	8.39	8.39	8.23	7.88	7.92	7.77		8.62	8.52	8.16	
FINAL - 2019 Chinese National Grand Prix 3 (Jinhau, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	23-May-19	time	2.62	3.68	4.74	5.78	6.82	7.90	8.96	10.02	11.12	12.22		13.71	2 / 1				
reaction time	0.179	interval	7 steps	1.06	1.06	1.04	1.04	1.08	1.06	1.06	1.10	1.10	1.49			3.16	3.18	3.26	
wind	2.5 m/s	velocity	5.24	8.62	8.62	8.79	8.79	8.46	8.62	8.62	8.31	8.31	9.41	8.02		8.68	8.62	8.41	
Heat 2 - 2nd Leg - 2019 IAAF World Relays - Shuttle Hurdle Relay (Yokohama, JPN)															<i>CAA Hurdle Development (2019)</i>				
date	11-May-19	time	2.45	3.53	4.62	5.72	6.79	7.87	8.97	10.07	11.21	12.34		13.88	4 / 1				
reaction time		interval	7 steps	1.08	1.09	1.10	1.07	1.08	1.10	1.10	1.14	1.13	1.54			3.27	3.25	3.37	
wind	na	velocity	5.60	8.46	8.39	8.31	8.54	8.46	8.31	8.31	8.02	8.09	9.10	7.93	57.54	8.39	8.44	8.14	
FINAL - 2019 Chinese National Grand Prix 2 (Huangshi, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	13-Apr-19	time	2.65	3.72	4.76	5.80	6.84	7.90	8.98	10.06	11.14	12.26		13.75	2 / 2				
reaction time	0.181	interval	7 steps	1.07	1.04	1.04	1.04	1.06	1.08	1.08	1.08	1.12	1.49	PB		3.15	3.18	3.28	
wind	-0.3 m/s	velocity	5.18	8.54	8.79	8.79	8.79	8.62	8.46	8.46	8.46	8.16	9.41	8.00		8.70	8.62	8.36	
Heat 2 - 2019 Chinese National Grand Prix 2 (Huangshi, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	13-Apr-19	time	2.64	3.72	4.79	5.86	6.94	8.04	9.18	10.31	11.45	12.68		14.33	3 / 2				
reaction time	0.169	interval	7 steps	1.08	1.07	1.07	1.08	1.10	1.14	1.13	1.14	1.23	1.65			3.22	3.32	3.50	
wind	0.1 m/s	velocity	5.20	8.46	8.54	8.54	8.46	8.31	8.02	8.09	8.02	7.43	8.50	7.68		8.52	8.26	7.83	
FINAL - 2019 Chinese National Grand Prix 1 (Zhaoqing, CHN)															<i>CAA Hurdle Development (2019)</i>				

date	09-Apr-19	time	2.62	3.70	4.78	5.82	6.88	7.94	9.02	10.10	11.22	12.32	13.83	4 / 1															
reaction time	0.177	interval	7 steps	1.08	1.08	1.04	1.06	1.06	1.08	1.08	1.12	1.10	1.51	PB	3.20	3.20	3.30												
wind	0.2 m/s	velocity	5.24	8.46	8.46	8.79	8.62	8.62	8.46	8.46	8.16	8.31	9.28	7.95	8.57	8.57	8.31												
Heat 3 - 2019 Chinese National Grand Prix 1 (Zhaoqing, CHN)														<i>CAA Hurdle Development (2019)</i>															
date	08-Apr-19	time	2.63	3.72	4.78	5.83	6.88	7.97	9.06	10.16	11.30	12.43	14.00	6 / 1															
reaction time	0.177	interval	7 steps	1.09	1.06	1.05	1.05	1.09	1.09	1.10	1.14	1.13	1.57	PB	3.20	3.23	3.37												
wind	0.0 m/s	velocity	5.22	8.39	8.62	8.70	8.70	8.39	8.39	8.31	8.02	8.09	8.93	7.86	8.57	8.49	8.14												
A-FINAL - 2019 Chinese Indoor National Grand Prix Final (Hangzhou, CHN)														<i>CAA Hurdle Development (2019)</i>															
date	20-Mar-19	time	2.61	3.69	4.73	5.77	6.86						7.79	5 / 2															
reaction time		interval	7 steps	1.08	1.04	1.04	1.09						0.93		3.16														
		velocity	5.26	8.46	8.79	8.79	8.39						10.45	7.70	8.68														
A-FINAL - 2019 Chinese Indoor National Grand Prix 3 (Xi'an, CHN)														<i>CAA Hurdle Development (2019)</i>															
date	28-Feb-19	time	2.58	3.63	4.69	5.75	6.81						7.80	3 / 1															
reaction time		interval	7 steps	1.05	1.06	1.06	1.06						0.99		3.17														
		velocity	5.32	8.70	8.62	8.62	8.62						9.82	7.69	8.65														
FINAL - 2018 Chinese National U20 Championships (Nanchang, CHN) (99.1cm)														<i>Zhang (2019) - comparative analysis characteristics Chinese elite 110m hurdles in different age</i>															
date	13-May-18	time	2.61	3.70	4.76	5.83	6.92	7.99	9.08	10.18	11.30	12.42	13.96	/ 4															
reaction time		interval	7 steps	1.09	1.06	1.07	1.09	1.07	1.09	1.10	1.12	1.12	1.54		3.22	3.25	3.34												
wind	1.0 m/s	velocity	5.26	8.39	8.62	8.54	8.39	8.54	8.39	8.31	8.16	8.16	9.10	7.88	8.52	8.44	8.21												
Susami, Youhei (JPN) (2006)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2021 Japanese U16 National Championships (Matsuyama, JPN) (99cm)														<i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>															
date	24-Oct-21	time	2.73	3.90	5.05	6.23	7.37	8.56	9.72	10.92	12.08	13.30	14.89	/ 6															
reaction time		interval	1.17	1.15	1.18	1.14	1.19	1.16	1.20	1.16	1.22	1.59			3.50	3.49	3.58												
wind	1.0 m/s	velocity	5.03	7.81	7.95	7.75	8.02	7.68	7.88	7.62	7.88	7.49	8.82	7.39	7.83	7.86	7.66												
Suzuki, Yusei (JPN) (2000)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Heat 3 - 2016 Japanese National Youth Championships (Mizuho, JPN) (91cm)														<i>(2016.11.07) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>															
date	21-Oct-16	time	2.64	3.76	4.89	6.01	7.13	8.27	9.42	10.55	11.72	12.91	14.46	4 / 3															
reaction time		interval	1.12	1.13	1.12	1.12	1.14	1.15	1.13	1.17	1.19	1.55			3.37	3.41	3.49												
wind	1.4 m/s	velocity	5.20	8.16	8.09	8.16	8.16	8.02	7.95	8.09	7.81	7.68	9.05	7.61	8.14	8.04	7.86												
Svoboda, Lukáš (CZE) (1998)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2015 Czech Republic National U18 Indoor Championships (Praha, CZE) (91cm)														<i>Feher (2015) - Final report U18 & U20 Czech Republic indoor national champs</i>															
date	14-Feb-15	time	2.73	3.87	5.02	6.13	7.26						8.30	7 / 7															
reaction time	0.158	interval	1.14	1.15	1.11	1.13							1.04		3.40														
		velocity	5.03	8.02	7.95	8.23	8.09						9.35	7.23	8.06														
Svoboda, Petr (CZE) (1984)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Semi-Final 1 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)														<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>															
date	20-Mar-22	time	2.50	3.56	4.58	5.58	6.63						7.71	5 / 7															
reaction time	0.136	interval	1.06	1.02	1.00	1.05							1.08		3.08														
		velocity	5.49	8.62	8.96	9.14	8.70						9.00	7.78	8.90														
Heat 4 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)														<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>															
date	20-Mar-22	time	2.53	3.58	4.60	5.62	6.66						7.59	4 / 1															
reaction time	0.132	interval	1.05	1.02	1.02	1.04							0.93		3.09														
		velocity	5.42	8.70	8.96	8.96	8.79						10.45	7.91	8.87														
FINAL - 2021 Boris Hanzeković Memorial (Zagreb, CRO) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>															
date	14-Sep-21	time	2.50	3.60	4.63	5.63	6.66	7.70	8.73	9.76	10.86	11.93	13.51	7 / 4															
reaction time	0.167	interval	1.10	1.03	1.00	1.03	1.04	1.03	1.03	1.10	1.07	1.58			3.13	3.10	3.20												
wind	0.7 m/s	velocity	5.49	8.31	8.87	9.14	8.87	8.79	8.87	8.87	8.31	8.54	8.87	8.14	8.76	8.85	8.57												
FINAL - 2014 Czech Republic National Championships (Ostrava, CZE)														<i>Feher (2014) - Final report from the Czech Republic national championships</i>															
date	02-Aug-14	time	2.57	3.63	4.67	5.68	6.71	7.76	8.80	9.85	10.91	12.01	13.50	4 / 1															
reaction time	0.140	interval	1.06	1.04	1.01	1.03	1.05	1.04	1.05	1.06	1.10	1.49			3.11	3.12	3.21												
wind	-1.2 m/s	velocity	5.34	8.62	8.79	9.05	8.87	8.70	8.79	8.70	8.62	8.31	9.41	8.15	8.82	8.79	8.54												
Heat 1 - 2014 Czech Republic National Championships (Ostrava, CZE)														<i>Feher (2014) - Final report from the Czech Republic national championships</i>															
date	02-Aug-14	time	2.57	3.65	4.70	5.75	6.81	7.87	8.92	9.98	11.05	12.15	13.64	4 / 1															
reaction time	0.133	interval	1.08	1.05	1.05	1.06	1.06	1.05	1.06	1.07	1.10	1.49			3.18	3.17	3.23												
wind	-1.6 m/s	velocity	5.34	8.46	8.70	8.70	8.62	8.62	8.70	8.62	8.54	8.31	9.41	8.06	8.62	8.65	8.49												
FINAL - 2010 IAAF World Indoor Championships (Doha, QAT)														<i>Kuitunen (2010) - biomechanical analysis of the 14th IAAF World Indoor championships</i>															
date	14-Mar-10	time	2.57	3.63	4.62	5.65	6.70						7.58	5 / 5															
reaction time	0.134	interval	1.06	0.99	1.03	1.05							0.88		3.08														
		velocity	5.34	8.62	9.23	8.87	8.70						11.05	7.92	8.90														

FINAL - 2009 IAAF World Championships (Berlin, GER)*Graubner (2009) - biomechanical analyses at the 12th IAAF world championships*

date	20-Aug-09	time	2.58	3.62	4.64	5.66	6.69	7.74	8.77	9.82	10.87	11.94	13.38	7 / 6			
reaction time	0.144	interval		1.04	1.02	1.02	1.03	1.05	1.03	1.05	1.05	1.07	1.44		3.08	3.11	3.17
wind	0.1 m/s	velocity	5.32	8.79	8.96	8.96	8.87	8.70	8.87	8.70	8.70	8.54	9.74	8.22	8.90	8.82	8.65

Semi-Final 1 - 2009 IAAF World Championships (Berlin, GER)*Graubner (2009) - biomechanical analyses at the 12th IAAF world championships*

date	20-Aug-09	time	2.61	3.65	4.66	5.68	6.69	7.71	8.74	9.80	10.87	11.95	13.33	3 / 2			
reaction time	0.149	interval		1.04	1.01	1.02	1.01	1.02	1.03	1.06	1.07	1.08	1.38		3.07	3.06	3.21
wind	0.9 m/s	velocity	5.26	8.79	9.05	8.96	9.05	8.96	8.87	8.62	8.54	8.46	10.16	8.25	8.93	8.96	8.54

Heat 3 - 2009 IAAF World Championships (Berlin, GER)*Graubner (2009) - biomechanical analyses at the 12th IAAF world championships*

date	19-Aug-09	time	2.63	3.69	4.72	5.74	6.75	7.78	8.85	9.91	10.99	12.09	13.56	6 / =1			
reaction time	0.152	interval		1.06	1.03	1.02	1.01	1.03	1.07	1.06	1.08	1.10	1.47		3.11	3.11	3.24
wind	0.2 m/s	velocity	5.22	8.62	8.87	8.96	9.05	8.87	8.54	8.62	8.46	8.31	9.54	8.11	8.82	8.82	8.46

FINAL - 2008 IAAF World Athletics Final (Stuttgart, GER)*Graubner (2009) - <http://www.fgs.uni-halle.de>*

date	14-Sep-08	time	2.65	3.69	4.70	5.70	6.72	7.74	8.78	9.82	10.87	11.93	13.33	8 / 2			
reaction time	0.191	interval		1.04	1.01	1.00	1.02	1.02	1.04	1.04	1.05	1.06	1.40		3.05	3.08	3.15
wind	-1.3 m/s	velocity	5.18	8.79	9.05	9.14	8.96	8.96	8.79	8.79	8.70	8.62	10.01	8.25	8.99	8.90	8.70

Swift, Eugene (USA) (1964)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 1996 Olympic Games (Atlanta, GA)***Butler (2016) - IAAF statistics handbook- special edition: Games of the XXXI Olympiad- Rio 2016*

date	26-Jul-96	time	2.36	3.42	4.44	5.47	6.48	7.47	8.46	9.50	10.55	11.62	13.23	4 / 6			
reaction time	0.151	interval		1.06	1.02	1.03	1.01	0.99	0.99	1.04	1.05	1.07	1.61		3.11	2.99	3.16
wind	0.8 m/s	velocity	5.81	8.62	8.96	8.87	9.05	9.23	9.23	8.79	8.70	8.54	8.71	8.31	8.82	9.17	8.68

FINAL - 1996 USA Olympic Trials (Atlanta, GA)*McNichols (2000) - Hurdle technique study through video analysis*

date	23-Jun-96	time	2.38	3.43	4.46	5.44	6.43	7.52	8.54	9.55	10.62	11.66	13.21	7 / 3			
reaction time		interval		1.05	1.03	0.98	0.99	1.09	1.02	1.01	1.07	1.04	1.55	PB	3.06	3.10	3.12
wind	0.9 m/s	velocity	5.76	8.70	8.87	9.33	9.23	8.39	8.96	9.05	8.54	8.79	9.05	8.33	8.96	8.85	8.79

Swift, Greggmar (BAR) (1991)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2019 Pan American Games (Lima, PER) (TV Analysis)***Henson (2020) - Athlete First: 2019 year end hurdle report*

date	10-Aug-19	time	2.60	3.60	4.65	5.68	6.70	7.74	8.79	9.86	10.95	12.05	13.51	4 / 4			
reaction time	0.140	interval		1.00	1.05	1.03	1.02	1.04	1.05	1.07	1.09	1.10	1.46		3.08	3.11	3.26
wind	1.8 m/s	velocity	5.28	9.14	8.70	8.87	8.96	8.79	8.70	8.54	8.39	8.31	9.60	8.14	8.90	8.82	8.41

FINAL - 2019 Prefontaine Classic (Stanford, CA) (TV Analysis)*Henson (2020) - Athlete First: 2019 year end hurdle report*

date	30-Jun-19	time	2.55	3.58	4.62	5.68	6.70	7.74	8.82	9.86	10.93	12.03	13.56	9 / 9			
reaction time	0.150	interval		1.03	1.04	1.06	1.02	1.04	1.08	1.04	1.07	1.10	1.53		3.13	3.14	3.21
wind	0.3 m/s	velocity	5.38	8.87	8.79	8.62	8.96	8.79	8.46	8.79	8.54	8.31	9.16	8.11	8.76	8.73	8.54

FINAL - 2019 Seiko Golden Grand Prix (Osaka, JPN)*Shibayama (2019) - race analysis of men's 110m hurdles in the 2019 season*

date	19-May-19	time	2.54	3.61	4.66	5.69	6.70	7.76	8.79	9.84	10.91	12.02	13.45	2 / 2			
reaction time	0.150	interval		1.07	1.05	1.03	1.01	1.06	1.03	1.05	1.07	1.11	1.43		3.15	3.10	3.23
wind	2.9 m/s	velocity	5.40	8.54	8.70	8.87	9.05	8.62	8.87	8.70	8.54	8.23	9.80	8.18	8.70	8.85	8.49

FINAL - 2017 Seiko Golden Grand Prix (Kawasaki, JPN)*(2017) - tfdata-store.com/2017/05/22/post-599/*

date	21-May-17	time	2.55	3.61	4.68	5.73	6.77	7.84	8.92	10.00	11.10	12.22	13.72	1 / 5			
reaction time	0.141	interval		1.06	1.07	1.05	1.04	1.07	1.08	1.08	1.10	1.12	1.50		3.18	3.19	3.30
wind	-1.8 m/s	velocity	5.38	8.62	8.54	8.70	8.79	8.54	8.46	8.31	8.16	9.35	8.02		8.62	8.60	8.31

FINAL - 2016 Seiko Golden Grand Prix (Kawasaki, JPN)*Kota (2016) - race analysis of japanese top-ranked men 110m and women 100m hurdlers*

date	08-May-16	time	2.67	3.82	4.95	6.11	7.24	8.41	9.56	10.75	11.94	13.14	14.79	6 / 7			
reaction time	0.153	interval		1.15	1.13	1.16	1.13	1.17	1.15	1.19	1.19	1.20	1.65		3.44	3.45	3.58
wind	-0.6 m/s	velocity	5.14	7.95	8.09	7.88	8.09	7.81	7.95	7.68	7.68	7.62	8.50	7.44	7.97	7.95	7.66

Sykora, Miroslav (CZE) (1997)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2015 Czech Republic National U20 Indoor Championships (Praha, CZE) (99cm)***Feher (2015) - Final report U18 & U20 Czech Republic indoor national champs*

date	14-Feb-15	time	2.90	4.08	5.64	7.06	8.66						10.20	8 / 8			
reaction time	0.162	interval		1.18	1.56	1.42	1.60					1.54			4.16		
		velocity	4.73	7.75	5.86	6.44	5.71					6.31	5.88		6.59		

Heat 2 - 2014 Czech Republic National U18 Championships (Trinec, CZE) (91cm)*Feher (2014) - Final report from the U18 & U20 Czech Republic national championships*

date	28-Jun-14	time	2.95	4.08	5.23	6.38	7.55	8.72	9.94	11.25	12.53	13.87	15.72	5 / 6			
reaction time	0.213	interval		1.13	1.15	1.15	1.17	1.17	1.22	1.31	1.28	1.34	1.85		3.43	3.56	3.93
wind	-4.1 m/s	velocity	4.65	8.09	7.95	7.95	7.81	7.81	7.49	6.98	7.14	6.82	7.58	7.00	7.99	7.70	6.98

Sysoyev, Aleksey (RUS) (1985)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Decathlon - Heat 4 - 2009 IAAF World Championships (Berlin, GER)***Graubner (2009) - biomechanical analyses at the 12th IAAF world championships*

date	20-Aug-09	time	2.87	3.95	5.10	6.29	7.49	8.65	9.83	11.02	12.23	13.42	14.97	6 / 5			
reaction time	0.150	interval		1.08	1.15	1.19	1.20	1.16	1.18	1.19	1.21	1.19	1.55		3.42	3.54	3.59
wind	0.0 m/s	velocity	4.78	8.46	7.95	7.68	7.62	7.88	7.75	7.68	7.55	7.68	9.05	7.35	8.02	7.75	7.64

Szűcs, Valdó (HUN) (1995)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2022 New Balance Indoor Grand Prix (Staten Island, NY) (TV Analysis)													<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>					
date	06-Feb-22	time	2.57	3.64	4.70	5.72	6.72						7.73	1 / 6				
reaction time	0.160	interval	7 steps	1.07	1.06	1.02	1.00					1.01			3.15			
		velocity	5.34	8.54	8.62	8.96	9.14					9.62	7.76		8.70			
FINAL - 2021 István Gyulai Memorial (Székesfehérvár, HUN) (TV Analysis)													<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>					
date	06-Jul-21	time	2.45	3.50	4.52	5.57	6.61	7.61	8.67	9.72	10.78	11.86	13.47	2 / 5				
reaction time	0.147	interval	7 steps	1.05	1.02	1.05	1.04	1.00	1.06	1.05	1.06	1.08	1.61		3.12	3.10	3.19	
wind	-0.1 m/s	velocity	5.60	8.70	8.96	8.70	8.79	9.14	8.62	8.70	8.62	8.46	8.71	8.17	8.79	8.85	8.60	
FINAL - 2020 István Gyulai Memorial (Székesfehérvár, HUN) (TV Analysis)													<i>Henson (2020) - Athlete First: 2020 year end hurdle report</i>					
date	19-Aug-20	time	2.50	3.67	4.74	5.80	6.85	7.91	8.94	9.98	11.08	12.18	13.74	7 / 7				
reaction time	0.141	interval	7 steps	1.17	1.07	1.06	1.05	1.06	1.03	1.04	1.10	1.10	1.56		3.30	3.14	3.24	
wind	0.3 m/s	velocity	5.49	7.81	8.54	8.62	8.70	8.62	8.87	8.79	8.31	8.31	8.99	8.01	8.31	8.73	8.46	
Szymański, Jakub (POL) (2002)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2024 Kamila Skolimowska Memorial (Silesia, POL)													<i>Omega Timing (2024) - diamond league race analysis</i>					
date	25-Aug-24	time	2.43	3.47	4.46	5.46	6.46	7.46	8.48	9.52	10.61	11.71	13.41	2 / 7				
reaction time	0.182	interval	7 steps	1.04	0.99	1.00	1.00	1.00	1.02	1.04	1.09	1.10	1.70		3.03	3.02	3.23	
wind	1.1 m/s	velocity	5.65	8.79	9.23	9.14	9.14	9.14	8.96	8.79	8.39	8.31	8.25	8.20	9.05	9.08	8.49	
Repechage 3 - 2024 Olympic Games (Paris, FRA)													<i>Paris 2024 Olympc Games - Results Book (2024)</i>					
date	06-Aug-24	time	2.43	3.51	4.53	5.55	6.56	7.58	8.63	9.69	10.78	11.91	13.63	5 / 4				
reaction time	0.153	interval	7 steps	1.08	1.02	1.02	1.01	1.02	1.05	1.06	1.09	1.13	1.72		3.12	3.08	3.28	
wind	-1.1 m/s	velocity	5.65	8.46	8.96	8.96	9.05	8.96	8.70	8.62	8.40	8.07	8.15	8.07	8.79	8.90	8.36	
Heat 1 - 2024 Olympic Games (Paris, FRA)													<i>Paris 2024 Olympc Games - Results Book (2024)</i>					
date	04-Aug-24	time	2.42	3.50	4.51	5.52	6.53	7.57	8.63	9.72	10.84	11.99	13.75	5 / 7				
reaction time	0.161	interval	7 steps	1.08	1.01	1.01	1.01	1.04	1.06	1.09	1.12	1.15	1.76		3.10	3.11	3.36	
wind	0.1 m/s	velocity	5.67	8.46	9.05	9.05	9.05	8.79	8.62	8.39	8.16	7.95	7.97	8.00	8.85	8.82	8.16	
FINAL - 2024 World Athletics Indoor Championships (Glasgow, GBR) (TV Analysis)													<i>Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record</i>					
date	02-Mar-24	time	2.56	3.59	4.60	5.58	6.60						7.53	6 / 5				
reaction time	0.163	interval	7 steps	1.03	1.01	0.98	1.02						7.53		3.02			
		velocity	5.36	8.87	9.05	9.33	8.96						1.86	7.97	9.08			
FINAL - 2024 Meeting Hauts-de-France Pas-de-Calais (Liévin, FRA) (TV Analysis)													<i>Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record</i>					
date	10-Feb-24	time	2.42	3.45	4.42	5.42	6.42						7.48	6 / 3				
reaction time	0.183	interval	7 steps	1.03	0.97	1.00	1.00						7.48		3.00			
		velocity	5.67	8.87	9.42	9.14	9.14						1.87	8.02	9.14			
Semi-Final 3 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)													<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>					
date	20-Mar-22	time	2.53	3.56	4.58	5.60	6.60						7.59	7 / 5				
reaction time	0.146	interval	7 steps	1.03	1.02	1.02	1.00					0.99	PB		3.07			
		velocity	5.42	8.87	8.96	8.96	9.14					9.82	7.91		8.93			
FINAL - 2022 Müller Indoor Grand Prix (Birmingham, GBR) (TV Analysis)													<i>Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record</i>					
date	19-Feb-22	time	2.46	3.50	4.52	5.55	6.57						7.62	8 / 4				
reaction time	0.165	interval	7 steps	1.04	1.02	1.03	1.02					1.05			3.09			
		velocity	5.58	8.79	8.96	8.87	8.96					9.26	7.87		8.87			
Taam, Rik (NED) (1997)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Decathlon - Heat 1 - 2024 Olympic Games (Paris, FRA)													<i>Paris 2024 Olympc Games - Results Book (2024)</i>					
date	03-Aug-24	time	2.56	3.72	4.85	5.98	7.13	8.31	9.50	10.66	11.86	13.06	14.78	3 / 5				
reaction time	0.181	interval		1.16	1.13	1.13	1.15	1.18	1.19	1.16	1.20	1.20	1.72		3.42	3.52	3.56	
wind	0.2 m/s	velocity	5.36	7.88	8.09	8.09	7.95	7.75	7.68	7.88	7.62	7.62	8.15	7.44	8.02	7.79	7.70	
Tagaku, Takashi (JPN)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2016 All-Star Night Athletics (Hiratsuka, JPN)													<i>(2016.07.23) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>					
date	23-Jul-16	time	2.69	3.74	4.82	5.88	6.95	8.03	9.11	10.16	11.25	12.35	13.81	3 / 2				
reaction time	0.160	interval	7 steps	1.09	1.07	1.05	1.06	1.05	1.09	1.06	1.09	1.10	1.46		3.21	3.20	3.25	
wind	0.5 m/s	velocity	5.10	8.39	8.54	8.70	8.62	8.70	8.39	8.62	8.39	8.31	9.60	7.97	8.54	8.57	8.44	
Tahara, Ayuma (JPN) (2004)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2021 Japanese U18 National Championships (Matsuyama, JPN) (99cm)													<i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>					
date	22-Oct-21	time	2.63	3.74	4.82	5.88	6.95	8.03	9.11	10.20	11.31	12.43	13.94	6 / 2				
reaction time	0.150	interval	7 steps	1.11	1.08	1.06	1.07	1.08	1.08	1.09	1.11	1.12	1.51		3.25	3.23	3.32	
wind	-0.6 m/s	velocity	5.22	8.23	8.46	8.62	8.54	8.46	8.46	8.39	8.23	8.16	9.28	7.89	8.44	8.49	8.26	
Tahara, Keigo (JPN) (2003)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2022 Japanese U20 National Championships (Osaka, JPN) (99cm)													<i>Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season</i>					

date	12-Jun-22	time	2.63	3.73	4.83	5.86	6.92	7.96	9.05	10.13	11.23	12.34		13.87	2 / 7			
reaction time	0.155	interval		1.10	1.10	1.03	1.06	1.04	1.09	1.08	1.10	1.11	1.53	PB		3.23	3.19	3.29
wind	1.1 m/s	velocity	5.22	8.31	8.31	8.87	8.62	8.79	8.39	8.46	8.31	8.23	9.16	7.93		8.49	8.60	8.33

Tait, Emmanuel (USA)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Semi-Final 1 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude) <i>CAA Hurdle Development (2020)</i>																
date	15-Feb-20	time	2.63	3.75	4.85	5.92	7.04					7.99	2 / 6			
reaction time	0.158	interval		1.12	1.10	1.07	1.12				0.95			3.29		
wind		velocity	5.22	8.16	8.31	8.54	8.16				10.23	7.51		8.33		

Heat 1 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)

date	14-Feb-20	time	2.64	3.72	4.84	5.87	6.96					7.89	1 / 4			
reaction time	0.146	interval		1.08	1.12	1.03	1.09				0.93	PB		3.23		
wind		velocity	5.20	8.46	8.16	8.87	8.39				10.45	7.60		8.49		

Takahashi, Daishi (JPN)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2023 Japanese National High School Championships (Sapporo, JPN) <i>Takashima (2023) - national high school sports festival - biomechanics data</i>																	
date	06-Aug-23	time	2.69	3.76	4.85	5.96	7.07	8.17	9.29	10.40	11.52	12.66		14.17	2 / 3		
reaction time	0.180	interval		1.07	1.09	1.11	1.11	1.10	1.12	1.11	1.12	1.14	1.51		3.27	3.33	3.37
wind	0.8 m/s	velocity	5.10	8.54	8.39	8.23	8.23	8.31	8.16	8.23	8.16	8.02	9.28	7.76	8.39	8.23	8.14

Takahashi, Harumasa (JPN) (2003)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
U18 FINAL - 2019 Japanese National U18/U20 Championships (Hiroshima, JPN) (99cm) <i>Kijima (2019) - research on athlete performance and technique- 2019 data book</i>																	
date	18-Oct-19	time	2.62	3.73	4.80	5.85	6.90	7.92	8.97	10.01	11.08	12.15		13.60	6 / 1		
reaction time	0.131	interval		1.11	1.07	1.05	1.05	1.02	1.05	1.04	1.07	1.07	1.45		3.23	3.12	3.18
wind	-0.4 m/s	velocity	5.24	8.23	8.54	8.70	8.70	8.96	8.70	8.79	8.54	8.54	9.67	8.09	8.49	8.79	8.62

Takahashi, Hayato (JPN)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2021 Japanese U16 National Championships (Matsuyama, JPN) (99cm) <i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>																	
date	24-Oct-21	time	2.78	3.96	5.13	6.32	7.52	8.73	9.93	11.13	12.32	13.57		15.22	/ 8		
reaction time		interval		1.18	1.17	1.19	1.20	1.21	1.20	1.20	1.19	1.25	1.65		3.54	3.61	3.64
wind	1.0 m/s	velocity	4.94	7.75	7.81	7.68	7.62	7.55	7.62	7.62	7.68	7.31	8.50	7.23	7.75	7.60	7.53

Takahashi, Masahiro (JPN)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2017 Osaka University Athletics Championships (Osaka, JPN) <i>(2017) - tfdata-store.com/2017/04/07/post-249/</i>																
date	06-Apr-17	time	2.76	3.92			8.58	9.79	10.98	12.18	13.41		14.98	2 / 6		
reaction time		interval		1.16			4.66	1.21	1.19	1.20	1.23	1.57				3.62
wind	-1.8 m/s	velocity	4.97	7.88			7.85	7.55	7.68	7.62	7.43	8.93	7.34			7.57

Takahashi, Rui (JPN) (1997)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2015 Japanese National High School Championships (Wakayama, JPN) (99cm) <i>Takashima (2015) - race analysis of 110m & 100m hurdles in Japan- results 2015 competitions</i>																	
date	02-Aug-15	time	2.73	3.86	5.00	6.13	7.28	8.46	9.57	10.75	11.93	13.04		14.57	7 / 7		
reaction time		interval		1.13	1.14	1.13	1.15	1.18	1.11	1.18	1.18	1.11	1.53		3.40	3.44	3.47
wind	1.4 m/s	velocity	5.03	8.09	8.02	8.09	7.95	7.75	8.23	7.75	7.75	8.23	9.16	7.55	8.06	7.97	7.90

Takahashi, Ryo (JPN) (2005)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2021 Japanese U18 National Championships (Matsuyama, JPN) (99cm) <i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>																	
date	22-Oct-21	time	2.71	3.83	4.93	6.02	7.10	8.19	9.31	10.40	11.52	12.64		14.15	9 / 5		
reaction time	0.163	interval		1.12	1.10	1.09	1.08	1.09	1.12	1.09	1.12	1.12	1.51		3.31	3.29	3.33
wind	-0.6 m/s	velocity	5.06	8.16	8.31	8.39	8.46	8.39	8.16	8.39	8.16	8.16	9.28	7.77	8.28	8.33	8.23

Takahasai, Yusuke (JPN) (1996)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2023 Fuse Sprint (Tottori, JPN) <i>Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season</i>																	
date	25-Jun-23	time	2.62	3.70	4.78	5.84	6.92	7.98	9.05	10.15	11.25	12.41		13.84	9 / 5		
reaction time	0.128	interval		1.08	1.08	1.06	1.08	1.06	1.07	1.10	1.10	1.16	1.43		3.22	3.21	3.36
wind	1.1 m/s	velocity	5.24	8.46	8.46	8.62	8.46	8.62	8.54	8.31	8.31	7.88	9.80	7.95	8.52	8.54	8.16

FINAL - 2023 Mikio Oda Memorial (Hiroshima, JPN)

date	29-Apr-23	time	2.63	3.69	4.77	5.83	6.89	7.98	9.08	10.22	11.34	12.48		13.94	7 / 8		
reaction time	0.145	interval		1.06	1.08	1.06	1.06	1.09	1.10	1.14	1.12	1.14	1.46		3.20	3.25	3.40
wind	0.3 m/s	velocity	5.22	8.62	8.46	8.62	8.62	8.39	8.31	8.02	8.16	8.02	9.60	7.89	8.57	8.44	8.06

FINAL - 2022 Japanese National Championships (Osaka, JPN)

date	12-Jun-22	time	2.63	3.70	4.74	5.78	6.83	7.87	8.94	9.99	11.08	12.17		13.57	6 / 4		
reaction time	0.152	interval		1.07	1.04	1.04	1.05	1.04	1.07	1.05	1.09	1.09	1.40		3.15	3.16	3.23
wind	-1.2 m/s	velocity	5.22	8.54	8.79	8.79	8.70	8.79	8.54	8.70	8.39	8.39	10.01	8.11	8.70	8.68	8.49

FINAL - 2020 Athlete Night Games (Fukui, JPN)

date	29-Aug-20	time	2.62	3.72	4.76	5.81	6.87	7.93	9.01	10.07	11.15	12.23		13.60	4 / 6			
reaction time		interval		1.10	1.04	1.05	1.06	1.06	1.08	1.06	1.08	1.08	1.37	PB		3.19	3.20	3.22
wind	1.4 m/s	velocity	5.24	8.31	8.79	8.70	8.62	8.62	8.46	8.62	8.46	8.46	10.23	8.09	8.60	8.57	8.52	

Heat 3 - 2017 Mito Invitational (Mito, JPN)

(2017) - tfdata-store.com/2017/05/06/post-423/

FINAL - 2022 Japanese National Championships (Osaka, JPN)

date	12-Jun-22	time	2.56	3.58	4.64	5.69	6.73	7.79	8.85	9.93	11.03	12.13	13.60	2 / 5			
reaction time	0.136	interval		1.02	1.06	1.05	1.04	1.06	1.06	1.08	1.10	1.10	1.47		3.13	3.16	3.28
wind	-1.2 m/s	velocity	5.36	8.96	8.62	8.70	8.79	8.62	8.62	8.46	8.31	8.31	9.54	8.09	8.76	8.68	8.36

*Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season***FINAL - 2022 Seiko Golden Grand Prix (Tokyo, JPN)**

date	08-May-22	time	2.63	3.69	4.73	5.80	6.86	7.93	9.00	10.09	11.18	12.31	13.75	4 / 7			
reaction time	0.156	interval		1.06	1.04	1.07	1.06	1.07	1.07	1.09	1.09	1.13	1.44		3.17	3.20	3.31
wind	0.1 m/s	velocity	5.22	8.62	8.79	8.54	8.62	8.54	8.54	8.39	8.39	8.09	9.74	8.00	8.65	8.57	8.28

*Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season***FINAL - 2022 Mikio Oda Memorial (Hiroshima, JPN)**

date	29-Apr-22	time	2.59	3.67	4.75	5.82	6.90	7.98	9.07	10.18	11.31	12.43	13.92	7 / 4			
reaction time	0.165	interval		1.08	1.08	1.07	1.08	1.08	1.09	1.11	1.13	1.12	1.49		3.23	3.25	3.36
wind	-1.5 m/s	velocity	5.30	8.46	8.46	8.54	8.46	8.46	8.39	8.23	8.09	8.16	9.41	7.90	8.49	8.44	8.16

*Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season***FINAL - 2021 Japanese National Championships (Osaka, JPN)**

date	27-Jun-21	time	2.57	3.60	4.64	5.68	6.71	7.74	8.78	9.83	10.88	11.95	13.37	3 / 3			
reaction time	0.139	interval		1.03	1.04	1.04	1.03	1.03	1.04	1.05	1.05	1.07	1.42		3.11	3.10	3.17
wind	1.2 m/s	velocity	5.34	8.87	8.79	8.79	8.87	8.87	8.79	8.70	8.70	8.54	9.87	8.23	8.82	8.85	8.65

*Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season***FINAL - 2021 Fuse Sprint (Tottori, JPN)**

date	06-Jun-21	time	2.56	3.61	4.64	5.68	6.71	7.75	8.79	9.85	10.91	12.02	13.48	6 / 3			
reaction time	0.145	interval		1.05	1.03	1.04	1.03	1.04	1.04	1.06	1.06	1.11	1.46		3.12	3.11	3.23
wind	1.8 m/s	velocity	5.36	8.70	8.87	8.79	8.87	8.79	8.79	8.62	8.62	8.23	9.60	8.16	8.79	8.82	8.49

*Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season***FINAL - 2021 Ready Steady Tokyo (Tokyo, JPN)**

date	09-May-21	time	2.58	3.64	4.65	5.67	6.70	7.74	8.77	9.84	10.92	12.01	13.45	5 / 3			
reaction time	0.163	interval		1.06	1.01	1.02	1.03	1.04	1.03	1.07	1.08	1.09	1.44		3.09	3.10	3.24
wind	-0.8 m/s	velocity	5.32	8.62	9.05	8.96	8.87	8.79	8.87	8.54	8.46	8.39	9.74	8.18	8.87	8.85	8.46

*Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season***FINAL - 2020 Michitaka Kinami Memorial (Osaka, JPN)**

date	24-Oct-20	time	2.53	3.58	4.61	5.65	6.68	7.73	8.79	9.84	10.93	12.01	13.49	7 / 1			
reaction time		interval		1.05	1.03	1.04	1.03	1.05	1.06	1.05	1.09	1.08	1.48		3.12	3.14	3.22
wind	0.6 m/s	velocity	5.42	8.70	8.87	8.79	8.87	8.70	8.62	8.70	8.39	8.46	9.47	8.15	8.79	8.73	8.52

*Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season***FINAL - 2020 Japanese National Championships (Niigata, JPN)**

date	03-Oct-20	time	2.57	3.60	4.63	5.66	6.70	7.73	8.78	9.84	10.92	12.02	13.47	7 / 2			
reaction time	0.146	interval		1.03	1.03	1.03	1.04	1.03	1.05	1.06	1.08	1.10	1.45		3.09	3.12	3.24
wind	-0.1 m/s	velocity	5.34	8.87	8.87	8.87	8.79	8.87	8.70	8.62	8.46	8.31	9.67	8.17	8.87	8.79	8.46

*Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season***FINAL - 2020 All Japan Corporate Championships (Kumagaya, JPN)**

date	20-Sep-20	time	2.58	3.64	4.67	5.69	6.73	7.78	8.83	9.88	10.95	12.05	13.51	5 / 1			
reaction time	0.153	interval		1.06	1.03	1.02	1.04	1.05	1.05	1.05	1.07	1.10	1.46		3.11	3.14	3.22
wind	0.1 m/s	velocity	5.32	8.62	8.87	8.96	8.79	8.70	8.70	8.70	8.54	8.31	9.60	8.14	8.82	8.73	8.52

*Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season***FINAL - 2020 Athlete Night Games (Fukui, JPN)**

date	29-Aug-20	time	2.57	3.60	4.62	5.63	6.64	7.68	8.72	9.75	10.82	11.90	13.34	3 / 2			
reaction time		interval		1.03	1.02	1.01	1.01	1.04	1.04	1.03	1.07	1.08	1.44		3.06	3.09	3.18
wind	1.4 m/s	velocity	5.34	8.87	8.96	9.05	9.05	8.79	8.79	8.87	8.54	8.46	9.74	8.25	8.96	8.87	8.62

*Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season***FINAL - 2020 Seiko Golden Grand Prix (Tokyo, JPN)**

date	23-Aug-20	time	2.58	3.65	4.70	5.75	6.81	7.87	8.95	10.06	11.16	12.27	13.74	5 / 3			
reaction time	0.135	interval		1.07	1.05	1.05	1.06	1.06	1.08	1.11	1.10	1.11	1.47		3.17	3.20	3.32
wind	-0.4 m/s	velocity	5.32	8.54	8.70	8.70	8.62	8.62	8.46	8.23	8.31	8.23	9.54	8.01	8.65	8.57	8.26

*Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season***Semi-Final 3 - 2019 IAAF World Championships (Doha, QAT)**

date	02-Oct-19	time	2.54	3.58	4.58	5.60	6.61	7.67	8.86	9.99	11.07	12.16	13.58	CAA Hurdle Development (2019)	6 / 6		
reaction time	0.144	interval		1.04	1.00	1.02	1.01	1.06	1.19	1.13	1.08	1.09	1.42		3.06	3.26	3.30
wind	0.6 m/s	velocity	5.40	8.79	9.14	8.96	9.05	8.62	7.68	8.09	8.46	8.39	9.87	8.10	8.96	8.41	8.31

Heat 4 - 2019 IAAF World Championships (Doha, QAT)

date	30-Sep-19	time	2.56	3.58	4.62	5.64	6.66	7.69	8.72	9.77	10.83	11.89	13.32	7 / 2			
reaction time	0.146	interval		1.02	1.04	1.02	1.02	1.03	1.03	1.05	1.06	1.06	1.43		3.08	3.08	3.17
wind	0.4 m/s	velocity	5.36	8.96	8.79	8.96	8.96	8.87	8.87	8.70	8.62	8.62	9.80	8.26	8.90	8.90	8.65

*Shibayama (2019) - race analysis of men's 110m hurdles in the 2019 season***FINAL - 2019 Japanese World Championships Trials (Fujiyoshida, JPN)**

date	01-Sep-19	time	2.53	3.61	4.63	5.68	6.70	7.73	8.75	9.80	10.83	11.88	13.29	5 / 1			
reaction time		interval		1.08	1.02	1.05	1.02	1.03	1.02	1.05	1.03	1.05	1.41		3.15	3.07	3.13
wind	1.4 m/s	velocity	5.42	8.46	8.96	8.70	8.96	8.87	8.96	8.70	8.87	8.70	9.94	8.28	8.70	8.93	8.76

*Shibayama (2019) - race analysis of men's 110m hurdles in the 2019 season***FINAL - 2019 Athlete Night Games (Fukui, JPN)**

date	17-Aug-19	time	2.54	3.57	4.59	5.62	6.63	7.65	8.68	9.72	10.77	11.82	13.25	4 / 1	(2019) - http://tfddata-store.com/2019/09/03/post-1615/		
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reaction time	interval	1.03	1.02	1.03	1.01	1.02	1.03	1.04	1.05	1.05	1.43	NR	3.08	3.06	3.14	
wind	1.1 m/s velocity	5.40	8.87	8.96	8.87	9.05	8.96	8.87	8.79	8.70	8.70	9.80	8.30	8.90	8.96	8.73
FINAL - 2019 Corporate Team vs College Team (Hiratsukai, JPN)													<i>(2019) - http://tfddata-store.com/2019/09/03/post-1615/</i>			
date	27-Jul-19	time	2.55	3.58	4.62	5.63	6.66	7.71	8.75	9.79	10.84	11.91	13.30	4 / 1		
reaction time	0.129	interval	1.03	1.04	1.01	1.03	1.05	1.04	1.04	1.05	1.07	1.39	NR	3.08	3.12	3.16
wind	1.9 m/s velocity	5.38	8.87	8.79	9.05	8.87	8.70	8.79	8.79	8.70	8.54	10.09	8.27	8.90	8.79	8.68
FINAL - 2019 Japanese National Championships (Fukuoka, JPN)													<i>Yamanaka (2019) - research on athlete performance and technique- 2019 data book</i>			
date	30-Jun-19	time	2.54	3.59	4.61	5.63	6.66	7.69	8.73	9.78	10.84	11.92	13.36	7 / 1		
reaction time	0.146	interval	1.05	1.02	1.02	1.03	1.03	1.04	1.05	1.06	1.08	1.44	=NR =PB	3.09	3.10	3.19
wind	-0.6 m/s velocity	5.40	8.70	8.96	8.96	8.87	8.87	8.79	8.70	8.62	8.46	9.74	8.23	8.87	8.85	8.60
FINAL - 2019 Fuse Sprint (Tottori, JPN)													<i>Kijima (2019) - research on athlete performance and technique- 2019 data book</i>			
date	02-Jun-19	time	2.54	3.58	4.62	5.66	6.68	7.70	8.75	9.80	10.87	11.92	13.36	7 / 1		
reaction time	0.128	interval	1.04	1.04	1.04	1.02	1.02	1.05	1.05	1.07	1.05	1.44	=NR PB	3.12	3.09	3.17
wind	1.9 m/s velocity	5.40	8.79	8.79	8.79	8.96	8.96	8.70	8.70	8.54	8.70	9.74	8.23	8.79	8.87	8.65
FINAL - 2019 Seiko Golden Grand Prix (Osaka, JPN)													<i>Shibayama (2019) - race analysis of men's 110m hurdles in the 2019 season</i>			
date	19-May-19	time	2.57	3.62	4.68	5.72	6.76	7.80	8.84	9.90	10.96	12.05	13.51	7 / 4		
reaction time	0.143	interval	1.05	1.06	1.04	1.04	1.04	1.04	1.06	1.06	1.09	1.46		3.15	3.12	3.21
wind	2.9 m/s velocity	5.34	8.70	8.62	8.79	8.79	8.79	8.79	8.62	8.62	8.39	9.60	8.14	8.70	8.79	8.54
FINAL - 2019 Asian Athletics Championships (Doha, QAT)													<i>CAA Hurdle Development (2019)</i>			
date	24-Apr-19	time	2.57	3.59	4.65	5.69	6.75	7.82	8.89	9.98	11.08	12.16	13.59	4 / 4		
reaction time	0.145	interval	1.02	1.06	1.04	1.06	1.07	1.07	1.09	1.10	1.08	1.43		3.12	3.20	3.27
wind	1.7 m/s velocity	5.34	8.96	8.62	8.79	8.62	8.54	8.54	8.39	8.31	8.46	9.80	8.09	8.79	8.57	8.39
FINAL - 2018 Asian Games (Jakarta, INA)													<i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>			
date	28-Aug-18	time	2.56	3.60	4.63	5.66	6.70	7.74	8.78	9.85	10.93	12.03	13.48	4 / 3		
reaction time	0.147	interval	1.04	1.03	1.03	1.04	1.04	1.04	1.07	1.08	1.10	1.45		3.10	3.12	3.25
wind	0.0 m/s velocity	5.36	8.79	8.87	8.87	8.79	8.79	8.79	8.54	8.46	8.31	9.67	8.16	8.85	8.79	8.44
FINAL - 2018 Japanese National Championships (Yamaguchi, JPN)													<i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>			
date	24-Jun-18	time	2.56	3.60	4.63	5.66	6.69	7.72	8.77	9.84	10.90	12.01	13.45	7 / 2		
reaction time	0.145	interval	1.04	1.03	1.03	1.03	1.03	1.05	1.07	1.06	1.11	1.44		3.10	3.11	3.24
wind	0.7 m/s velocity	5.36	8.79	8.87	8.87	8.87	8.87	8.70	8.54	8.62	8.23	9.74	8.18	8.85	8.82	8.46
FINAL - 2018 Fuse Sprint (Tottori, JPN)													<i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>			
date	03-Jun-18	time	2.63	3.69	4.74	5.79	6.83	7.88	8.96	10.03	11.11	12.20	13.67	1 / 2		
reaction time		interval	1.06	1.05	1.05	1.04	1.05	1.08	1.07	1.08	1.09	1.47		3.16	3.17	3.24
wind	0.5 m/s velocity	5.22	8.62	8.70	8.70	8.79	8.70	8.46	8.54	8.46	8.39	9.54	8.05	8.68	8.65	8.46
FINAL - 2018 Seiko Golden Grand Prix (Osaka, JPN)													<i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>			
date	20-May-18	time	2.61	3.69	4.74	5.78	6.83	7.89	8.94	10.00	11.07	12.17	13.55	6 / 3		
reaction time	0.150	interval	1.08	1.05	1.04	1.05	1.06	1.05	1.06	1.07	1.10	1.38		3.17	3.16	3.23
wind	-0.4 m/s velocity	5.26	8.46	8.70	8.79	8.70	8.62	8.70	8.62	8.54	8.31	10.16	8.12	8.65	8.68	8.49
FINAL - 2018 Mikio Oda Memorial (Hiroshima, JPN)													<i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>			
date	29-Apr-18	time	2.64	3.71	4.78	5.83	6.89	7.95	9.01	10.09	11.20	12.32	13.76	5 / 5		
reaction time		interval	1.07	1.07	1.05	1.06	1.06	1.06	1.08	1.11	1.12	1.44		3.19	3.18	3.31
wind	2.6 m/s velocity	5.20	8.54	8.54	8.70	8.62	8.62	8.62	8.46	8.23	8.16	9.74	7.99	8.60	8.62	8.28
FINAL - 2017 Japanese National Championships (Osaka, JPN)													<i>(2017) - tfddata-store.com/2017/07/13/post-1040/</i>			
date	25-Jun-17	time	2.57	3.60	4.65	5.68	6.70	7.75	8.80	9.87	10.94	12.03	13.45	4 / 1		
reaction time	0.138	interval	1.03	1.05	1.03	1.02	1.05	1.05	1.07	1.07	1.09	1.42		3.11	3.12	3.23
wind	-0.2 m/s velocity	5.34	8.87	8.70	8.87	8.96	8.70	8.70	8.54	8.54	8.39	9.87	8.18	8.82	8.79	8.49
Semi-Final 1 - 2017 Japanese National Championships (Osaka, JPN)													<i>(2017) - tfddata-store.com/2017/07/13/post-1040/</i>			
date	24-Jun-17	time	2.58	3.62	4.65	5.68	6.71	7.75	8.80	9.85	10.89	12.00	13.44	4 / 1		
reaction time	0.150	interval	1.04	1.03	1.03	1.03	1.04	1.05	1.05	1.04	1.11	1.44	PB	3.10	3.12	3.20
wind	0.6 m/s velocity	5.32	8.79	8.87	8.87	8.87	8.79	8.70	8.70	8.79	8.23	9.74	8.18	8.85	8.79	8.57
Heat 3 - 2017 Japanese National Championships (Osaka, JPN)													<i>(2017) - tfddata-store.com/2017/07/13/post-1040/</i>			
date	24-Jun-17	time	2.59	3.64	4.69	5.74	6.78	7.83	8.87	9.93	11.00	12.08	13.50	7 / 1		
reaction time	0.159	interval	1.05	1.05	1.05	1.04	1.05	1.04	1.06	1.07	1.08	1.42	PB	3.15	3.13	3.21
wind	0.5 m/s velocity	5.30	8.70	8.70	8.70	8.79	8.70	8.79	8.62	8.54	8.46	9.87	8.15	8.70	8.76	8.54
FINAL - 2017 Fuse Sprint (Tottori, JPN)													<i>(2017) - tfddata-store.com/2017/06/04/post-848/</i>			
date	04-Jun-17	time	2.62	3.67	4.72	5.77	6.82	7.87	8.93	10.00	11.08	12.18	13.62	5 / 2		
reaction time		interval	1.05	1.05	1.05	1.05	1.05	1.06	1.07	1.08	1.10	1.44		3.15	3.16	3.25
wind	3.2 m/s velocity	5.24	8.70	8.70	8.70	8.70	8.70	8.62	8.54	8.46	8.31	9.74	8.08	8.70	8.68	8.44

Heat 5 - 2017 Fuse Sprint (Tottori, JPN)(2017) - tfdata-store.com/2017/06/04/post-848/

date	04-Jun-17	time	2.57	3.61	4.68	5.73	6.77	7.82	8.89	9.96	11.04	12.16	13.63	5 / 3				
reaction time		interval		1.04	1.07	1.05	1.04	1.05	1.07	1.07	1.08	1.12	1.47		3.16	3.16	3.27	
wind	1.5 m/s	velocity	5.34	8.79	8.54	8.70	8.79	8.70	8.54	8.54	8.46	8.16	9.54	8.07	8.68	8.68	8.39	

FINAL - 2017 East Japan Business Athletics Championships (Yuma, JPN)(2017) - tfdata-store.com/2017/05/20/post-579/

date	20-May-17	time	2.58	3.62	4.64	5.68	6.72	7.77	8.83	9.90	10.98	12.08	13.53	4 / 1				
reaction time		interval		1.04	1.02	1.04	1.04	1.05	1.06	1.07	1.08	1.10	1.45	PB	3.10	3.15	3.25	
wind	1.1 m/s	velocity	5.32	8.79	8.96	8.79	8.79	8.70	8.62	8.54	8.46	8.31	9.67	8.13	8.85	8.70	8.44	

FINAL - 2017 Mikio Oda Memorial (Hiroshima, JPN)(2017) - tfdata-store.com/2017/05/01/458/

date	29-Apr-17	time	2.62	3.68	4.74	5.80	6.85	7.92	8.97	10.05	11.13	12.21	13.67	6 / 3				
reaction time		interval		1.06	1.06	1.06	1.05	1.07	1.05	1.08	1.08	1.08	1.46		3.18	3.17	3.24	
wind	1.5 m/s	velocity	5.24	8.62	8.62	8.62	8.70	8.54	8.70	8.46	8.46	8.46	9.60	8.05	8.62	8.65	8.46	

FINAL - 2016 Japanese University Championships (Kumagaya, JPN)(2016.09.06) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en

date	04-Sep-16	time	2.67	3.74	4.84	5.92	7.01	8.09	9.19	10.31	11.43	12.56	14.02	7 / 1				
reaction time	0.159	interval		1.07	1.10	1.08	1.09	1.08	1.10	1.12	1.12	1.13	1.46		3.25	3.27	3.37	
wind	-1.9 m/s	velocity	5.14	8.54	8.31	8.46	8.39	8.46	8.31	8.16	8.16	8.09	9.60	7.85	8.44	8.39	8.14	

Semi-Final 3 - 2016 Japanese University Championships (Kumagaya, JPN)(2016.09.05) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en

date	04-Sep-16	time	2.71	3.83	4.94	6.06	7.17	8.27	9.39	10.51	11.64	12.80	14.32	9 / 5				
reaction time	0.151	interval		1.12	1.11	1.12	1.11	1.10	1.12	1.12	1.13	1.16	1.52		3.35	3.33	3.41	
wind	-0.1 m/s	velocity	5.06	8.16	8.23	8.16	8.23	8.31	8.16	8.16	8.09	7.88	9.22	7.68	8.19	8.23	8.04	

Division 1 FINAL - 2016 Kanto Collegiate Championships (Yokohama, JPN)(2016.05.20) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en

date	20-May-16	time	2.62	3.72	4.78	5.83	6.90	7.97	9.03	10.12	11.20	12.30	13.75	6 / 1				
reaction time	0.160	interval		1.10	1.06	1.05	1.07	1.07	1.06	1.09	1.08	1.10	1.45	PB	3.21	3.20	3.27	
wind	0.3 m/s	velocity	5.24	8.31	8.62	8.70	8.54	8.54	8.62	8.39	8.46	8.31	9.67	8.00	8.54	8.57	8.39	

FINAL - 2016 Mikio Oda Memorial (Hiroshima, JPN)Kota (2016) - *race analysis of japanese top-ranked men 110m and women 100m hurdlers*

date	29-Apr-16	time	2.61	3.68	4.76	5.82	6.91	7.98	9.06	10.16	11.26	12.39	13.89	/ 3				
reaction time		interval		1.07	1.08	1.06	1.09	1.07	1.08	1.10	1.10	1.13	1.50		3.21	3.24	3.33	
wind	-0.5 m/s	velocity	5.26	8.54	8.46	8.62	8.39	8.54	8.46	8.31	8.31	8.09	9.35	7.92	8.54	8.46	8.23	

FINAL - 2015 Japanese National Championships (Niigata, JPN)Takashima (2015) - *race analysis of 110m & 100m hurdles in Japan- results 2015 competitions*

date	28-Jun-15	time	2.58	3.64	4.69	5.76	6.84	7.91	8.98	10.08	11.18	12.30	13.81	4 / 1				
reaction time	0.135	interval		1.06	1.05	1.07	1.08	1.07	1.07	1.10	1.10	1.12	1.51		3.18	3.22	3.32	
wind	-1.4 m/s	velocity	5.32	8.62	8.70	8.54	8.46	8.54	8.54	8.31	8.31	8.16	9.28	7.97	8.62	8.52	8.26	

Tauchi, Tomoki (JPN) (2004)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2022 Japanese National High School Championships (Naruto, JPN)**Kishima (2022) - *national high school championships biomechanics data collection*

date	07-Aug-22	time	2.70	3.86	5.02	6.16	7.34	8.52	9.70	10.92	12.17	13.45	14.96	2 / 6				
reaction time	0.157	interval		1.16	1.16	1.14	1.18	1.18	1.18	1.22	1.25	1.28	1.51		3.46	3.54	3.75	
wind	-3.8 m/s	velocity	5.08	7.88	7.88	8.02	7.75	7.75	7.75	7.49	7.31	7.14	9.28	7.35	7.92	7.75	7.31	

Takeyoshi, Daiki (JPN) (1994)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2018 Kinami Michitaka Memorial (Osaka, JPN)**Shibayama (2018) - *Race analysis of men's 110m hurdle run in 2018 season*

date	06-May-18	time	2.65	3.72	4.79	5.85	6.90	7.95	9.03	10.12	11.22	12.34	13.83	5 / 3				
reaction time		interval		1.07	1.07	1.06	1.05	1.05	1.08	1.09	1.10	1.12	1.49	PB	3.20	3.18	3.31	
wind	1.6 m/s	velocity	5.18	8.54	8.54	8.62	8.70	8.70	8.46	8.39	8.31	8.16	9.41	7.95	8.57	8.62	8.28	

Semi-Final 3 - 2016 Japanese University Championships (Kumagaya, JPN)(2016.09.05) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en

date	04-Sep-16	time	2.66	3.74	4.82	5.90	7.00	8.09	9.22	10.35	11.49	12.65	14.15	6 / 2				
reaction time	0.134	interval		1.08	1.08	1.08	1.10	1.09	1.13	1.13	1.14	1.16	1.50		3.24	3.32	3.43	
wind	-0.1 m/s	velocity	5.16	8.46	8.46	8.46	8.31	8.39	8.09	8.09	8.02	7.88	9.35	7.77	8.46	8.26	7.99	

Tamura, Eita (JPN) (2006)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2024 Japanese National High School Championships (Fukuoka, JPN)**Takashima (2024) - *national high school sports festival - biomechanics data*

date	01-Aug-24	time	2.75	3.86	4.96	6.06	7.16	8.27	9.41	10.53	11.68	12.85	14.30	2 / 8				
reaction time	0.213	interval		1.11	1.10	1.10	1.10	1.11	1.14	1.12	1.15	1.17	1.45		3.31	3.35	3.44	
wind	-0.7 m/s	velocity	4.99	8.23	8.31	8.31	8.31	8.23	8.02	8.16	7.95	7.81	9.67	7.69	8.28	8.19	7.97	

Tan Junyu (CHN) (2004)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2021 National Grand Prix (Chengdu, CHN)**

CAA Hurdle Development (2021)

date	02-Apr-21	time	2.76	3.92	5.14	6.36	7.56	8.74	10.06	11.36	12.68	13.98	15.64	7 / 7				
reaction time	0.194	interval		1.16	1.22	1.22	1.20	1.18	1.32	1.30	1.32	1.30	1.66		3.60	3.70	3.92	
wind	-0.1 m/s	velocity	4.97	7.88	7.49	7.49	7.62	7.75	6.92	7.03	6.92	7.03	8.45	7.03	7.62	7.41	6.99	

Heat 2 - 2021 National Grand Prix (Chengdu, CHN)

CAA Hurdle Development (2021)

date	02-Apr-21	time	2.80	3.96	5.16	6.32	7.52	8.72	9.92	11.10	12.32	13.54	15.14	4 / 4				
reaction time	0.218	interval		1.16	1.20	1.16	1.20	1.20	1.20	1.18	1.22	1.22	1.60		3.52	3.60	3.62	
wind	0.3 m/s	velocity	4.90	7.88	7.62	7.88	7.62	7.62	7.62	7.75	7.49	7.49	8.76	7.76	7.79	7.62	7.57	

Tanaka, Hideaki (JPN) (1995)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Heat 2 - 2020 All Japan Corporate Championships (Kumagaya, JPN)													<i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>						
date	20-Sep-20	time	2.68	3.78	4.86	5.95	7.04	8.13	9.22	10.33	11.47	12.61		14.09	3 / 4				
reaction time	0.131	interval		1.10	1.08	1.09	1.09	1.09	1.09	1.11	1.14	1.14	1.48			3.27	3.27	3.39	
wind	1.7 m/s	velocity	5.12	8.31	8.46	8.39	8.39	8.39	8.39	8.23	8.02	8.02	9.47	7.81		8.39	8.39	8.09	
Race 2 - 2020 World Athletics Trials (Fuji, JPN)													<i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>						
date	06-Sep-20	time	2.71	3.83	4.92	6.00	7.10	8.19	9.28	10.40	11.51	12.65		14.13	6 / 3				
reaction time		interval	7 steps	1.12	1.09	1.08	1.10	1.09	1.09	1.12	1.11	1.14	1.48			3.29	3.28	3.37	
wind	1.3 m/s	velocity	5.06	8.16	8.39	8.46	8.31	8.39	8.39	8.16	8.23	8.02	9.47	7.78		8.33	8.36	8.14	
Tanaka, Hiromasa (JPN) (1981)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Decathlon - Heat 2 - 2009 Japanese National Championships (Hiroshima, JPN)													<i>Hisashi (2010) - the run performance analysis in the decathlon sprint events</i>						
date	26-Jun-09	time	2.53	3.71	4.89	6.08	7.27	8.48	9.70	10.92	12.17	13.44		15.23	1 / 4				
reaction time		interval		1.18	1.18	1.19	1.19	1.21	1.22	1.22	1.25	1.27	1.79			3.55	3.62	3.74	
wind	1.6 m/s	velocity	5.42	7.75	7.75	7.68	7.68	7.55	7.49	7.49	7.31	7.20	7.83	7.22		7.72	7.57	7.33	
Tanaka, Shinya (JPN) (1993)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2018 Japanese National Championships (Yamaguchi, JPN)													<i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>						
date	24-Jun-18	time	2.60	3.66	4.70	5.73	6.83	7.90	8.98	10.06	11.15	12.23		13.64	5 / 3				
reaction time	0.145	interval		1.06	1.04	1.03	1.10	1.07	1.08	1.08	1.09	1.08	1.41	=PB		3.13	3.25	3.25	
wind	0.7 m/s	velocity	5.28	8.62	8.79	8.87	8.31	8.54	8.46	8.46	8.39	8.46	9.94	8.06		8.76	8.44	8.44	
FINAL - 2018 Fuse Sprint (Tottori, JPN)													<i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>						
date	03-Jun-18	time	2.65	3.75	4.83	5.92	7.00	8.11	9.25	10.38	11.53	12.70		14.25	1 / 7				
reaction time		interval		1.10	1.08	1.09	1.08	1.11	1.14	1.13	1.15	1.17	1.55			3.27	3.33	3.45	
wind	0.5 m/s	velocity	5.18	8.31	8.46	8.39	8.46	8.23	8.02	8.09	7.95	7.81	9.05	7.72		8.39	8.23	7.95	
FINAL - 2018 Kinami Michitaka Memorial (Osaka, JPN)													<i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>						
date	06-May-18	time	2.63	3.78	4.87	5.95	7.03	8.10	9.16	10.28	11.38	12.50		13.96	6 / 5				
reaction time		interval		1.15	1.09	1.08	1.08	1.07	1.06	1.12	1.10	1.12	1.46			3.32	3.21	3.34	
wind	1.6 m/s	velocity	5.22	7.95	8.39	8.46	8.46	8.54	8.62	8.16	8.31	8.16	9.60	7.88		8.26	8.54	8.21	
FINAL - 2017 Japanese National Championships (Osaka, JPN)													<i>(2017) - tfdata-store.com/2017/07/13/post-1040/</i>						
date	25-Jun-17	time	2.61	3.69	4.75	5.80	6.86	7.93	9.00	10.11	11.22	12.37		13.92	9 / 8				
reaction time	0.141	interval	7 steps	1.08	1.06	1.05	1.06	1.07	1.07	1.11	1.11	1.15	1.55			3.19	3.20	3.37	
wind	-0.2 m/s	velocity	5.26	8.46	8.62	8.70	8.62	8.54	8.54	8.23	8.23	7.95	9.05	7.90		8.60	8.57	8.14	
Heat 4 - 2017 Japanese National Championships (Osaka, JPN)													<i>(2017) - tfdata-store.com/2017/07/13/post-1040/</i>						
date	24-Jun-17	time	2.62	3.69	4.74	5.78	6.84	7.88	8.95	10.02	11.11	12.19		13.64	6 / 1				
reaction time	0.148	interval	7 steps	1.07	1.05	1.04	1.06	1.04	1.07	1.07	1.09	1.08	1.45	PB		3.16	3.17	3.24	
wind	0.0 m/s	velocity	5.24	8.54	8.70	8.79	8.62	8.79	8.54	8.54	8.39	8.46	9.67	8.06		8.68	8.65	8.46	
FINAL - 2017 Fuse Sprint (Tottori, JPN)													<i>(2017) - tfdata-store.com/2017/06/04/post-848/</i>						
date	04-Jun-17	time	2.61	3.68	4.73	5.79	6.85	7.92	8.99	10.07	11.16	12.25		13.68	9 / 3				
reaction time		interval	7 steps	1.07	1.05	1.06	1.06	1.07	1.07	1.08	1.09	1.09	1.43			3.18	3.20	3.26	
wind	3.2 m/s	velocity	5.26	8.54	8.70	8.62	8.62	8.54	8.54	8.46	8.39	8.39	9.80	8.04		8.62	8.57	8.41	
Heat 5 - 2017 Fuse Sprint (Tottori, JPN)													<i>(2017) - tfdata-store.com/2017/06/04/post-848/</i>						
date	04-Jun-17	time	2.63	3.70	4.79	5.85	6.93	8.02	9.10	10.18	11.31	12.42		13.89	1 / 7				
reaction time		interval	7 steps	1.07	1.09	1.06	1.08	1.09	1.08	1.08	1.13	1.11	1.47			3.22	3.25	3.32	
wind	1.5 m/s	velocity	5.22	8.54	8.39	8.62	8.46	8.39	8.46	8.46	8.09	8.23	9.54	7.92		8.52	8.44	8.26	
FINAL - 2017 East Japan Business Athletics Championships (Yuma, JPN)													<i>(2017) - tfdata-store.com/2017/05/20/post-579/</i>						
date	20-May-17	time	2.58	3.65	4.70	5.78	6.84	7.93	9.02	10.10	11.20	12.32		13.76	6 / 3				
reaction time		interval	7 steps	1.07	1.05	1.08	1.06	1.09	1.09	1.08	1.10	1.12	1.44	PB		3.20	3.24	3.30	
wind	1.1 m/s	velocity	5.32	8.54	8.70	8.46	8.62	8.39	8.39	8.46	8.31	8.16	9.74	7.99		8.57	8.46	8.31	
FINAL - 2017 Mito Invitational (Mito, JPN)													<i>(2017) - tfdata-store.com/2017/05/06/post-423/</i>						
date	05-May-17	time	2.66	3.74	4.83	5.91	7.00	8.09	9.18	10.28	11.35	12.50		13.94	7 / 2				
reaction time		interval	7 steps	1.08	1.09	1.08	1.09	1.09	1.09	1.10	1.07	1.15	1.44			3.25	3.27	3.32	
wind	-2.3 m/s	velocity	5.16	8.46	8.39	8.46	8.39	8.39	8.39	8.31	8.54	7.95	9.74	7.89		8.44	8.39	8.26	
Heat 3 - 2017 Mito Invitational (Mito, JPN)													<i>(2017) - tfdata-store.com/2017/05/06/post-423/</i>						
date	05-May-17	time	2.63	3.70	4.79	5.87	6.95	8.02	9.10	10.19	11.27	12.41		13.88	6 / 2				
reaction time		interval	7 steps	1.07	1.09	1.08	1.08	1.07	1.08	1.09	1.08	1.14	1.47	PB		3.24	3.23	3.31	
wind	-2.5 m/s	velocity	5.22	8.54	8.39	8.46	8.46	8.54	8.46	8.39	8.46	8.02	9.54	7.93		8.46	8.49	8.28	
B FINAL - 2017 Mikio Oda Memorial (Hiroshima, JPN)													<i>(2017) - tfdata-store.com/2017/05/01/458/</i>						
date	29-Apr-17	time	2.62	3.74	4.82	5.89	6.98	8.09	9.21	10.34	11.49	12.64		14.13	7 / 4				
reaction time		interval	7 steps	1.12	1.08	1.07	1.09	1.11	1.12	1.13	1.15	1.15	1.49			3.27	3.32	3.43	
wind	-1.5 m/s	velocity	5.24	8.16	8.46	8.54	8.39	8.23	8.16	8.09	7.95	7.95	9.41	7.78		8.39	8.26	7.99	

Semi-Final 3 - 2016 Japanese University Championships (Kumagaya, JPN)(2016.09.05) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en

date	04-Sep-16	time	2.68	3.77	4.86	5.96	7.07	8.17	9.29	10.44	11.58	12.75	14.22	7 / 3				
reaction time	0.141	interval	7 steps	1.09	1.09	1.10	1.11	1.10	1.12	1.15	1.14	1.17	1.47		3.28	3.33	3.46	
wind	-0.1 m/s	velocity	5.12	8.39	8.39	8.31	8.23	8.31	8.16	7.95	8.02	7.81	9.54	7.74	8.36	8.23	7.92	

Tanigawa, Satoru (JPN) (1972)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Heat 1 - 2004 Olympic Games (Athens, GRE)**(2016.05.12) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en

date	24-Aug-04	time	2.63	3.69	4.75	5.81	6.87	7.94	9.02	10.10	11.18	12.26	13.72	/ 1				
reaction time	0.128	interval		1.06	1.06	1.06	1.06	1.07	1.08	1.08	1.08	1.08	1.46		3.18	3.21	3.24	
wind	1.5 m/s	velocity	5.22	8.62	8.62	8.62	8.62	8.54	8.46	8.46	8.46	8.46	9.60	8.02	8.62	8.54	8.46	

Tanonaka, Tasuku (JPN) (1978)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2009 Nambu Chuhei Memorial (Sapporo, JPN)***Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdles*

date	09-Jul-09	time	2.63	3.69	4.75	5.81	6.87	7.94	9.02	10.10	11.18	12.26	13.72	/ 1				
reaction time		interval		1.06	1.06	1.06	1.06	1.07	1.08	1.08	1.08	1.08	1.46		3.18	3.21	3.24	
wind	1.2 m/s	velocity	5.22	8.62	8.62	8.62	8.62	8.54	8.46	8.46	8.46	8.46	9.60	8.02	8.62	8.54	8.46	

FINAL - 2009 Japanese National Championships (Hiroshima, JPN)*Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdles*

date	27-Jun-09	time	2.59	3.67	4.72	5.76	6.80	7.87	8.91	9.97	11.05	12.13	13.57	3 / 1				
reaction time		interval		1.08	1.05	1.04	1.04	1.07	1.04	1.06	1.08	1.08	1.44		3.17	3.15	3.22	
wind	1.6 m/s	velocity	5.30	8.46	8.70	8.79	8.79	8.54	8.79	8.62	8.46	8.46	9.74	8.11	8.65	8.70	8.52	

FINAL - 2009 Osaka Grand Prix (Osaka, JPN)*Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdles*

date	09-May-09	time	2.60	3.69	4.73	5.79	6.84	7.89	8.96	10.02	11.10	12.19	13.67	/ 4				
reaction time		interval		1.09	1.04	1.06	1.05	1.05	1.07	1.06	1.08	1.09	1.48		3.19	3.17	3.23	
wind	0.2 m/s	velocity	5.28	8.39	8.79	8.62	8.70	8.70	8.54	8.62	8.46	8.39	9.47	8.05	8.60	8.65	8.49	

FINAL - 2009 Mikio Oda Memorial (Hiroshima, JPN)*Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdles*

date	29-Apr-09	time	2.60	3.68	4.74	5.80	6.85	7.90	8.96	10.04	11.12	12.20	13.65	/ 2				
reaction time		interval		1.08	1.06	1.06	1.05	1.05	1.06	1.08	1.08	1.08	1.45		3.20	3.16	3.24	
wind	1.9 m/s	velocity	5.28	8.46	8.62	8.62	8.70	8.70	8.62	8.46	8.46	8.46	9.67	8.06	8.57	8.68	8.46	

FINAL - 2008 Seiko Super Grand Prix (Kawasaki, JPN)*Akirabun (2009) - race analysis of 2008 men's and women's 100m and 110m & 100m hurdles*

date	23-Sep-08	time	2.44	3.52	4.59	5.66	6.73	7.80	8.89	9.99	11.10	12.20	13.88	/ 4				
reaction time		interval		1.08	1.07	1.07	1.07	1.07	1.09	1.10	1.11	1.10	1.68		3.22	3.23	3.31	
wind	-0.7 m/s	velocity	5.62	8.46	8.54	8.54	8.54	8.54	8.39	8.31	8.23	8.31	8.35	7.93	8.52	8.49	8.28	

FINAL - 2008 Nambu Chuhei Memorial (Harodate, JPN)*Akirabun (2009) - race analysis of 2008 men's and women's 100m and 110m & 100m hurdles*

date	06-Jul-08	time	2.44	3.52	4.57	5.62	6.67	7.74	8.81	9.88	10.95	12.04	13.64	/ 1				
reaction time		interval		1.08	1.05	1.05	1.05	1.07	1.07	1.07	1.07	1.09	1.60		3.18	3.19	3.23	
wind	0.5 m/s	velocity	5.62	8.46	8.70	8.70	8.70	8.54	8.54	8.54	8.54	8.39	8.76	8.06	8.62	8.60	8.49	

Heat 2 - 2008 Nambu Chuhei Memorial (Harodate, JPN)*Akirabun (2009) - race analysis of 2008 men's and women's 100m and 110m & 100m hurdles*

date	06-Jul-08	time	2.45	3.52	4.58	5.62	6.69	7.78	8.83	9.91	11.00	12.10	13.72	/ 2				
reaction time		interval		1.07	1.06	1.04	1.07	1.09	1.05	1.08	1.09	1.10	1.62		3.17	3.21	3.27	
wind	2.0 m/s	velocity	5.60	8.54	8.62	8.79	8.54	8.39	8.70	8.46	8.39	8.31	8.65	8.02	8.65	8.54	8.39	

FINAL - 2008 Japanese National Championships (Kawasaki, JPN)*Akirabun (2009) - race analysis of 2008 men's and women's 100m and 110m & 100m hurdles*

date	28-Jun-08	time	2.43	3.51	4.57	5.63	6.68	7.75	8.81	9.90	10.98	12.09	13.73	/ 2				
reaction time		interval		1.08	1.06	1.06	1.05	1.07	1.06	1.09	1.08	1.11	1.64		3.20	3.18	3.28	
wind	-0.2 m/s	velocity	5.65	8.46	8.62	8.62	8.70	8.54	8.62	8.39	8.46	8.23	8.55	8.01	8.57	8.62	8.36	

FINAL - 2008 Mikio Oda Memorial (Hiroshima, JPN)*Akirabun (2009) - race analysis of 2008 men's and women's 100m and 110m & 100m hurdles*

date	29-Apr-08	time	2.40	3.47	4.52	5.57	6.63	7.69	8.75	9.84	10.93	12.02	13.62	/ 2				
reaction time		interval		1.07	1.05	1.05	1.06	1.06	1.06	1.09	1.09	1.09	1.60		3.17	3.18	3.27	
wind	1.6 m/s	velocity	5.72	8.54	8.70	8.70	8.62	8.62	8.62	8.39	8.39	8.39	8.76	8.08	8.65	8.62	8.39	

Heat 2 - 2008 Mikio Oda Memorial (Hiroshima, JPN)*Akirabun (2009) - race analysis of 2008 men's and women's 100m and 110m & 100m hurdles*

date	29-Apr-08	time	2.43	3.51	4.56	5.61	6.65	7.71	8.77	9.86	10.95	12.04	13.67	/ 1				
reaction time		interval		1.08	1.05	1.05	1.04	1.06	1.06	1.09	1.09	1.09	1.63		3.18	3.16	3.27	
wind	1.3 m/s	velocity	5.65	8.46	8.70	8.70	8.79	8.62	8.62	8.39	8.39	8.39	8.60	8.05	8.62	8.68	8.39	

Heat 4 - 2007 IAAF World Championships (Osaka, JPN)*Shibayama (2008) - analysis of racing patterns in the men's 110m & women's 100m sprint hurdles*

date	29-Aug-07	time	2.64	3.69	4.76	5.81	6.84	7.89	8.94	10.03	11.11	12.19	13.61	5 / 3				
reaction time	0.140	interval		1.05	1.07	1.05	1.03	1.05	1.05	1.09	1.08	1.08	1.42		3.17	3.13	3.25	
wind	0.6 m/s	velocity	5.20	8.70	8.54	8.70	8.87	8.70	8.70	8.39	8.46	8.46	9.87	8.08	8.65	8.76	8.44	

FINAL - 2007 Osaka Grand Prix (Osaka, JPN)*Akirabun (2008) - 2007 speed analysis of the men's & women's 100m, 100m hurdles, & 110m hurdles*

date	05-May-07	time	2.40	3.48	4.52	5.56	6.62	7.68	8.74	9.82	10.90	11.99	13.59	/ 3				
reaction time		interval		1.08	1.04	1.04	1.06	1.06	1.06	1.08	1.08	1.09	1.60		3.16	3.18	3.25	
wind	0.8 m/s	velocity	5.72	8.46	8.79	8.79	8.62	8.62	8.62	8.46	8.46	8.39	8.76	8.09	8.68	8.62	8.44	

FINAL - 2007 Mikio Oda Memorial (Hiroshima, JPN)

date	29-Apr-07	time	2.42	3.49	4.54	5.59	6.65	7.71	8.78	9.87	10.98	12.10	13.73	/ 1			
reaction time		interval		1.07	1.05	1.05	1.06	1.06	1.07	1.09	1.11	1.12	1.63		3.17	3.19	3.32
wind	0.0 m/s	velocity	5.67	8.54	8.70	8.70	8.62	8.62	8.54	8.39	8.23	8.16	8.60	8.01	8.65	8.60	8.26

*Akirabun (2008) - 2007 speed analysis of the men's & women's 100m, 100m hurdles, & 110m hurdles***Heat 2 - 2007 Mikio Oda Memorial (Hiroshima, JPN)**

date	29-Apr-07	time	2.40	3.49	4.55	5.60	6.65	7.70	8.76	9.83	10.90	11.99	13.60	/ 1			
reaction time		interval		1.09	1.06	1.05	1.05	1.05	1.06	1.07	1.07	1.09	1.61		3.20	3.16	3.23
wind	2.6 m/s	velocity	5.72	8.39	8.62	8.70	8.70	8.70	8.62	8.54	8.54	8.39	8.71	8.09	8.57	8.68	8.49

*Akirabun (2008) - 2007 speed analysis of the men's & women's 100m, 100m hurdles, & 110m hurdles***FINAL - 2006 Osaka Grand Prix (Osaka, JPN)**

date	06-May-06	time	2.45	3.53	4.60	5.65	6.70	7.77	8.85	9.93	11.03	12.13	13.72	/ 4			
reaction time		interval		1.08	1.07	1.05	1.05	1.07	1.08	1.08	1.10	1.10	1.59		3.20	3.20	3.28
wind	1.2 m/s	velocity	5.60	8.46	8.54	8.70	8.70	8.54	8.46	8.46	8.31	8.31	8.82	8.02	8.57	8.57	8.36

*Akirabun (2007) - speed analysis of the 100m and hurdles with a laser system***Tateyama, Masama (JPN)**

date	06-Aug-23	time	2.73	3.84	4.96	6.09	7.24	8.34	9.48	10.62	11.78	12.96	14.46	6 / 8			
reaction time	0.171	interval		1.11	1.12	1.13	1.15	1.10	1.14	1.14	1.16	1.18	1.50		3.36	3.39	3.48
wind	0.8 m/s	velocity	5.03	8.23	8.16	8.09	7.95	8.31	8.02	8.02	7.88	7.75	9.35	7.61	8.16	8.09	7.88

*Takashima (2023) - national high school sports festival - biomechanics data***Tau, Shun (JPN) (1997)**

date	11-Jun-23	time	2.85	4.00	5.21	6.39	7.55	8.74	9.93	11.13	12.34	13.62	15.27	6 / 6			
reaction time		interval		1.15	1.21	1.18	1.16	1.19	1.19	1.20	1.21	1.28	1.65		3.54	3.54	3.69
wind	-0.1 m/s	velocity	4.81	7.95	7.55	7.75	7.88	7.68	7.68	7.62	7.55	7.14	8.50	7.20	7.75	7.75	7.43

*Matsubayashi (2024) - performance analysis of decathlon athletes in the 2023 season***Decathlon - Heat 2 - 2023 Japanese Multi-Event National Championships (Akita, JPN)**

date	08-May-23	time	2.72	3.86	4.96	6.07	7.17	8.28	9.38	10.50	11.62	12.78	14.26	8 / 1			
reaction time	0.161	interval		1.14	1.10	1.11	1.10	1.11	1.10	1.12	1.12	1.16	1.48		3.35	3.31	3.40
wind	-0.2 m/s	velocity	5.04	8.02	8.31	8.23	8.31	8.23	8.31	8.16	8.16	7.88	9.47	7.71	8.19	8.28	8.06

*Matsubayashi (2024) - performance analysis of decathlon athletes in the 2023 season***Decathlon - FINAL - 2022 Japanese Multi-Event National Championships (Akita, JPN)**

date	05-Jun-22	time	2.72	3.87	4.99	6.09	7.23	8.35	9.49	10.65	11.81	12.99	14.48	7 / 1			
reaction time		interval		1.15	1.12	1.10	1.14	1.12	1.14	1.16	1.16	1.18	1.49		3.37	3.40	3.50
wind	-2.3 m/s	velocity	5.04	7.95	8.16	8.31	8.02	8.16	8.02	7.88	7.88	7.75	9.41	7.60	8.14	8.06	7.83

*Takefu (2023) - performance analysis of decathlon athletes in the 2022 season***Decathlon - Heat 1 - 2022 Michitaka Kinami Memorial (Osaka, JPN)**

date	01-May-22	time	2.75	3.90	5.03	6.16	7.28	8.40	9.53	10.69	11.84	13.02	14.54	4 / 1			
reaction time	0.139	interval		1.15	1.13	1.13	1.12	1.12	1.13	1.16	1.15	1.18	1.52		3.41	3.37	3.49
wind	0.0 m/s	velocity	4.99	7.95	8.09	8.09	8.16	8.16	8.09	7.88	7.95	7.75	9.22	7.57	8.04	8.14	7.86

*Takefu (2023) - performance analysis of decathlon athletes in the 2022 season***Decathlon - Heat 3 - 2020 Japanese Multi-Event National Championships (Nagano, JPN)**

date	27-Sep-20	time	2.77	3.88	4.97	6.06	7.16	8.24	9.34	10.44	11.56	12.68	14.15	7 / 1			
reaction time		interval		1.11	1.09	1.09	1.10	1.08	1.10	1.10	1.12	1.12	1.47		3.29	3.28	3.34
wind	0.7 m/s	velocity	4.95	8.23	8.39	8.39	8.31	8.46	8.31	8.31	8.16	8.16	9.54	7.77	8.33	8.36	8.21

*Matsubayashi (2020) - research athlete performance technique- 2020 databook***FINAL - 2016 Kanto Student Championships (Sagamihara, JPN)**

date	17-Sep-16	time	2.71	3.81	4.90	5.97	7.04	8.12	9.22	10.31	11.41	12.54	13.95	7 / 3			
reaction time		interval		1.10	1.09	1.07	1.07	1.08	1.10	1.09	1.10	1.13	1.41		3.26	3.25	3.32
wind	3.2 m/s	velocity	5.06	8.31	8.39	8.54	8.54	8.46	8.31	8.39	8.31	8.09	9.94	7.89	8.41	8.44	8.26

*(2016.09.17) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en***Semi-Final 1 - 2016 Japanese University Championships (Kumagaya, JPN)**

date	04-Sep-16	time	2.73	3.85	4.94	6.02	7.12	8.22	9.32	10.41	11.54	12.69	14.16	2 / 4			
reaction time	0.144	interval		1.12	1.09	1.08	1.10	1.10	1.10	1.09	1.13	1.15	1.47		3.29	3.30	3.37
wind	0.6 m/s	velocity	5.03	8.16	8.39	8.46	8.31	8.31	8.31	8.39	8.09	7.95	9.54	7.77	8.33	8.31	8.14

*(2016.09.05) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en***FINAL - 2015 Japanese National High School Championships (Wakayama, JPN) (99cm)**

date	02-Aug-15	time	2.72	3.83	4.94	6.01	7.11	8.21	9.30	10.40	11.52	12.65	14.10	6 / 2			
reaction time		interval		1.11	1.11	1.07	1.10	1.10	1.09	1.10	1.12	1.13	1.45	=PB	3.29	3.29	3.35
wind	1.4 m/s	velocity	5.04	8.23	8.23	8.54	8.31	8.31	8.39	8.31	8.16	8.09	9.67	7.80	8.33	8.33	8.19

*Takashima (2015) - race analysis of 110m & 100m hurdles in Japan- results 2015 competitions***Tawada, Asahi (JPN) (2001)**

date	07-Oct-18	time	2.59	3.66	4.69	5.73	6.75	7.78	8.80	9.83	10.86	11.91	13.31	3 / 1			
reaction time	0.122	interval		1.07	1.03	1.04	1.02	1.03	1.02	1.03	1.03	1.05	1.40		3.14	3.07	3.11
wind	1.5 m/s	velocity	5.30	8.54	8.87	8.79	8.96	8.87	8.96	8.87	8.87	8.70	10.01	8.26	8.73	8.93	8.82

*Joshi (2018) - research on athlete performance and technique- 2018 data book***FINAL - 2018 Japanese National High School Championships (Nagoya, JPN) (99cm)**

date	06-Aug-18	time	2.65	3.76	4.88	6.00	7.09	8.19	9.30	10.45	11.59	12.75	14.31	6 / 5			
reaction time		interval		1.11	1.12	1.12	1.09	1.10	1.11	1.15	1.14	1.16	1.56		3.35	3.30	3.45
wind	1.6 m/s	velocity	5.18	8.23	8.16	8.16	8.39	8.31	8.23	7.95	8.02	7.88	8.99	7.69	8.19	8.31	7.95

Kota (2018) - 71st high school championships: JAF scientific committee - biomechanics data collection

		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Tawiah, Casimir (USA) (1997)															<i>CAA Hurdle Development (2020)</i>			
Semi-Final 2 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)																		
date	15-Feb-20	time	2.68	3.80	4.92	6.00	7.15							8.09	8 / 8			
reaction time	0.162	interval	7 Steps	1.12	1.12	1.08	1.15						0.94			3.32		
		velocity	5.12	8.16	8.16	8.46	7.95						10.34	7.42		8.26		
Heat 3 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)															<i>CAA Hurdle Development (2020)</i>			
date	14-Feb-20	time	2.70	3.80	4.90	5.98	7.07							8.03	7 / 6			
reaction time	0.168	interval	7 Steps	1.10	1.10	1.08	1.09						0.96			3.28		
		velocity	5.08	8.31	8.31	8.46	8.39						10.13	7.47		8.36		
Tay, Marvin (SWE) (1990)															<i>(2017) - www.windsprint/Splittider/</i>			
FINAL 2 - 2017 Windsprint (Sundsvall, SWE)																		
date	30-Jul-17	time	2.69	3.82	4.92							dnf	/ --					
reaction time		interval		1.13	1.10													
wind	1.0 m/s	velocity	5.10	8.09	8.31													
FINAL - 2017 Windsprint (Sundsvall, SWE)															<i>(2017) - www.windsprint/Splittider/</i>			
date	30-Jul-17	time	2.68	3.79	4.89	6.01	7.12	8.25	9.41	10.56	11.72	12.93		14.59	/ 4			
reaction time		interval		1.11	1.10	1.12	1.11	1.13	1.16	1.15	1.16	1.21	1.66		3.33	3.40	3.52	
wind	1.0 m/s	velocity	5.12	8.23	8.31	8.16	8.23	8.09	7.88	7.95	7.88	7.55	8.45	7.54	8.23	8.06	7.79	
FINAL - 2010 Swedish National Championships (Falun, SWE)															<i>Blomkvist (2010) - www.sub13.se</i>			
date	22-Aug-10	time	2.71	3.82	4.95	6.07	7.20	8.37	9.53	10.70	11.85	13.02		14.77	/ 5			
reaction time		interval		1.11	1.13	1.12	1.13	1.17	1.16	1.17	1.15	1.17	1.75		3.36	3.46	3.49	
wind	-0.7 m/s	velocity	5.06	8.23	8.09	8.16	8.09	7.81	7.88	7.81	7.95	7.81	8.01	7.45	8.16	7.92	7.86	
Taylor, Logan (USA) (1986)															<i>USATF Men's Hurdle Development (2007)</i>			
Heat 3 - 2007 USATF National Championships (Indianapolis, IN)																		
date	23-Jun-07	time	2.64	3.75	4.84	5.94	7.06	8.12	9.22	10.36	11.46	12.63		14.12	7 / 6			
reaction time		interval		1.11	1.09	1.10	1.12	1.06	1.10	1.14	1.10	1.17	1.49		3.30	3.28	3.41	
wind	-3.2 m/s	velocity	5.20	8.23	8.39	8.31	8.16	8.62	8.31	8.02	8.31	7.81	9.41	7.79	8.31	8.36	8.04	
Teape, Hugh (GBR) (1963)															<i>Knight (1992) - 1992 Olympic report: the hurdling events</i>			
FINAL - 1992 Olympic Games (Barcelona, ESP)																		
date	03-Aug-92	time	2.64	3.78	4.84	5.97	6.99	8.03	9.10	10.19	11.34	12.57		14.00	1 / 8			
reaction time	0.156	interval		1.14	1.06	1.13	1.02	1.04	1.07	1.09	1.15	1.23	1.43		3.33	3.13	3.47	
wind	0.8 m/s	velocity	5.20	8.02	8.62	8.09	8.96	8.79	8.54	8.39	7.95	7.43	9.80	7.86	8.23	8.76	7.90	
Tetsuguchi, Ren (JPN) (1994)															<i>(2017) - tfdata-store.com/2017/05/06/post-423/</i>			
Heat 1 - 2017 Mito Invitational (Mito, JPN)																		
date	05-May-17	time	2.79	3.94	5.08	6.21	7.36	8.51	9.65	10.82	12.01	13.21		14.73	8 / 5			
reaction time		interval	7 steps	1.15	1.14	1.13	1.15	1.15	1.14	1.17	1.19	1.20	1.52		3.42	3.44	3.56	
wind	0.3 m/s	velocity	4.92	7.95	8.02	8.09	7.95	7.95	8.02	7.81	7.68	7.62	9.22	7.47	8.02	7.97	7.70	
Tharp, Jakobe (USA) (2005)															<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>			
Heat 1 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)																		
date	24-Jun-24	time	2.56	3.63	4.68	5.70	6.70	7.72	8.75	9.81	10.86	11.92		13.37	3 / 4			
reaction time		interval		1.07	1.05	1.02	1.00	1.02	1.03	1.06	1.05	1.06	1.45		3.14	3.05	3.17	
wind	0.8 m/s	velocity	5.36	8.54	8.70	8.96	9.14	8.96	8.87	8.62	8.70	8.62	9.67	8.23	8.73	8.99	8.65	
FINAL - 2024 NCAA Championships (Eugene, OR) (TV Analysis)															<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>			
date	07-Jun-24	time	2.57	3.60	4.67	5.67	6.70	7.71	8.74	9.76	10.78	11.81		13.20	5 / 2			
reaction time		interval		1.03	1.07	1.00	1.03	1.01	1.03	1.02	1.02	1.03	1.39		3.10	3.07	3.07	
wind	0.1 m/s	velocity	5.34	8.87	8.54	9.14	8.87	9.05	8.87	8.96	8.96	8.87	10.09	8.33	8.85	8.93	8.93	
Thomas, Chris (USA) (1981)															<i>(2007) - www.ssg.se/en/Windsprint/Split-times/</i>			
FINAL - 2007 Windsprint (Sundsvall, SWE)																		
date	24-Jul-07	time		3.73							10.19			13.95	/ 2			
reaction time		interval									3.19		3.76					
wind	1.3 m/s	velocity		6.13							8.60		8.59	7.89				
Heat 2 - 2007 USATF National Championships (Indianapolis, IN)															<i>USATF Men's Hurdle Development (2007)</i>			
date	23-Jun-07	time	2.82	3.90	4.99	6.06	7.12	8.19	9.27	10.34	11.43	12.55		13.90	8 / 6			
reaction time		interval		1.08	1.09	1.07	1.06	1.07	1.08	1.07	1.09	1.12	1.35		3.24	3.21	3.28	
wind	-1.9 m/s	velocity	4.87	8.46	8.39	8.54	8.62	8.54	8.46	8.54	8.39	8.16	10.39	7.91	8.46	8.54	8.36	
Thomas, Damion (JAM) (1999)															<i>Omega Timing (2023) - diamond league race analysis</i>			
Heat 1 - 2023 Kamila Skolimowska Memorial (Silesia, POL)																		
date	16-Jul-23	time	2.47	3.55	4.59	5.62	6.65	7.69	8.73	9.78	10.85	11.93		13.53	9 / 8			
reaction time	0.147	interval	7 steps	1.08	1.04	1.03	1.03	1.04	1.04	1.05	1.07	1.08	1.60		3.15	3.11	3.20	
wind	0.3 m/s	velocity	5.55	8.46	8.79	8.87	8.87	8.79	8.79	8.70	8.54	8.46	8.76	8.13	8.70	8.82	8.57	

FINAL - 2023 USATF New York City Grand Prix (Randalls Island, NY) (TV Analysis)

date	24-Jun-23	time	2.57	3.60	4.65	5.68	6.71	7.73	8.77	9.83	10.92	12.02	<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>					
reaction time	0.163	interval	7 steps	1.03	1.05	1.03	1.03	1.02	1.04	1.06	1.09	1.10	1.51			3.11	3.09	3.25
wind	1.6 m/s	velocity	5.34	8.87	8.70	8.87	8.87	8.96	8.79	8.62	8.39	8.31	9.28	8.13		8.82	8.87	8.44

FINAL - 2023 USATF Bermuda Grand Prix (Devonshire, BER) (TV Analysis)

date	21-May-23	time	2.63	3.67	4.70	5.70	6.72	7.73	8.75	9.82	10.87	11.93	<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>					
reaction time	0.166	interval	7 steps	1.04	1.03	1.00	1.02	1.01	1.02	1.07	1.05	1.06	1.45			3.07	3.05	3.18
wind	4.0 m/s	velocity	5.22	8.79	8.87	9.14	8.96	9.05	8.96	8.54	8.70	8.62	9.67	8.22		8.93	8.99	8.62

FINAL - 2022 New York Grand Prix (New York, NY) (TV Analysis)

date	12-Jun-22	time	2.52	3.56	4.57	5.58	6.61	7.63	8.70	9.75	10.82	11.90	<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>					
reaction time	0.149	interval	7 steps	1.04	1.01	1.01	1.03	1.02	1.07	1.05	1.07	1.08	1.50			3.06	3.12	3.20
wind	1.6 m/s	velocity	5.44	8.79	9.05	9.05	8.87	8.96	8.54	8.70	8.54	8.46	9.35	8.21		8.96	8.79	8.57

FINAL - 2021 NCAA Championships (Eugene, OR) (TV Analysis)

date	11-Jun-21	time	2.60	3.67	4.70	5.75	6.77	7.80	8.90	10.00	11.07	12.23	<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>					
reaction time	0.200	interval	7 steps	1.07	1.03	1.05	1.02	1.03	1.10	1.10	1.07	1.16	1.53			3.15	3.15	3.33
wind	-0.6 m/s	velocity	5.28	8.54	8.87	8.70	8.96	8.87	8.31	8.31	8.54	7.88	9.16	7.99		8.70	8.70	8.23

FINAL - 2018 IAAF World Junior Championships (Tampere, FIN) (99cm)

date	12-Jul-18	time	2.58	3.63	4.66	5.69	6.70	7.76	8.79	9.86	10.92	11.98	<i>Koyama (2018) - research on athlete performance and technique- 2018 data book</i>					
reaction time	0.186	interval	1.05	1.03	1.03	1.01	1.06	1.03	1.07	1.06	1.06	1.18				3.11	3.10	3.19
wind	0.3 m/s	velocity	5.32	8.70	8.87	8.87	9.05	8.62	8.87	8.54	8.62	8.62	11.88	8.36		8.82	8.85	8.60

FINAL - 2018 NCAA Championships (Eugene, OR) (TV Analysis)

date	08-Jun-18	time	2.60	3.67	4.67	5.70	6.71	7.74	8.78	9.82	10.89	11.95	<i>Henson (2020) - Athlete First: 2018 year end hurdle report</i>					
reaction time		interval	1.07	1.00	1.03	1.01	1.03	1.04	1.04	1.07	1.06	1.50				3.10	3.08	3.17
wind	-1.1 m/s	velocity	5.28	8.54	9.14	8.87	9.05	8.87	8.79	8.79	8.54	8.62	9.35	8.18		8.85	8.90	8.65

Thomas, Dwight (JAM) (1980)

			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2012 Golden Grand Prix (Shanghai, CHN) (TV Analysis)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>				
date	19-May-12	time	2.58	3.68	4.78	5.86	6.90	7.94	8.98	10.04	11.12	12.20		13.72	3 / 9			
reaction time	0.174	interval	7 steps	1.10	1.10	1.08	1.04	1.04	1.04	1.06	1.08	1.08	1.52			3.28	3.12	3.22
wind	0.4 m/s	velocity	5.32	8.31	8.31	8.46	8.79	8.79	8.79	8.62	8.46	8.46	9.22	8.02		8.36	8.79	8.52

FINAL - 2011 IAAF World Championships (Daegu, KOR) (TV Analysis)

date	29-Aug-11	time	2.57	3.68										<i>Henson (2021) - Athlete First: major championships report</i>				
reaction time	0.153	interval	7 steps	1.11										dnf		2 / --		
wind	-1.1 m/s	velocity	5.34	8.23														

FINAL - 2010 Colorful Daegu Meeting (Daegu, KOR)

date	19-May-10	time	2.65	3.73	4.73	5.73	6.75	7.78	8.83	9.86	10.93	11.99	<i>Hong (2018) - performance of men's 110m hurdles using rhythmic units</i>					
reaction time	0.161	interval	1.08	1.00	1.00	1.02	1.03	1.05	1.03	1.07	1.06	1.41				3.08	3.10	3.16
wind	-0.2 m/s	velocity	5.18	8.46	9.14	9.14	8.96	8.87	8.70	8.87	8.54	8.62	9.94	8.21		8.90	8.85	8.68

FINAL - 2010 GE Galan (Stockholm, SWE)

date	10-Feb-10	time	2.42	3.48	4.51	5.55	6.58							<i>Blomkvist (2010) - www.sub13.se</i>				
reaction time		interval	1.06	1.03	1.04	1.03							1.08			3.13		
		velocity	5.67	8.62	8.87	8.79	8.87						9.00	7.83		8.76		

FINAL - 2009 Seiko Super Grand Prix (Kawasaki, JPN)

date	23-Sep-09	time	2.60	3.66	4.70	5.73	6.74	7.78	8.83	9.85	10.95	11.98	<i>Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdles</i>					
reaction time		interval	1.06	1.04	1.03	1.01	1.04	1.05	1.02	1.10	1.03	1.39				3.13	3.10	3.15
wind	-1.3 m/s	velocity	5.28	8.62	8.79	8.87	9.05	8.79	8.70	8.96	8.31	8.87	10.09	8.23		8.76	8.85	8.70

FINAL - 2009 IAAF World Championships (Berlin, GER)

date	20-Aug-09	time	2.66	3.73	4.77	5.80	6.84	7.88	8.90	9.95	11.00	12.14	<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>					
reaction time	0.145	interval	1.07	1.04	1.03	1.04	1.04	1.02	1.05	1.05	1.14	1.42				3.14	3.10	3.24
wind	0.1 m/s	velocity	5.16	8.54	8.79	8.87	8.79	8.79	8.96	8.70	8.70	8.02	9.87	8.11		8.73	8.85	8.46

Semi-Final 2 - 2009 IAAF World Championships (Berlin, GER)

date	20-Aug-09	time	2.65	3.73	4.77	5.80	6.81	7.84	8.86	9.89	10.91	11.97	<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>					
reaction time	0.151	interval	1.08	1.04	1.03	1.01	1.03	1.02	1.03	1.02	1.06	1.40				3.15	3.06	3.11
wind	0.6 m/s	velocity	5.18	8.46	8.79	8.87	9.05	8.87	8.96	8.87	8.96	8.62	10.01	8.23		8.70	8.96	8.82

Heat 1 - 2009 IAAF World Championships (Berlin, GER)

date	19-Aug-09	time	2.64	3.70	4.78	5.82	6.86	7.89	8.94	10.00	11.08	12.16	<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>					
reaction time	0.138	interval	1.06	1.08	1.04	1.04	1.03	1.05	1.06	1.08	1.08	1.41				3.18	3.12	3.22
wind	-0.4 m/s	velocity	5.20	8.62	8.46	8.79	8.79	8.87	8.70	8.62	8.46	8.46	9.94	8.11		8.62	8.79	8.52

Thomas, Mikel (TTO) (1987)

			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2015 Pan American Games (Toronto, CAN)														<i>(2016.01.29) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>				

date	24-Jul-15	time	2.57	3.62	4.63	5.64	6.65	7.66	8.69	9.71	10.75	11.83	13.17	8 / 2				
reaction time	0.160	interval	7 steps	1.05	1.01	1.01	1.01	1.01	1.03	1.02	1.04	1.08	1.34	NR	3.07	3.05	3.14	
wind	0.8 m/s	velocity	5.34	8.70	9.05	9.05	9.05	9.05	8.87	8.96	8.79	8.46	10.46	8.35	8.93	8.99	8.73	
Thorne, Craig (CAN) (2001)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Repechage 1 - 2024 Olympic Games (Paris, FRA)														<i>Paris 2024 Olympic Games - Results Book (2024)</i>				
date	06-Aug-24	time	2.47	3.57	4.63	5.66	6.70	7.75	8.80	9.87	10.94	12.04	13.62	4 / 5				
reaction time	0.167	interval		1.10	1.06	1.03	1.04	1.05	1.05	1.07	1.07	1.10	1.58			3.19	3.14	3.24
wind	0.2 m/s	velocity	5.55	8.31	8.62	8.87	8.79	8.70	8.70	8.54	8.54	8.31	8.87	8.08		8.60	8.73	8.46
Heat 3 - 2024 Olympic Games (Paris, FRA)														<i>Paris 2024 Olympic Games - Results Book (2024)</i>				
date	04-Aug-24	time	2.45	3.54	4.60	5.63	6.67	7.70	8.76	9.80	10.86	11.96	13.60	5 / 7				
reaction time	0.157	interval		1.09	1.06	1.03	1.04	1.03	1.06	1.04	1.06	1.10	1.64			3.18	3.13	3.20
wind	1.1 m/s	velocity	5.60	8.39	8.62	8.87	8.79	8.87	8.62	8.79	8.62	8.31	8.55	8.09		8.62	8.76	8.57
FINAL - 2023 Weltklasse (Zürich, SUI)														<i>Omega Timing (2023) - diamond league race analysis</i>				
date	31-Aug-23	time	2.47	3.55	4.60	5.64	6.68	7.74	8.79	9.87	10.96	12.08	13.70	2 / 7				
reaction time	0.148	interval		1.08	1.05	1.04	1.04	1.06	1.05	1.08	1.09	1.12	1.62			3.17	3.15	3.29
wind	-0.1 m/s	velocity	5.55	8.46	8.70	8.79	8.79	8.62	8.70	8.46	8.39	8.16	8.65	8.03		8.65	8.70	8.33
Thornton, Kirk (USA) (1986)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2010 Folksam GP (Sollentuna, SWE)														<i>Blomkvist (2010) - www.sub13.se</i>				
date	01-Jul-10	time	2.51	3.57	4.64	5.69	6.73	7.79	8.85	9.93	11.01	12.12	13.77	3 / 4				
reaction time		interval	7 steps	1.06	1.07	1.05	1.04	1.06	1.06	1.08	1.08	1.11	1.65			3.18	3.16	3.27
wind	0.4 m/s	velocity	5.47	8.62	8.54	8.70	8.79	8.62	8.62	8.46	8.46	8.23	8.50	7.99		8.62	8.68	8.39
Tian Yang (CHN) (1997)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Decathlon - Heat 3 - 2021 Chinese National Championships (Chongqing, CHN)														<i>CAA Hurdle Development (2021)</i>				
date	27-Jun-21	time	2.85	4.02	5.19	6.35	7.52	8.69	9.88	11.04	12.24	13.50	15.15	8 / 4				
reaction time	0.273	interval		1.17	1.17	1.16	1.17	1.17	1.19	1.16	1.20	1.26	1.65			3.50	3.53	3.62
wind	-0.2 m/s	velocity	4.81	7.81	7.81	7.88	7.81	7.81	7.68	7.88	7.62	7.25	8.50	7.26		7.83	7.77	7.57
Decathlon - Heat 2 - 2019 Chinese National Championships (Shenyang, CHN)														<i>CAA Hurdle Development (2019)</i>				
date	11-Jul-19	time	2.85	4.00	5.15	6.29	7.44	8.61	9.77	10.96	12.14	13.40	15.02	2 / 3				
reaction time	0.223	interval		1.15	1.15	1.14	1.15	1.17	1.16	1.19	1.18	1.26	1.62	PB		3.44	3.48	3.63
wind	-0.1 m/s	velocity	4.81	7.95	7.95	8.02	7.95	7.81	7.88	7.68	7.75	7.25	8.65	7.32		7.97	7.88	7.55
Tilga, Karel (EST) (1998)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Decathlon - Heat 1 - 2024 Olympic Games (Paris, FRA)														<i>Paris 2024 Olympic Games - Results Book (2024)</i>				
date	03-Aug-24	time	2.57	3.74	4.86	5.99	7.10	8.24	9.44	10.59	11.80	12.98	14.66	2 / 4				
reaction time	0.163	interval	7 steps	1.17	1.12	1.13	1.11	1.14	1.20	1.15	1.21	1.18	1.68			3.42	3.45	3.54
wind	0.2 m/s	velocity	5.34	7.81	8.16	8.09	8.23	8.02	7.62	7.95	7.55	7.75	8.35	7.50		8.02	7.95	7.75
Tinch, Cordell (USA) (2000)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2024 Memorial van damme (Brussels, BEL)														<i>Omega Timing (2024) - diamond league race analysis</i>				
date	13-Sep-24	time	2.40	3.47	4.48	5.47	6.47	7.47	8.49	9.54	10.61	11.69	13.27	7 / 4				
reaction time	0.147	interval	7 steps	1.07	1.01	0.99	1.00	1.00	1.02	1.05	1.07	1.08	1.58			3.07	3.02	3.20
wind	0.4 m/s	velocity	5.72	8.54	9.05	9.23	9.14	9.14	8.96	8.70	8.54	8.46	8.87	8.29		8.93	9.08	8.57
FINAL - 2024 Weltklasse (Zürich, SUI)														<i>Omega Timing (2024) - diamond league race analysis</i>				
date	05-Sep-24	time	2.42	3.48	4.51	5.52	6.52	7.54	8.56	9.60	10.64	11.71	13.31	1 / 7				
reaction time	0.170	interval	7 steps	1.06	1.03	1.01	1.00	1.02	1.02	1.04	1.04	1.07	1.60			3.10	3.04	3.15
wind	-0.3 m/s	velocity	5.67	8.62	8.87	9.05	9.14	8.96	8.96	8.79	8.79	8.54	8.76	8.26		8.85	9.02	8.70
FINAL - 2024 Golden Gala • Pietro Mennea (Roma, ITA)														<i>Omega Timing (2024) - diamond league race analysis</i>				
date	30-Aug-24	time	2.42	3.47	4.50	5.51	6.53	7.54	8.57	9.61	10.66	11.74	13.34	3 / 7				
reaction time	0.171	interval	7 steps	1.05	1.03	1.01	1.02	1.01	1.03	1.04	1.05	1.08	1.60			3.09	3.06	3.17
wind	0.4 m/s	velocity	5.67	8.70	8.87	9.05	8.96	9.05	8.87	8.79	8.70	8.46	8.76	8.25		8.87	8.96	8.65
FINAL - 2024 Kamila Skolimowska Memorial (Silesia, POL)														<i>Omega Timing (2024) - diamond league race analysis</i>				
date	25-Aug-24	time	2.41	3.45	4.49	5.49	6.50	7.50	8.52	9.58	10.63	11.70	13.29	4 / 4				
reaction time	0.173	interval	7 steps	1.04	1.04	1.00	1.01	1.00	1.02	1.06	1.05	1.07	1.59			3.08	3.03	3.18
wind	1.1 m/s	velocity	5.69	8.79	8.79	9.14	9.05	9.14	8.96	8.62	8.70	8.54	8.82	8.28		8.90	9.05	8.62
FINAL - 2024 Athletissima (Lausanne, SUI)														<i>Omega Timing (2024) - diamond league race analysis</i>				
date	22-Aug-24	time	2.38	3.43	4.44	5.44	6.45	7.47	8.52	9.57	10.64	11.71	13.34	1 / 6				
reaction time	0.153	interval	7 steps	1.05	1.01	1.00	1.01	1.02	1.05	1.05	1.07	1.07	1.63			3.06	3.08	3.19
wind	-0.1 m/s	velocity	5.76	8.70	9.05	9.14	9.05	8.96	8.70	8.70	8.54	8.54	8.60	8.25		8.96	8.90	8.60
FINAL - 2024 Herculis Meeting International d'Athlétisme (Monaco, MON)														<i>Omega Timing (2024) - diamond league race analysis</i>				
date	12-Jul-24	time	2.40	3.44	4.44	5.44	6.45	7.45	8.46	9.48	10.52	11.57	13.10	7 / 3				
reaction time	0.161	interval	7 steps	1.04	1.00	1.00	1.01	1.00	1.01	1.02	1.04	1.05	1.53			3.04	3.02	3.11
wind	-0.7 m/s	velocity	5.72	8.79	9.14	9.14	9.05	9.14	9.05	8.96	8.79	8.70	9.16	8.40		9.02	9.08	8.82

Heat 1 - 2024 Meeting de Paris (Paris, FRA)														<i>Omega Timing (2024) - diamond league race analysis</i>			
date	07-Jul-24	time	2.46	3.53	4.54	5.54	6.54	7.56	8.58	9.62	10.68	11.75	13.33	5 / 5			
reaction time	0.174	interval	7 steps	1.07	1.01	1.00	1.00	1.02	1.02	1.04	1.06	1.07	1.58		3.08	3.04	3.17
wind	0.1 m/s	velocity	5.58	8.54	9.05	9.14	9.14	8.96	8.96	8.79	8.62	8.54	8.87	8.25	8.90	9.02	8.65
FINAL - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)														<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>			
date	28-Jun-24	time	2.50	3.54	4.52	5.50	6.50	7.50	8.50	9.52	10.56	11.65	13.03	3 / 4			
reaction time		interval	7 steps	1.04	0.98	0.98	1.00	1.00	1.00	1.02	1.04	1.09	1.38		3.00	3.00	3.15
wind	2.0 m/s	velocity	5.49	8.79	9.33	9.33	9.14	9.14	9.14	8.96	8.79	8.39	10.16	8.44	9.14	9.14	8.70
Semi-Final 1 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)														<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>			
date	27-Jun-24	time	2.50	3.54	4.56	5.57	6.57	7.57	8.57	9.58	10.64	11.71	13.19	6 / 2			
reaction time		interval	7 steps	1.04	1.02	1.01	1.00	1.00	1.00	1.01	1.06	1.07	1.48		3.07	3.00	3.14
wind	0.3 m/s	velocity	5.49	8.79	8.96	9.05	9.14	9.14	9.14	9.05	8.62	8.54	9.47	8.34	8.93	9.14	8.73
Heat 2 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)														<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>			
date	24-Jun-24	time	2.54	3.56	4.57	5.58	6.60	7.60	8.62	9.63	10.67	11.75	13.33	6 / 2			
reaction time		interval	7 steps	1.02	1.01	1.01	1.02	1.00	1.02	1.01	1.04	1.08	1.58		3.04	3.04	3.13
wind	-0.3 m/s	velocity	5.40	8.96	9.05	9.05	8.96	9.14	8.96	9.05	8.79	8.46	8.87	8.25	9.02	9.02	8.76
FINAL - 2024 Prefontaine Classic (Eugene, OR)														<i>Omega Timing (2024) - diamond league race analysis</i>			
date	25-May-24	time	2.43	3.51	4.56	5.58	6.59	7.61	8.64	9.67	10.71	11.79	13.38	3 / 9			
reaction time	0.164	interval	7 steps	1.08	1.05	1.02	1.01	1.02	1.03	1.03	1.04	1.08	1.59		3.15	3.06	3.15
wind	-0.1 m/s	velocity	5.65	8.46	8.70	8.96	9.05	8.96	8.87	8.87	8.79	8.46	8.82	8.22	8.70	8.96	8.70
FINAL - 2024 Yangtze River Delta Athletics Diamond Gala (Suzhou, CHN) (TV Analysis)														<i>Omega Timing (2024) - diamond league race analysis</i>			
date	27-Apr-24	time	2.54	3.60	4.64	5.64	6.66	7.67	8.67	9.71	10.77	11.84	13.26	6 / 4			
reaction time	0.151	interval	7 steps	1.06	1.04	1.00	1.02	1.01	1.00	1.04	1.06	1.07	1.42		3.10	3.03	3.17
wind	0.8 m/s	velocity	5.40	8.62	8.79	9.14	8.96	9.05	9.14	8.79	8.62	8.54	9.87	8.30	8.85	9.05	8.65
FINAL - 2024 Xiamen Diamond League (Xiamen, CHN)														<i>Omega Timing (2024) - diamond league race analysis</i>			
date	20-Apr-24	time	2.44	3.48	4.49	5.50	6.50	7.50	8.51	9.53	10.57	11.63	13.16	3 / 2			
reaction time	0.176	interval	7 steps	1.04	1.01	1.01	1.00	1.00	1.01	1.02	1.04	1.06	1.53		3.06	3.01	3.12
wind	-0.3 m/s	velocity	5.62	8.79	9.05	9.05	9.14	9.14	9.05	8.96	8.79	8.62	9.16	8.36	8.96	9.11	8.79
FINAL - 2024 USATF National Indoor Championships (Albuquerque, NM) (Altitude) (TV Analysis)														<i>Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record</i>			
date	16-Feb-24	time	2.56	3.60	4.64	5.67	6.67						7.58	3 / 6			
reaction time	0.132	interval	7 steps	1.04	1.04	1.03	1.00						7.58		3.11		
		velocity	5.36	8.79	8.79	8.87	9.14						1.85	7.92	8.82		
FINAL - 2024 New Balance Indoor Grand Prix (Boston, MA) (TV Analysis)														<i>Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record</i>			
date	04-Feb-24	time	2.52	3.54	4.58	5.60	6.62						7.55	6 / 4			
reaction time	0.174	interval	7 steps	1.02	1.04	1.02	1.02						7.55		3.08		
		velocity	5.44	8.96	8.79	8.96	8.96						1.86	7.95	8.90		
FINAL - 2023 Prefontaine Classic (Eugene, OR)														<i>Omega Timing (2023) - diamond league race analysis</i>			
date	17-Sep-23	time	2.36	3.41	4.41	5.41	6.41	7.42	8.43	9.47	10.52	11.60	13.21	2 / 7			
reaction time	0.148	interval	7 steps	1.05	1.00	1.00	1.00	1.01	1.01	1.04	1.05	1.08	1.61		3.05	3.02	3.17
wind	0.9 m/s	velocity	5.81	8.70	9.14	9.14	9.14	9.05	9.05	8.79	8.70	8.46	8.71	8.33	8.99	9.08	8.65
FINAL - 2023 Xiamen Diamond League (Xiamen, CHN)														<i>Omega Timing (2023) - diamond league race analysis</i>			
date	02-Sep-23	time	2.41	3.43	4.45	5.47	6.48	7.51	8.54	9.59	10.66	11.74	13.38	8 / 7			
reaction time	0.170	interval	7 steps	1.02	1.02	1.02	1.01	1.03	1.03	1.05	1.07	1.08	1.64		3.06	3.07	3.20
wind	0.0 m/s	velocity	5.69	8.96	8.96	8.96	9.05	8.87	8.87	8.70	8.54	8.46	8.55	8.22	8.96	8.93	8.57
Semi-Final 2 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>			
date	21-Aug-23	time	2.50	3.58	4.60	5.60	6.62	7.65	8.67	9.70	10.76	11.83	13.31	3 / 4			
reaction time	0.168	interval	7 steps	1.08	1.02	1.00	1.02	1.03	1.02	1.03	1.06	1.07	1.48		3.10	3.07	3.16
wind	-0.2 m/s	velocity	5.49	8.46	8.96	9.14	8.96	8.87	8.96	8.87	8.62	8.54	9.47	8.26	8.85	8.93	8.68
Heat 1 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>			
date	20-Aug-23	time	2.50	3.55	4.56	5.58	6.60	7.63	8.72	9.78	10.88	11.96	13.49	9 / 4			
reaction time	0.170	interval	7 steps	1.05	1.01	1.02	1.02	1.03	1.09	1.06	1.10	1.08	1.53		3.08	3.14	3.24
wind	-0.3 m/s	velocity	5.49	8.70	9.05	8.96	8.96	8.87	8.39	8.62	8.31	8.46	9.16	8.15	8.90	8.73	8.46
FINAL - 2023 USATF National Championships (Eugene, OR) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>			
date	09-Jul-23	time	2.47	3.49	4.50	5.50	6.48	7.48	8.50	9.52	10.55	11.62	13.08	3 / 2			
reaction time		interval	7 steps	1.02	1.01	1.00	0.98	1.00	1.02	1.02	1.03	1.07	1.46		3.03	3.00	3.12
wind	-0.2 m/s	velocity	5.55	8.96	9.05	9.14	9.33	9.14	8.96	8.96	8.87	8.54	9.60	8.41	9.05	9.14	8.79
FINAL - 2023 NCAA Division II National Championships (Pueblo, CO) (Altitude) (TV Analysis)														<i>Henson (2023) - Athlete First: 2023 year end hurdle report</i>			
date	27-May-23	time	2.50	3.50	4.50	5.48	6.46	7.44	8.41	9.43	10.43	11.46	12.87	5 / 1			

reaction time	interval	7 steps	1.00	1.00	0.98	0.98	0.98	0.97	1.02	1.00	1.03	1.41		2.98	2.93	3.05	
wind	6.0 m/s	velocity	5.49	9.14	9.14	9.33	9.33	9.33	9.42	8.96	9.14	8.87	9.94	8.55	9.20	9.36	8.99

FINAL - 2023 Trackwired Arkansas Grand Prix (Fayetteville, AR) (TV Analysis)*Henson (2023) - Athlete First: 2023 year end hurdle report*

date	23-May-23	time	2.46	3.50	4.50	5.50	6.48	7.46	8.43	9.47	10.47	11.49		12.96	5 / 1			
reaction time	interval	7 steps	1.04	1.00	1.00	0.98	0.98	0.97	1.04	1.00	1.02	1.47	PB		3.04	2.93	3.06	
wind	1.3 m/s	velocity	5.58	8.79	9.14	9.14	9.33	9.33	9.42	8.79	9.14	8.96	9.54	8.49	9.02	9.36	8.96	

FINAL - 2023 MIAA Championships (Jefferson City, MO) (TV Analysis)*Henson (2023) - Athlete First: 2023 year end hurdle report*

date	07-May-23	time	2.40	3.40	4.40	5.37	6.34	7.31	8.34	9.34	10.36	11.40		12.97	4 / 1			
reaction time	interval	7 steps	1.00	1.00	0.97	0.97	0.97	1.03	1.00	1.02	1.04	1.57			2.97	2.97	3.06	
wind	3.0 m/s	velocity	5.72	9.14	9.14	9.42	9.42	9.42	8.87	9.14	8.96	8.79	8.93	8.48	9.23	9.23	8.96	

Tochioka, Takei (JPN) (2001)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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FINAL - 2019 Japanese National High School Championships (Okinawa, JPN) (99cm)*Kota (2019) - 72nd high school champs: JAF scientific committee - biomechanics data*

date	08-Aug-19	time	2.76	3.96	5.13	6.29	7.47	8.67	9.93	11.18	12.45	13.78		15.49	1 / 7			
reaction time	interval		1.20	1.17	1.16	1.18	1.20	1.26	1.25	1.27	1.33	1.71			3.53	3.64	3.85	
wind	-3.0 m/s	velocity	4.97	7.62	7.81	7.88	7.75	7.62	7.25	7.31	7.20	6.87	8.20	7.10	7.77	7.53	7.12	

Togochi, Hiromasa (JPN)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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FINAL - 2017 Japanese National High School Championships (Yamagata, JPN) (99cm)*Kota (2017) - 70th high school championships: JAF scientific committee - biomechanics data*

date	02-Aug-17	time	2.77	3.90	5.05	6.18	7.32	8.43	9.56	10.71	11.84	13.03		14.52	9 / 6			
reaction time	interval		1.13	1.15	1.13	1.14	1.11	1.13	1.15	1.13	1.19	1.49			3.41	3.38	3.47	
wind	-0.7 m/s	velocity	4.95	8.09	7.95	8.09	8.02	8.23	8.09	7.95	8.09	7.68	9.41	7.58	8.04	8.11	7.90	

Tokuoka, Rika (JPN)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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Semi-Final 3 - 2016 Japanese National Youth Championships (Mizuho, JPN) (91cm)*(2016.11.11) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en*

date	21-Oct-16	time	2.64	3.76	4.85	5.93	7.01	8.11	9.22	10.35	11.51	12.67		14.22	8 / 3			
reaction time	interval		1.12	1.09	1.08	1.08	1.10	1.11	1.13	1.16	1.16	1.55			3.29	3.29	3.45	
wind	-0.2 m/s	velocity	5.20	8.16	8.39	8.46	8.46	8.31	8.23	8.09	7.88	7.88	9.05	7.74	8.33	8.33	7.95	

Heat 2 - 2016 Japanese National Youth Championships (Mizuho, JPN) (91cm)*(2016.11.07) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en*

date	21-Oct-16	time	2.68	3.79	4.91	6.02	7.12	8.22	9.34	10.49	11.61	12.77		14.30	7 / 3			
reaction time	interval		1.11	1.12	1.11	1.10	1.10	1.12	1.15	1.12	1.16	1.53			3.34	3.32	3.43	
wind	2.3 m/s	velocity	5.12	8.23	8.16	8.23	8.31	8.31	8.16	7.95	8.16	7.88	9.16	7.69	8.21	8.26	7.99	

Tokuoka, Ryo (JPN) (1999)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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FINAL - 2023 Seiko Golden Grand Prix (Yokohama, JPN)*Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season*

date	21-May-23	time	2.63	3.70	4.76	5.82	6.87	7.91	8.98	10.05	11.13	12.25		13.99	2 / 9			
reaction time	interval	7 steps	1.07	1.06	1.06	1.05	1.04	1.07	1.07	1.08	1.12	1.74			3.19	3.16	3.27	
wind	0.8 m/s	velocity	5.22	8.54	8.62	8.62	8.70	8.79	8.54	8.54	8.46	8.16	8.06	7.86	8.60	8.68	8.39	

FINAL - 2023 Michitaka Kinami Memorial (Osaka, JPN)*Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season*

date	07-May-23	time	2.65	3.73	4.77	5.81	6.86	7.92	8.98	10.03	11.11	12.20		13.63	3 / 5			
reaction time	interval	7 steps	1.08	1.04	1.04	1.05	1.06	1.06	1.05	1.08	1.09	1.43			3.16	3.17	3.22	
wind	-0.3 m/s	velocity	5.18	8.46	8.79	8.79	8.70	8.62	8.62	8.70	8.46	8.39	9.80	8.07	8.68	8.65	8.52	

FINAL - 2023 Mikio Oda Memorial (Hiroshima, JPN)*Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season*

date	29-Apr-23	time	2.64	3.70	4.73	5.78	6.84	7.88	8.92	9.99	11.05	12.14		13.57	2 / 3			
reaction time	interval	7 steps	1.06	1.03	1.05	1.06	1.04	1.04	1.07	1.06	1.09	1.43			3.14	3.14	3.22	
wind	0.3 m/s	velocity	5.20	8.62	8.87	8.70	8.62	8.79	8.79	8.54	8.62	8.39	9.80	8.11	8.73	8.73	8.52	

B FINAL - 2022 Mikio Oda Memorial (Hiroshima, JPN)*Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season*

date	29-Apr-22	time	2.67	3.75	4.80	5.85	6.91	7.99	9.07	10.18	11.28	12.39		13.86	3 / 1			
reaction time	interval	7 steps	1.08	1.05	1.05	1.06	1.08	1.08	1.11	1.10	1.11	1.47			3.18	3.22	3.32	
wind	-0.7 m/s	velocity	5.14	8.46	8.70	8.70	8.62	8.46	8.46	8.23	8.31	8.23	9.54	7.94	8.62	8.52	8.26	

FINAL - 2021 Ready Steady Tokyo (Tokyo, JPN)*Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season*

date	09-May-21	time	2.63	3.69	4.74	5.82	6.87	7.92	9.05	10.15	11.25	12.35		13.77	3 / 8			
reaction time	interval		1.06	1.05	1.08	1.05	1.05	1.13	1.10	1.10	1.10	1.42	PB		3.19	3.23	3.30	
wind	-0.8 m/s	velocity	5.22	8.62	8.70	8.46	8.70	8.09	8.31	8.31	8.31	9.87	7.99		8.60	8.49	8.31	

FINAL - 2021 Mikio Oda Memorial (Hiroshima, JPN)*Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season*

date	29-Apr-21	time	2.64	3.70	4.75	5.80	6.85	7.88	8.95	10.00	11.09	12.20		13.67	8 / 5			
reaction time	interval		1.06	1.05	1.05	1.05	1.03	1.07	1.05	1.09	1.11	1.47			3.16	3.15	3.25	
wind	1.7 m/s	velocity	5.20	8.62	8.70	8.70	8.70	8.87	8.54	8.70	8.39	8.23	9.54	8.05	8.68	8.70	8.44	

FINAL - 2020 Michitaka Kinami Memorial (Osaka, JPN)*Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season*

date	24-Oct-20	time	2.65	3.73	4.80	5.85	6.93	7.99	9.08	10.17	11.26	12.39		13.89	3 / 6			
reaction time	interval		1.08	1.07	1.05	1.08	1.06	1.09	1.09	1.09	1.13	1.50			3.20	3.23	3.31	
wind	0.6 m/s	velocity	5.18	8.46	8.54	8.70	8.46	8.62	8.39	8.39	8.39	8.09	9.35	7.92	8.57	8.49	8.28	

B FINAL - 2019 Mikio Oda Memorial (Hiroshima, JPN)*Kobayashi (2019) - research on athlete performance and technique- 2019 data book*

date	28-Apr-19	time	2.74	3.86	4.99	6.11	7.20	8.33	9.44	10.60	11.75	12.91	14.44	1 / 6				
reaction time		interval		1.12	1.13	1.12	1.09	1.13	1.11	1.16	1.15	1.16	1.53		3.37	3.33	3.47	
wind	1.4 m/s	velocity	5.01	8.16	8.09	8.16	8.39	8.09	8.23	7.88	7.95	7.88	9.16	7.62	8.14	8.23	7.90	
Tomioaka, Tatsuto (JPN) (1998)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2016 Japanese National High School Championships (Okayama, JPN) (99cm)			<i>Kota (2016) - 69th high school championships: JAF scientific committee- biomechanics data</i>															
date	02-Aug-16	time	2.71	3.82	4.94	6.02	7.12	8.21	9.30	10.41	11.54	12.67	14.20	5 / 4				
reaction time	0.138	interval		1.11	1.12	1.08	1.10	1.09	1.09	1.11	1.13	1.13	1.53	PB		3.31	3.28	3.37
wind	1.2 m/s	velocity	5.06	8.23	8.16	8.46	8.31	8.39	8.39	8.23	8.09	8.09	9.16	7.75		8.28	8.36	8.14
Tomita, Kanto (JPN) (2004)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2021 Japanese U18 National Championships (Matsuyama, JPN) (99cm)			<i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>															
date	22-Oct-21	time	2.71	3.82	4.91	6.00	7.10	8.19	9.30	10.41	11.54	12.68	14.20	3 / 6				
reaction time	0.191	interval		1.11	1.09	1.09	1.10	1.09	1.11	1.13	1.14	1.52				3.29	3.30	3.38
wind	-0.6 m/s	velocity	5.06	8.23	8.39	8.39	8.31	8.39	8.23	8.23	8.09	8.02	9.22	7.75		8.33	8.31	8.11
Tomiyama, Hiroki (JPN) (1998)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Race 2 - 2020 World Athletics Trials (Fuji, JPN)			<i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>															
date	06-Sep-20	time	2.68	3.81	4.93	6.04	7.13	8.24	9.35	10.49	11.62	12.78	14.30	5 / 5				
reaction time		interval	7 steps	1.13	1.12	1.11	1.09	1.11	1.11	1.14	1.13	1.16	1.52			3.36	3.31	3.43
wind	1.3 m/s	velocity	5.12	8.09	8.16	8.23	8.39	8.23	8.23	8.02	8.09	7.88	9.22	7.69		8.16	8.28	7.99
FINAL - 2015 Japanese National High School Championships (Wakayama, JPN) (99cm)			<i>Takashima (2015) - race analysis of 110m & 100m hurdles in Japan- results 2015 competitions</i>															
date	02-Aug-15	time	2.75	3.88	5.01	6.15	7.29	8.42	9.60	10.76	11.94	13.13	14.69	9 / 8				
reaction time		interval		1.13	1.13	1.14	1.14	1.13	1.18	1.16	1.18	1.19	1.56			3.40	3.45	3.53
wind	1.4 m/s	velocity	4.99	8.09	8.09	8.02	8.02	8.09	7.75	7.88	7.75	7.68	8.99	7.49		8.06	7.95	7.77
Tørring, Jesper (DEN) (1947)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Heat 4 - 1972 Olympic Games (Munich, GER)			<i>Letzelter (1977) - Hurdensprint: geschwindigkeitsverlauf und spezielle eigenschaften</i>															
date	03-Sep-72	time	2.6			6.0								14.50	1 / 5			
reaction time		interval				3.38											3.38	
wind	0.9 m/s	velocity	5.34			8.11								7.59			8.11	
Touret, Philippe (FRA) (1967)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 1991 European Cup (Frankfurt, GER)			<i>Federle (2003) - http://www.fgs.uni-halle.de</i>															
date	30-Jun-91	time	2.63	3.72	4.77	5.82	6.87	7.93	8.97	10.07	11.09	12.20	13.63	/ 3				
reaction time		interval		1.09	1.05	1.05	1.05	1.06	1.04	1.10	1.02	1.11	1.43			3.19	3.15	3.23
wind	-0.9 m/s	velocity	5.22	8.39	8.70	8.70	8.70	8.62	8.79	8.31	8.96	8.23	9.80	8.07		8.60	8.70	8.49
Semi-Final 2 - 1988 Olympic Games (Seoul, KOR)			<i>Brüggemann (1990) - scientific research project at the games of the XXXIV Olympiad, Seoul 1988</i>															
date	26-Sep-88	time	2.55	3.62	4.70	5.78	6.86	7.97	9.07	10.19	11.31	12.43	13.96	8 / 7				
reaction time	0.155	interval		1.07	1.08	1.08	1.08	1.11	1.10	1.12	1.12	1.12	1.53			3.23	3.29	3.36
wind	-0.7 m/s	velocity	5.38	8.54	8.46	8.46	8.46	8.23	8.31	8.16	8.16	8.16	9.16	7.88		8.49	8.33	8.16
Townsend, Fred (USA) (1982)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2013 Windsprint (Sundsvall, SWE)			<i>(2013) - www.ssg.se/windsprint/Splittider/</i>															
date	28-Jul-13	time	2.62	3.69	4.73	5.78	6.81	7.86	8.93	9.99	11.04	12.13	13.53	5 / 2				
reaction time		interval	7 steps	1.07	1.04	1.05	1.03	1.05	1.07	1.06	1.05	1.09	1.40			3.16	3.15	3.20
wind	1.7 m/s	velocity	5.24	8.54	8.79	8.70	8.87	8.70	8.54	8.62	8.70	8.39	10.01	8.13		8.68	8.70	8.57
FINAL - 2012 Windsprint (Sundsvall, SWE)			<i>Blomkvist (2012) - www.sub13.se</i>															
date	17-Jun-12	time	2.64	3.68	4.72	5.75	6.77	7.78	8.83	9.86	10.92	11.98	13.39	4 / 1				
reaction time		interval		1.04	1.04	1.03	1.02	1.01	1.05	1.03	1.06	1.06	1.41	PB		3.11	3.08	3.15
wind	1.1 m/s	velocity	5.20	8.79	8.79	8.87	8.96	9.05	8.70	8.87	8.62	8.62	9.94	8.22		8.82	8.90	8.70
FINAL - 2011 Windsprint (Sundsvall, SWE)			<i>Blomkvist (2011) - www.sub13.se</i>															
date	31-Jul-11	time	2.62	3.68	4.71	5.75	6.76	7.78	8.83	9.87	10.93	11.99	13.41	/ 1				
reaction time		interval		1.06	1.03	1.04	1.01	1.02	1.05	1.04	1.06	1.06	1.42			3.13	3.08	3.16
wind	2.8 m/s	velocity	5.24	8.62	8.87	8.79	9.05	8.96	8.70	8.79	8.62	8.62	9.87	8.20		8.76	8.90	8.68
FINAL - 2011 Folksam GP (Göteborg, SWE)			<i>Blomkvist (2011) - www.sub13.se</i>															
date	11-Jun-11	time	2.52	3.56	4.60	5.64	6.68	7.72	8.78	9.84	10.90	11.98	13.57	/ 3				
reaction time		interval		1.04	1.04	1.04	1.04	1.04	1.06	1.06	1.06	1.08	1.59			3.12	3.14	3.20
wind	0.6 m/s	velocity	5.44	8.79	8.79	8.79	8.79	8.79	8.62	8.62	8.62	8.46	8.82	8.11		8.79	8.73	8.57
FINAL - 2010 Windsprint (Sundsvall, SWE)			<i>Blomkvist (2010) - www.sub13.se</i>															
date	08-Aug-10	time	2.61	3.68	4.74	5.79	6.82	7.88	8.94	9.99	11.08	12.16	13.64	/ 1				
reaction time		interval		1.07	1.06	1.05	1.03	1.06	1.06	1.05	1.09	1.08	1.48			3.18	3.15	3.22
wind	1.1 m/s	velocity	5.26	8.54	8.62	8.70	8.87	8.62	8.62	8.70	8.39	8.46	9.47	8.06		8.62	8.70	8.52
FINAL - 2009 Windsprint (Sundsvall, SWE)			<i>(2009) - www.ssg.se/en/Windsprint/Split-times/</i>															
date	25-Jul-09	time		3.67			6.79			9.98			13.56	/ 1				
reaction time		interval					3.12			3.19			3.58					

wind 1.6 m/s velocity 6.23 8.79 8.60 9.02 8.11

FINAL - 2008 Windsprint (Sundsvall, SWE)(2008) - www.ssg.se/en/Windsprint/Split-times/

date 06-Jul-08 time 3.72 6.78 10.04 13.63 4 / 1
 reaction time interval 3.06 3.26 3.59
 wind 0.5 m/s velocity 6.15 8.96 8.41 9.00 8.07

Toyama, Hiroki (JPN) (1999)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2016 Hiroshima Perfecture High School Meeting (Hiroshima, JPN)											(2016.05.30) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en						
date	29-May-16	time	2.69	3.83	4.95	6.11	7.25	8.38	9.51	10.65	11.80	12.97	14.42	6 / 1			
reaction time	0.136	interval	7 steps	1.14	1.12	1.16	1.14	1.13	1.13	1.14	1.15	1.17	1.45		3.42	3.40	3.46
wind	0.1 m/s	velocity	5.10	8.02	8.16	7.88	8.02	8.09	8.09	8.02	7.95	7.81	9.67	7.63	8.02	8.06	7.92

Toyoda, Ken (JPN) (2002)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2020 Seiko Golden Grand Prix (Tokyo, JPN)											Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season						
date	23-Aug-20	time	2.60	3.68	4.76	5.85	6.98	8.08	9.19	10.33	11.48	12.62	14.15	1 / 7			
reaction time	0.136	interval	7 steps	1.08	1.08	1.09	1.13	1.10	1.11	1.14	1.15	1.14	1.53	PB	3.25	3.34	3.43
wind	-0.4 m/s	velocity	5.28	8.46	8.46	8.39	8.09	8.31	8.23	8.02	7.95	8.02	9.16	7.77	8.44	8.21	7.99

Toyoda, Masaki (JPN) (1998)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2015 Japanese National High School Championships (Wakayama, JPN) (99cm)											Takashima (2015) - race analysis of 110m & 100m hurdles in Japan- results 2015 competitions						
date	02-Aug-15	time	2.72	3.87	5.01	6.13	7.24	8.35	9.49	10.64	11.78	12.93	14.38	8 / 5			
reaction time	0.136	interval	7 steps	1.15	1.14	1.12	1.11	1.11	1.14	1.15	1.14	1.15	1.45		3.41	3.36	3.44
wind	1.4 m/s	velocity	5.04	7.95	8.02	8.16	8.23	8.23	8.02	7.95	8.02	7.95	9.67	7.65	8.04	8.16	7.97

Traber, Gregor (GER) (1992)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Semi-Final 2 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)											Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record						
date	20-Mar-22	time	2.54	3.58	4.62	5.66	6.70						7.67	8 / 7			
reaction time	0.140	interval	7 steps	1.04	1.04	1.04	1.04					0.97			3.12		
		velocity	5.40	8.79	8.79	8.79	8.79					10.02	7.82		8.79		

FINAL - 2017 Shanghai Diamond League (Shanghai, CHN) (TV Analysis)

Henson (2020) - Athlete First: 2017 year end hurdle report

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
date	13-May-17	time	2.56	3.60	4.62	5.62	6.66	7.68	8.70	9.76	10.82	11.94	13.41	9 / 7			
reaction time	0.150	interval	7 steps	1.04	1.02	1.00	1.04	1.02	1.02	1.06	1.06	1.12	1.47		3.06	3.08	3.24
wind	0.5 m/s	velocity	5.36	8.79	8.96	9.14	8.79	8.96	8.96	8.62	8.62	8.16	9.54	8.20	8.96	8.90	8.46

FINAL - 2016 London Anniversary Games (London, GBR) (TV Analysis)

Henson (2021) - Athlete First: 2016 year end hurdle report

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
date	23-Jul-16	time	2.53	3.58	4.60	5.63	6.65	7.68	8.72	9.80	10.86	11.95	13.45	3 / 2			
reaction time	0.150	interval	7 steps	1.05	1.02	1.03	1.02	1.03	1.04	1.08	1.06	1.09	1.50		3.10	3.09	3.23
wind	-1.0 m/s	velocity	5.42	8.70	8.96	8.87	8.96	8.87	8.79	8.46	8.62	8.39	9.35	8.18	8.85	8.87	8.49

FINAL - 2011 German National Indoor Junior Championships (Leverkusen, GER) (99cm)

May (2011) - zwei jugendliche hürdensprinter im vergleich

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
date	19-Feb-11	time	2.60	3.66	4.70	5.73	6.76						7.66	4 / 1			
reaction time		interval	7 steps	1.06	1.04	1.03	1.03					0.90			3.13		
		velocity	5.28	8.62	8.79	8.87	8.87					10.80	7.83		8.76		

Trajkovic, Milan (CYP) (1992)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Semi-Final 3 - 2024 Olympic Games (Paris, FRA)											Paris 2024 Olympc Games - Results Book (2024)						
date	07-Aug-24	time	2.36	3.42	4.43	5.43	6.43	7.46	8.49	9.54	10.62	11.71	13.32	3 / 3			
reaction time	0.128	interval	7 steps	1.06	1.01	1.00	1.00	1.03	1.03	1.05	1.08	1.09	1.61		3.07	3.06	3.22
wind	0.6 m/s	velocity	5.81	8.62	9.05	9.14	9.14	8.87	8.87	8.70	8.46	8.39	8.71	8.26	8.93	8.96	8.52

Heat 3 - 2024 Olympic Games (Paris, FRA)

Paris 2024 Olympc Games - Results Book (2024)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
date	04-Aug-24	time	2.41	3.46	4.48	5.49	6.51	7.52	8.56	9.63	10.69	11.79	13.43	2 / 4			
reaction time	0.139	interval	7 steps	1.05	1.02	1.01	1.02	1.01	1.04	1.07	1.06	1.10	1.64		3.08	3.07	3.23
wind	1.1 m/s	velocity	5.69	8.70	8.96	9.05	8.96	9.05	8.79	8.54	8.62	8.31	8.55	8.19	8.90	8.93	8.49

FINAL - 2024 World Athletics Indoor Championships (Glasgow, GBR) (TV Analysis)

Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
date	02-Mar-24	time	2.60	3.65	4.68	5.70	6.72						7.59	4 / 8			
reaction time	0.163	interval	7 steps	1.05	1.03	1.02	1.02					7.59			3.10		
		velocity	5.28	8.70	8.87	8.96	8.96					1.85	7.91		8.85		

Semi-Final 2 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)

Henson (2023) - Athlete First: 2023 year end hurdle report

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
date	21-Aug-23	time	2.50	3.56	4.58	5.56	6.58	7.60	8.64	9.68	10.78	11.85	13.33	4 / 5			
reaction time	0.137	interval	7 steps	1.06	1.02	0.98	1.02	1.02	1.04	1.04	1.10	1.07	1.48		3.06	3.08	3.21
wind	-0.2 m/s	velocity	5.49	8.62	8.96	9.33	8.96	8.96	8.79	8.79	8.31	8.54	9.47	8.25	8.96	8.90	8.54

Heat 4 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)

Henson (2023) - Athlete First: 2023 year end hurdle report

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
date	20-Aug-23	time	2.50	3.55	4.58	5.60	6.62	7.65	8.67	9.70	10.78	11.85	13.33	4 / 2			
reaction time	0.164	interval	7 steps	1.05	1.03	1.02	1.02	1.03	1.02	1.03	1.08	1.07	1.48		3.10	3.07	3.18
wind	-0.6 m/s	velocity	5.49	8.70	8.87	8.96	8.96	8.87	8.96	8.87	8.46	8.54	9.47	8.25	8.85	8.93	8.62

FINAL - 2023 Kamila Skolimowska Memorial (Silesia, POL)

Omega Timing (2023) - diamond league race analysis

date	16-Jul-23	time	2.40	3.48	4.53	5.58	6.62	7.67	8.74	10.06	12.38	20.77				8 / --				
reaction time	0.159	interval	7 steps	1.08	1.05	1.05	1.04	1.05	1.07	1.32	2.32	8.39	DQ				3.18	3.16	12.03	
wind	0.3 m/s	velocity	5.72	8.46	8.70	8.70	8.79	8.70	8.54	6.92	3.94	1.09					8.62	8.68	2.28	
Heat 2 - 2023 Kamila Skolimowska Memorial (Silesia, POL)																				
Omega Timing (2023) - diamond league race analysis																				
date	16-Jul-23	time	2.42	3.47	4.50	5.52	6.53	7.55	8.59	9.63	10.68	11.76				13.34	9 / 3			
reaction time	0.160	interval	7 steps	1.05	1.03	1.02	1.01	1.02	1.04	1.04	1.05	1.08	1.58					3.10	3.07	3.17
wind	-0.2 m/s	velocity	5.67	8.70	8.87	8.96	9.05	8.96	8.79	8.79	8.70	8.46	8.87	8.25				8.85	8.93	8.65
FINAL - 2023 FBK Games (Hengelo, NED) (TV Analysis)																				
Henson (2023) - Athlete First: 2023 year end hurdle report																				
date	04-Jun-23	time	2.58	3.63	4.68	5.70	6.72	7.75	8.78	9.83	10.93	12.03				13.44	2 / 5			
reaction time	0.117	interval	7 steps	1.05	1.05	1.02	1.02	1.03	1.03	1.05	1.10	1.10	1.41					3.12	3.08	3.25
wind	0.4 m/s	velocity	5.32	8.70	8.70	8.96	8.96	8.87	8.87	8.70	8.31	8.31	9.94	8.18				8.79	8.90	8.44
Semi-Final 2 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)																				
Henson (2022) - Athlete First: 2022 year end hurdle report																				
date	17-Jul-22	time	2.56	3.63	4.70	5.70	6.73	7.76	8.83	9.88	10.93	12.03				13.49	5 / 6			
reaction time	0.142	interval	7 steps	1.07	1.07	1.00	1.03	1.03	1.07	1.05	1.05	1.10	1.46					3.14	3.13	3.20
wind	0.3 m/s	velocity	5.36	8.54	8.54	9.14	8.87	8.87	8.54	8.70	8.70	8.31	9.60	8.15				8.73	8.76	8.57
Heat 5 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)																				
Henson (2022) - Athlete First: 2022 year end hurdle report																				
date	16-Jul-22	time	2.53	3.60	4.60	5.66	6.70	7.73	8.76	9.83	10.90	11.98				13.52	4 / 2			
reaction time	0.133	interval	7 steps	1.07	1.00	1.06	1.04	1.03	1.03	1.07	1.07	1.08	1.54					3.13	3.10	3.22
wind	0.4 m/s	velocity	5.42	8.54	9.14	8.62	8.79	8.87	8.87	8.54	8.54	8.46	9.10	8.14				8.76	8.85	8.52
FINAL - 2022 Meeting de Paris (Paris, FRA) (TV Analysis)																				
Henson (2022) - Athlete First: 2022 year end hurdle report																				
date	18-Jun-22	time	2.50	3.56	4.58	5.58	6.60	7.64	8.68	9.72	10.80	11.86				13.39	8 / 5			
reaction time	0.154	interval	7 steps	1.06	1.02	1.00	1.02	1.04	1.04	1.04	1.08	1.06	1.53					3.08	3.10	3.18
wind	-0.2 m/s	velocity	5.49	8.62	8.96	9.14	8.96	8.79	8.79	8.79	8.46	8.62	9.16	8.22				8.90	8.85	8.62
FINAL - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)																				
Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record																				
date	20-Mar-22	time	2.52	3.58	4.62	5.62	6.62									7.62	7 / 7			
reaction time	0.207	interval	7 steps	1.06	1.04	1.00	1.00						1.00					3.10		
		velocity	5.44	8.62	8.79	9.14	9.14						9.72	7.87				8.85		
Semi-Final 1 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)																				
Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record																				
date	20-Mar-22	time	2.47	3.53	4.53	5.55	6.57									7.53	1 / 2			
reaction time	0.145	interval	7 steps	1.06	1.00	1.02	1.02						0.96					3.08		
		velocity	5.55	8.62	9.14	8.96	8.96						10.13	7.97				8.90		
FINAL - 2019 IAAF World Championships (Doha, QAT)																				
CAA Hurdle Development (2019)																				
date	02-Oct-19	time	2.57	3.62	4.62	5.64	6.63	7.65	8.81	10.07	11.25	12.39				13.87	8 / 8			
reaction time	0.150	interval	7 steps	1.05	1.00	1.02	0.99	1.02	1.16	1.26	1.18	1.14	1.48					3.07	3.17	3.58
wind	0.6 m/s	velocity	5.34	8.70	9.14	8.96	9.23	8.96	7.88	7.25	7.75	8.02	9.47	7.93				8.93	8.65	7.66
Semi-Final 3 - 2019 IAAF World Championships (Doha, QAT)																				
CAA Hurdle Development (2019)																				
date	02-Oct-19	time	2.58	3.61	4.63	5.62	6.62	7.63	8.65	9.69	10.77	11.85				13.29	7 / 2			
reaction time	0.162	interval	7 steps	1.03	1.02	0.99	1.00	1.01	1.02	1.04	1.08	1.08	1.44					3.04	3.03	3.20
wind	0.6 m/s	velocity	5.32	8.87	8.96	9.23	9.14	9.05	8.96	8.79	8.46	8.46	9.74	8.28				9.02	9.05	8.57
FINAL - 2019 Meeting International Mohammed VI d'Atlétisme (Rabat, MAR) (TV Analysis)																				
Henson (2020) - Athlete First: 2019 year end hurdle report																				
date	16-Jun-19	time	2.54	3.62	4.64	5.68	6.70	7.74	8.80	9.86	10.90	12.00				13.53	8 / 7			
reaction time	0.098	interval	7 steps	1.08	1.02	1.04	1.02	1.04	1.06	1.06	1.04	1.10	1.53					3.14	3.12	3.20
wind	0.3 m/s	velocity	5.40	8.46	8.96	8.79	8.96	8.79	8.62	8.62	8.79	8.31	9.16	8.13				8.73	8.79	8.57
FINAL - 2019 Golden Gala Pietro Mennea (Rome, ITA) (TV Analysis)																				
Henson (2020) - Athlete First: 2019 year end hurdle report																				
date	06-Jun-19	time	2.55	3.63	4.68	5.70	6.73	7.82	8.82	9.92	10.95	12.06				13.50	3 / 5			
reaction time	0.136	interval	7 steps	1.08	1.05	1.02	1.03	1.09	1.00	1.10	1.03	1.11	1.44					3.15	3.12	3.24
wind	0.4 m/s	velocity	5.38	8.46	8.70	8.96	8.87	8.39	9.14	8.31	8.87	8.23	9.74	8.15				8.70	8.79	8.46
FINAL - 2019 Nanjing World Challenge (Nanjing, CHN)																				
CAA Hurdle Development (2019)																				
date	21-May-19	time	2.62	3.67	4.73	5.76	6.79	7.85	8.90	9.96	11.02	12.11				13.56	4 / 6			
reaction time	0.192	interval	7 steps	1.05	1.06	1.03	1.03	1.06	1.05	1.06	1.06	1.09	1.45					3.14	3.14	3.21
wind	0.1 m/s	velocity	5.24	8.70	8.62	8.87	8.87	8.62	8.70	8.62	8.62	8.39	9.67	8.11				8.73	8.73	8.54
FINAL - 2019 Shanghai Diamond League (Shanghai, CHN)																				
CAA Hurdle Development (2019)																				
date	18-May-19	time	2.60	3.68	4.70	5.70	6.72	7.74	8.76	9.80	10.84	11.94				13.41	9 / 7			
reaction time	0.145	interval	7 steps	1.08	1.02	1.00	1.02	1.02	1.02	1.04	1.04	1.10	1.47					3.10	3.06	3.18
wind	0.7 m/s	velocity	5.28	8.46	8.96	9.14	8.96	8.96	8.96	8.79	8.79	8.31	9.54	8.20				8.85	8.96	8.62
FINAL - 2019 PSD Bank Meeting (Düsseldorf, GER) (TV Analysis)																				
Henson (2020) - Athlete First: 2019 year end hurdle report																				
date	20-Feb-19	time	2.40	3.42	4.44	5.44	6.44									7.52	7 / 2			
reaction time	0.153	interval	7 steps	1.02	1.02	1.00	1.00						1.08					3.04		
		velocity	5.72	8.96	8.96	9.14	9.14						9.00	7.98				9.02		

FINAL - 2019 Müller Indoor Grand Prix (Birmingham, GBR) (TV Analysis)

date	16-Feb-19	time	2.52	3.55	4.55	5.55	6.56												
reaction time	0.166	interval	7 steps	1.03	1.00	1.00	1.01												
		velocity	5.44	8.87	9.14	9.14	9.05												

Henson (2020) - Athlete First: 2019 year end hurdle report

	7.54	6 / 3																	
	0.98																		3.03
	9.92	7.96																	9.05

FINAL - 2017 Memorial van Damme (Brussels, BEL) (TV Analysis)

date	01-Sep-17	time	2.52	3.58	4.62	5.64	6.68	7.72	8.76	9.82	10.88	11.96									
reaction time	0.142	interval	7 steps	1.06	1.04	1.02	1.04	1.04	1.04	1.06	1.06	1.08	1.51						3.12	3.12	3.20
wind	0.5 m/s	velocity	5.44	8.62	8.79	8.96	8.79	8.79	8.79	8.62	8.62	8.46	9.28	8.17					8.79	8.79	8.57

Henson (2020) - Athlete First: 2017 year end hurdle report

	13.47	2 / 7																			

Semi-Final 1 - 2017 IAAF World Championships (London, GBR)

date	06-Aug-17	time	2.42	3.45	4.50	5.53	6.58	7.61	8.61	9.64	10.68	11.75									
reaction time	0.146	interval	7 steps	1.03	1.05	1.03	1.05	1.03	1.00	1.03	1.04	1.07	1.57						3.11	3.08	3.14
wind	0.2 m/s	velocity	5.67	8.87	8.70	8.87	8.70	8.87	9.14	8.87	8.79	8.54	8.93	8.26					8.82	8.90	8.73

Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles

	13.32	5 / 5																			

FINAL - 2017 Müller's Anniversary Games (London, GBR) (TV Analysis)

date	09-Jul-17	time	2.52	3.58	4.60	5.60	6.62	7.64	8.66	9.70	10.74	11.80									
reaction time	0.157	interval	7 steps	1.06	1.02	1.00	1.02	1.02	1.02	1.04	1.04	1.06	1.45	NR PB					3.08	3.06	3.14
wind	0.0 m/s	velocity	5.44	8.62	8.96	9.14	8.96	8.96	8.96	8.79	8.79	8.62	9.67	8.30					8.90	8.96	8.73

Henson (2020) - Athlete First: 2017 year end hurdle report

	13.25	5 / 2																			

FINAL - 2017 Meeting de Paris (Paris, FRA) (TV Analysis)

date	01-Jul-17	time	2.50	3.56	4.58	5.60	6.62	7.66	8.70	9.74	10.80	11.86									
reaction time	0.142	interval	7 steps	1.06	1.02	1.02	1.02	1.04	1.04	1.04	1.06	1.06	1.44						3.10	3.10	3.16
wind	-0.1 m/s	velocity	5.49	8.62	8.96	8.96	8.96	8.79	8.79	8.79	8.62	8.62	9.74	8.27					8.85	8.85	8.68

Henson (2020) - Athlete First: 2017 year end hurdle report

	13.30	2 / 6																			

FINAL - 2017 Golden Spike (Ostrava, CZE) (TV Analysis)

date	28-Jun-17	time	2.48	3.52	4.56	5.58	6.62	7.66	8.66	9.70	10.78	11.82									
reaction time	0.164	interval	7 steps	1.04	1.04	1.02	1.04	1.04	1.00	1.04	1.08	1.04	1.52						3.10	3.08	3.16
wind	0.6 m/s	velocity	5.53	8.79	8.79	8.96	8.79	8.79	9.14	8.79	8.46	8.79	9.22	8.25					8.85	8.90	8.68

Henson (2020) - Athlete First: 2017 year end hurdle report

	13.34	8 / 3																			

FINAL - 2017 Golden Gala Pietro Mennea (Rome, ITA) (TV Analysis)

date	08-Jun-17	time	2.52	3.54	4.56	5.58	6.62	7.66	8.70	9.74	10.82	11.90									
reaction time	0.157	interval	7 steps	1.02	1.02	1.02	1.04	1.04	1.04	1.04	1.08	1.08	1.49						3.06	3.12	3.20
wind	-0.3 m/s	velocity	5.44	8.96	8.96	8.96	8.79	8.79	8.79	8.79	8.46	8.46	9.41	8.22					8.96	8.79	8.57

Henson (2020) - Athlete First: 2017 year end hurdle report

	13.39	9 / 5																			

FINAL - 2017 Seiko Golden Grand Prix (Kawasaki, JPN)

date	21-May-17	time	2.56	3.61	4.64	5.70	6.75	7.76	8.81	9.87	10.96	12.05									
reaction time	0.155	interval	7 steps	1.05	1.03	1.06	1.05	1.01	1.05	1.06	1.09	1.09	1.47						3.14	3.11	3.24
wind	-1.8 m/s	velocity	5.36	8.70	8.87	8.62	8.70	9.05	8.70	8.62	8.39	8.39	9.54	8.14					8.73	8.82	8.46

(2017) - tfdata-store.com/2017/05/22/post-599/

	13.52	5 / 2																			

FINAL - 2016 Memorial van Damme (Brussels, BEL) (TV Analysis)

date	09-Sep-16	time	2.50	3.53	4.57	5.57	6.59	7.61	8.66	9.74	10.81	11.90									
reaction time	0.143	interval	7 steps	1.03	1.04	1.00	1.02	1.02	1.05	1.08	1.07	1.09	1.54						3.07	3.09	3.24
wind	0.2 m/s	velocity	5.49	8.87	8.79	9.14	8.96	8.96	8.70	8.46	8.54	8.39	9.10	8.18					8.93	8.87	8.46

Henson (2020) - Athlete First: 2016 year end hurdle report

	13.44	7 / 6																			

FINAL - 2016 Olympic Games (Rio de Janeiro, BRA) (TV Analysis)

date	16-Aug-16	time	2.50	3.56	4.62	5.64	6.66	7.72	8.76	9.82	10.88	11.94									
reaction time	0.136	interval	7 steps	1.06	1.06	1.02	1.02	1.06	1.04	1.06	1.06	1.06	1.47						3.14	3.12	3.18
wind	0.2 m/s	velocity	5.49	8.62	8.62	8.96	8.96	8.62	8.79	8.62	8.62	8.62	9.54	8.20					8.73	8.79	8.62

Henson (2020) - Athlete First: 2016 year end hurdle report

	13.41	8 / 7																			

Trammell, Terrence (USA) (1978)

Kuitunen (2010) - biomechanical analysis of the 14th IAAF World Indoor championships

FINAL - 2009 IAAF World Championships (Berlin, GER)

date	20-Aug-09	time	2.56	3.60	4.61	5.60	6.60	7.62	8.63	9.66	10.71	11.77									
reaction time	0.141	interval		1.04	1.01	0.99	1.00	1.02	1.01	1.03	1.05	1.06	1.38						3.04	3.03	3.14

date	06-Jul-08	time	2.52	3.54	4.53	5.54	6.52	7.52	8.53	9.54	10.56	11.59	13.00	6 / 2			
reaction time	0.157	interval		1.02	0.99	1.01	0.98	1.00	1.01	1.01	1.02	1.03	1.41		3.02	2.99	3.06
wind	3.5 m/s	velocity	5.44	8.96	9.23	9.05	9.33	9.14	9.05	9.05	8.96	8.87	9.94	8.46	9.08	9.17	8.96
FINAL - 2007 IAAF World Athletics Final (Stuttgart, GER)														<i>Graubner (2007) - http://www.fgs.uni-halle.de</i>			
date	23-Sep-07	time	2.53	3.57	4.59	5.58	6.59	7.61	8.63	9.67	10.71	11.75	13.15	3 / 3			
reaction time	0.140	interval		1.04	1.02	0.99	1.01	1.02	1.02	1.04	1.04	1.04	1.40		3.05	3.05	3.12
wind	0.0 m/s	velocity	5.42	8.79	8.96	9.23	9.05	8.96	8.96	8.79	8.79	8.79	10.01	8.37	8.99	8.99	8.79
FINAL - 2007 IAAF World Championships (Osaka, JPN)														<i>Ae (2008) - IAAF biomechanics team - a booklet of biomechanics data</i>			
date	31-Aug-07	time	2.53	3.53	4.52	5.53	6.53	7.52	8.53	9.55	10.57	11.60	12.99	5 / 2			
reaction time	0.205	interval		1.00	0.99	1.01	1.00	0.99	1.01	1.02	1.02	1.03	1.39		3.00	3.00	3.07
wind	1.7 m/s	velocity	5.42	9.14	9.23	9.05	9.14	9.23	9.05	8.96	8.96	8.87	10.09	8.47	9.14	9.14	8.93
Semi-Final 2 - 2007 IAAF World Championships (Osaka, JPN)														<i>Shibayama (2008) - analysis of racing patterns in the men's 110m & women's 100m sprint hurdles</i>			
date	30-Aug-07	time	2.55	3.58	4.60	5.62	6.62	7.64	8.64	9.67	10.72	11.79	13.23	7 / 1			
reaction time	0.223	interval		1.03	1.02	1.02	1.00	1.02	1.00	1.03	1.05	1.07	1.44		3.07	3.02	3.15
wind	0.4 m/s	velocity	5.38	8.87	8.96	8.96	9.14	8.96	9.14	8.87	8.70	8.54	9.74	8.31	8.93	9.08	8.70
Heat 1 - 2007 IAAF World Championships (Osaka, JPN)														<i>Shibayama (2008) - analysis of racing patterns in the men's 110m & women's 100m sprint hurdles</i>			
date	29-Aug-07	time	2.63	3.66	4.73	5.75	6.77	7.79	8.84	9.91	10.96	12.01	13.40	5 / 1			
reaction time	0.223	interval		1.03	1.07	1.02	1.02	1.02	1.05	1.07	1.05	1.05	1.39		3.12	3.09	3.17
wind	0.4 m/s	velocity	5.22	8.87	8.54	8.96	8.96	8.96	8.70	8.54	8.70	8.70	10.09	8.21	8.79	8.87	8.65
FINAL - 2007 USATF National Championships (Indianapolis, IN)														<i>USATF Men's Hurdle Development (2007)</i>			
date	24-Jun-07	time	2.55	3.59	4.59	5.59	6.59	7.59	8.59	9.59	10.61	11.70	13.08	3 / 1			
reaction time		interval		1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.02	1.09	1.38		3.04	3.00	3.11
wind	0.5 m/s	velocity	5.38	8.79	9.14	9.14	9.14	9.14	9.14	9.14	8.96	8.39	10.16	8.41	9.02	9.14	8.82
Semi-Final 2 - 2007 USATF National Championships (Indianapolis, IN)														<i>USATF Men's Hurdle Development (2007)</i>			
date	24-Jun-07	time	2.59	3.64	4.65	5.69	6.71	7.72	8.73	9.78	10.82	11.86	13.26	2 / 1			
reaction time		interval		1.05	1.01	1.04	1.02	1.01	1.01	1.05	1.04	1.04	1.40		3.10	3.04	3.13
wind	-0.9 m/s	velocity	5.30	8.70	9.05	8.79	8.96	9.05	9.05	8.70	8.79	8.79	10.01	8.30	8.85	9.02	8.76
Heat 4 - 2007 USATF National Championships (Indianapolis, IN)														<i>USATF Men's Hurdle Development (2007)</i>			
date	23-Jun-07	time	2.62	3.72	4.77	5.82	6.89	7.96	9.06	10.13	11.23	12.30	13.78	2 / 3			
reaction time		interval		1.10	1.05	1.05	1.07	1.07	1.10	1.07	1.10	1.07	1.48		3.20	3.24	3.24
wind	-2.8 m/s	velocity	5.24	8.31	8.70	8.70	8.54	8.54	8.31	8.54	8.31	8.54	9.47	7.98	8.57	8.46	8.46
Race 2 - 2006 Athletissima Meeting (Lausanne, SUI)														<i>Li (2013) - technical characteristics of Merritt, the 110m hurdle champion at London Olympics</i>			
date	11-Jul-06	time	2.54	3.55	4.55	5.51	6.48	7.47	8.49	9.51	10.53	11.59	13.02	5 / 3			
reaction time		interval		1.01	1.00	0.96	0.97	0.99	1.02	1.02	1.02	1.06	1.43	=PB	2.97	2.98	3.10
wind	1.1 m/s	velocity	5.40	9.05	9.14	9.52	9.42	9.23	8.96	8.96	8.96	8.62	9.80	8.45	9.23	9.20	8.85
FINAL - 2006 USATF National Championships (Indianapolis, IN)														<i>USATF Men's Hurdle Development (2006)</i>			
date	25-Jun-06	time	2.57	3.62	4.62	5.62	6.64	7.64	8.64	9.68	10.71	11.75	13.14	1 / 2			
reaction time		interval		1.05	1.00	1.00	1.02	1.00	1.00	1.04	1.03	1.04	1.39		3.05	3.02	3.11
wind	-0.4 m/s	velocity	5.34	8.70	9.14	9.14	8.96	9.14	9.14	8.79	8.87	8.79	10.09	8.37	8.99	9.08	8.82
FINAL - 2005 USATF National Championships (Carson, CA)														<i>USATF Women's Sprint Development (2005)</i>			
date	24-Jun-05	time	2.54	3.57	4.61	5.61	6.61	7.61	8.63	9.64	10.64	11.69	13.02	6 / 3			
reaction time		interval		1.03	1.04	1.00	1.00	1.00	1.02	1.01	1.00	1.05	1.33	PB	3.07	3.02	3.06
wind	0.2 m/s	velocity	5.40	8.87	8.79	9.14	9.14	9.14	8.96	9.05	9.14	8.70	10.54	8.45	8.93	9.08	8.96
FINAL - 2004 Olympic Games (Athens, GRE)														<i>Ruiz (2004) - las carreras con vallas de juegos olimpicos de atenas '04</i>			
date	27-Aug-04	time	2.40	3.42	4.43	5.45	6.45	7.45	8.48	9.50	10.54	11.60	13.18	6 / 2			
reaction time	0.154	interval		1.02	1.01	1.02	1.00	1.00	1.03	1.02	1.04	1.06	1.58		3.05	3.03	3.12
wind	0.3 m/s	velocity	5.72	8.96	9.05	8.96	9.14	9.14	8.87	8.96	8.79	8.62	8.87	8.35	8.99	9.05	8.79
FINAL - 2003 IAAF World Championships (Paris, FRA)														<i>Xu (2004) - analysis on the hurdling techniques of the excellence chinese male 110m hurdle athletes</i>			
date	30-Aug-03	time	2.57	3.61	4.63	5.63	6.63	7.63	8.65	9.67	10.73	11.79	13.20	6 / 2			
reaction time	0.140	interval		1.04	1.02	1.00	1.00	1.00	1.02	1.02	1.06	1.06	1.41		3.06	3.02	3.14
wind	0.3 m/s	velocity	5.34	8.79	8.96	9.14	9.14	9.14	8.96	8.96	8.62	8.62	9.94	8.33	8.96	9.08	8.73
FINAL - 2003 USATF National Championships (Palo Alto, CA)														<i>USATF Women's Sprint Development (2003)</i>			
date	21-Jun-03	time	2.34	3.44	4.44	5.50	6.52	7.52	8.54	9.58	10.64	11.70	13.38	3 / 2			
reaction time		interval		1.10	1.00	1.06	1.02	1.00	1.02	1.04	1.06	1.06	1.68		3.16	3.04	3.16
wind	-2.4 m/s	velocity	5.86	8.31	9.14	8.62	8.96	9.14	8.96	8.79	8.62	8.62	8.35	8.22	8.68	9.02	8.68
FINAL - 2000 ISTAF (Berlin, GER)														<i>Graubner (2009) - http://www.fgs.uni-halle.de</i>			
date	01-Sep-00	time	2.54	3.59	4.62	5.63	6.66	7.68	8.72	9.74	10.78	11.85	13.28	1 / 1			
reaction time	0.154	interval		1.05	1.03	1.01	1.03	1.02	1.04	1.02	1.04	1.07	1.43		3.09	3.09	3.13
wind	-0.4 m/s	velocity	5.40	8.70	8.87	9.05	8.87	8.96	8.79	8.96	8.79	8.54	9.80	8.28	8.87	8.87	8.76

		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Tsuchiya, Toru (JPN) (1995)																	
Heat 3 - 2017 Mito Invitational (Mito, JPN)		<i>(2017) - tfdata-store.com/2017/05/06/post-423/</i>															
date	05-May-17	time	2.74	3.90	5.05	6.19	7.36	8.53	9.68	10.83	12.07	13.30	14.83	3 / 7			
reaction time	0.173	interval	7 steps	1.16	1.15	1.14	1.17	1.17	1.15	1.15	1.24	1.23	1.53		3.45	3.49	3.62
wind	-2.5 m/s	velocity	5.01	7.88	7.95	8.02	7.81	7.81	7.95	7.95	7.37	7.43	9.16	7.42	7.95	7.86	7.57
Tsuneyoshi, Keisuke (JPN) (1995)																	
Semi-Final 1 - 2016 Japanese University Championships (Kumagaya, JPN)		<i>(2016.09.05) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>															
date	04-Sep-16	time	2.76	3.88	4.97	6.07	7.17	8.27	9.36	10.52	11.63	12.78	14.21	4 / 5			
reaction time	0.173	interval		1.12	1.09	1.10	1.10	1.10	1.09	1.16	1.11	1.15	1.43		3.31	3.29	3.42
wind	0.6 m/s	velocity	4.97	8.16	8.39	8.31	8.31	8.31	8.39	7.88	8.23	7.95	9.80	7.74	8.28	8.33	8.02
Tuček, Martin (CZE) (1995)																	
FINAL - 2014 Czech Republic National U20 Championships (Trinec, CZE) (99cm)		<i>Feher (2014) - Final report from the U18 & U20 Czech Republic national championships</i>															
date	28-Jun-14	time	2.68	3.82	4.94	6.07	7.20	8.31	9.42	10.56	11.70	12.91	14.51	6 / 2			
reaction time	0.148	interval		1.14	1.12	1.13	1.13	1.11	1.11	1.14	1.14	1.21	1.60		3.39	3.35	3.49
wind	-2.2 m/s	velocity	5.12	8.02	8.16	8.09	8.09	8.23	8.23	8.02	8.02	7.55	8.76	7.58	8.09	8.19	7.86
Heat 2 - 2014 Czech Republic National U20 Championships (Trinec, CZE) (99cm)		<i>Feher (2014) - Final report from the U18 & U20 Czech Republic national championships</i>															
date	28-Jun-14	time	2.73	3.86	4.99	6.13	7.29	8.43	9.60	10.77	11.99	13.20	15.00	4 / 2			
reaction time	0.154	interval		1.13	1.13	1.14	1.16	1.14	1.17	1.17	1.22	1.21	1.80		3.40	3.47	3.60
wind	-2.9 m/s	velocity	5.03	8.09	8.09	8.02	7.88	8.02	7.81	7.81	7.49	7.55	7.79	7.33	8.06	7.90	7.62
Turner, Andy (GBR) (1980)																	
FINAL - 2012 Prefontaine Classic (Eugene, OR) (TV Analysis)		<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>															
date	02-Jun-12	time	2.60	3.64	4.68	5.72	6.74	7.76	8.82	9.86	10.92	12.00	13.46	2 / 8			
reaction time	0.149	interval		1.04	1.04	1.04	1.02	1.02	1.06	1.04	1.06	1.08	1.46		3.12	3.10	3.18
wind	2.4 m/s	velocity	5.28	8.79	8.79	8.79	8.96	8.96	8.62	8.79	8.62	8.46	9.60	8.17	8.79	8.85	8.62
FINAL - 2011 IAAF World Championships (Daegu, KOR) (TV Analysis)		<i>Henson (2021) - Athlete First: major championships report</i>															
date	29-Aug-11	time	2.53	3.58	4.64	5.67	6.71	7.74	8.77	9.82	10.89	11.92	13.44	1 / 4 3			
reaction time	0.146	interval		1.05	1.06	1.03	1.04	1.03	1.03	1.05	1.07	1.03	1.52		3.14	3.10	3.15
wind	-1.1 m/s	velocity	5.42	8.70	8.62	8.87	8.79	8.87	8.87	8.70	8.54	8.87	9.22	8.18	8.73	8.85	8.70
FINAL - 2008 IAAF World Athletics Final (Stuttgart, GER)		<i>Graubner (2009) - http://www.fgs.uni-halle.de</i>															
date	14-Sep-08	time	2.65	3.74	4.79	5.83	6.88	7.93	8.98	10.06	11.14	12.24	13.68	2 / 7			
reaction time	0.125	interval		1.09	1.05	1.04	1.05	1.05	1.05	1.08	1.08	1.10	1.44		3.18	3.15	3.26
wind	-1.3 m/s	velocity	5.18	8.39	8.70	8.79	8.70	8.70	8.70	8.46	8.46	8.31	9.74	8.04	8.62	8.70	8.41
FINAL - 2007 European Cup (Munich, GER)		<i>Graubner (2007) - http://www.fgs.uni-halle.de</i>															
date	24-Jun-07	time	2.62	3.66	4.69	5.73	6.76	7.80	8.85	9.91	10.98	12.07	13.48	1 / 2			
reaction time	0.156	interval		1.04	1.03	1.04	1.03	1.04	1.05	1.06	1.07	1.09	1.41		3.11	3.12	3.22
wind	0.4 m/s	velocity	5.24	8.79	8.87	8.79	8.87	8.79	8.70	8.62	8.54	8.39	9.94	8.16	8.82	8.79	8.52
Uchida, Kaisei (JPN) (2004)																	
FINAL - 2022 Japanese National High School Championships (Naruto, JPN)		<i>Kishima (2022) - national high school championships biomechanics data collection</i>															
date	07-Aug-22	time	2.72	3.90	5.07	6.24	7.42	8.58	9.78	10.98	12.18	13.39	14.87	5 / 4			
reaction time	0.159	interval		1.18	1.17	1.17	1.18	1.16	1.20	1.20	1.20	1.21	1.48		3.52	3.54	3.61
wind	-3.8 m/s	velocity	5.04	7.75	7.81	7.81	7.75	7.88	7.62	7.62	7.62	7.55	9.47	7.40	7.79	7.75	7.60
FINAL - 2021 Japanese U18 National Championships (Matsuyama, JPN) (99cm)		<i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>															
date	22-Oct-21	time	2.64	3.76	4.86	5.96	7.07	8.16	9.27	10.39	11.53	12.65	14.12	8 / 4			
reaction time	0.139	interval		1.12	1.10	1.10	1.11	1.09	1.11	1.12	1.14	1.12	1.47		3.32	3.31	3.38
wind	-0.6 m/s	velocity	5.20	8.16	8.31	8.31	8.23	8.39	8.23	8.16	8.02	8.16	9.54	7.79	8.26	8.28	8.11
Uchino, Rio (JPN) (2003)																	
FINAL - 2021 Japanese High School National Championships (Fukui, JPN)		<i>Shibayama (2021) - national high school and U20 national championships</i>															
date	01-Aug-21	time	2.73	3.85	4.95	6.06	7.17	8.28	9.40	10.51	11.66	12.84	14.37	1 / 8			
reaction time	0.139	interval		1.12	1.10	1.11	1.11	1.11	1.12	1.11	1.15	1.18	1.53	PB	3.33	3.34	3.44
wind	1.4 m/s	velocity	5.03	8.16	8.31	8.23	8.23	8.23	8.16	8.23	7.95	7.75	9.16	7.65	8.23	8.21	7.97
Ueno, Yuta (JPN) (1995)																	
Semi-Final 1 - 2016 Japanese University Championships (Kumagaya, JPN)		<i>(2016.09.05) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>															
date	04-Sep-16	time	2.71	3.83	4.95	6.05	7.15	8.28	9.40	10.54	11.68	12.84	14.31	8 / 7			
reaction time	0.136	interval		1.12	1.12	1.10	1.10	1.13	1.12	1.14	1.14	1.16	1.47		3.34	3.35	3.44
wind	0.6 m/s	velocity	5.06	8.16	8.16	8.31	8.31	8.09	8.16	8.02	8.02	7.88	9.54	7.69	8.21	8.19	7.97
Uher, Jakub (CZE) (1983)																	
Heat 3 - 2013 Czech Republic National Championships (Tábor, CZE)		<i>Feher (2013) - Final report from the men's & women's Czech Republic national championships</i>															
date	15-Jun-13	time	2.78	3.94	5.07	6.23	7.39	8.53	9.73	10.90	12.11	13.29	14.92	6 / 4			
reaction time	0.170	interval		1.16	1.13	1.16	1.16	1.14	1.20	1.17	1.21	1.18	1.63		3.45	3.50	3.56
wind	-0.3 m/s	velocity	4.94	7.88	8.09	7.88	7.88	8.02	7.62	7.81	7.55	7.75	8.60	7.37	7.95	7.83	7.70

Umemura, Taichi (JPN) (1996)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2014 Japanese National High School Championships (Kofu, JPN) (99cm)																					<i>Yanagiya (2014) - research on athlete performance and technique- 2014 data book</i>								
date	03-Aug-14	time	2.74	3.89	4.98	6.12	7.22	8.36	9.51	10.67	11.85	13.04		14.52	5 / 2														
reaction time		interval		1.15	1.09	1.14	1.10	1.14	1.15	1.16	1.18	1.19	1.48			3.38	3.39	3.53											
wind	-2.4 m/s	velocity	5.01	7.95	8.39	8.02	8.31	8.02	7.95	7.88	7.75	7.68	9.47	7.58		8.11	8.09	7.77											
Ureña, Jorge (ESP) (1993)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Decathlon - Heat 2 - 2024 Olympic Games (Paris, FRA)																					<i>Paris 2024 Olympic Games - Results Book (2024)</i>								
date	03-Aug-24	time	2.48	3.63	4.74	5.84	6.93	8.04	9.14	10.28	11.43	12.58		14.29	3 / 2														
reaction time	0.136	interval		1.15	1.11	1.10	1.09	1.11	1.10	1.14	1.15	1.15	1.71			3.36	3.30	3.44											
wind	0.2 m/s	velocity	5.53	7.95	8.23	8.31	8.39	8.23	8.31	8.02	7.95	7.95	8.20	7.70		8.16	8.31	7.97											
Ushiro, Keisuke (JPN) (1986)														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Decathlon - Heat 1 - 2023 Japanese Multi-Event National Championships (Akita, JPN)																					<i>Matsubayashi (2024) - performance analysis of decathlon athletes in the 2023 season</i>								
date	11-Jun-23	time	2.83	4.05	5.25	6.48	7.70	8.94	10.20	11.50	12.80	14.13		15.90	9 / 5														
reaction time		interval		1.22	1.20	1.23	1.22	1.24	1.26	1.30	1.30	1.33	1.77			3.65	3.72	3.93											
wind	-1.6 m/s	velocity	4.85	7.49	7.62	7.43	7.49	7.37	7.25	7.03	7.03	6.87	7.92	6.92		7.51	7.37	6.98											
Decathlon - Heat 1 - 2023 Michitaka Kinami Memorial (Osaka, JPN)																					<i>Matsubayashi (2024) - performance analysis of decathlon athletes in the 2023 season</i>								
date	08-May-23	time	2.79	4.00	5.19	6.41	7.65	8.87	10.11	11.37	12.66	13.97		15.75	8 / 5														
reaction time	0.180	interval		1.21	1.19	1.22	1.24	1.22	1.24	1.26	1.29	1.31	1.78			3.62	3.70	3.86											
wind	0.1 m/s	velocity	4.92	7.55	7.68	7.49	7.37	7.49	7.37	7.25	7.09	6.98	7.88	6.98		7.57	7.41	7.10											
Decathlon - FINAL - 2022 Japanese Multi-Event National Championships (Akita, JPN)																					<i>Takefu (2023) - performance analysis of decathlon athletes in the 2022 season</i>								
date	05-Jun-22	time	2.79	3.98	5.19	6.41	7.62	8.86	10.12	11.41	12.67	13.95		15.67	8 / 8														
reaction time		interval		1.19	1.21	1.22	1.21	1.24	1.26	1.29	1.26	1.28	1.72			3.62	3.71	3.83											
wind	-2.3 m/s	velocity	4.92	7.68	7.55	7.49	7.55	7.37	7.25	7.09	7.25	7.14	8.15	7.02		7.57	7.39	7.16											
Decathlon - Heat 1 - 2022 Michitaka Kinami Memorial (Osaka, JPN)																					<i>Takefu (2023) - performance analysis of decathlon athletes in the 2022 season</i>								
date	01-May-22	time	2.77	3.96	5.15	6.35	7.57	8.81	10.03	11.28	12.54	13.81		15.50	3 / 4														
reaction time	0.146	interval		1.19	1.19	1.20	1.22	1.24	1.22	1.25	1.26	1.27	1.69			3.58	3.68	3.78											
wind	0.0 m/s	velocity	4.95	7.68	7.68	7.62	7.49	7.37	7.49	7.31	7.25	7.20	8.30	7.10		7.66	7.45	7.25											
Decathlon - Heat 2 - 2020 Japanese Multi-Event National Championships (Nagano, JPN)																					<i>Matsubayashi (2020) - research athlete performance technique- 2020 databook</i>								
date	27-Sep-20	time	2.80	3.97	5.12	6.30	7.47	8.63	9.81	11.03	12.25	13.47		15.14	4 / 7														
reaction time		interval		1.17	1.15	1.18	1.17	1.16	1.18	1.22	1.22	1.22	1.67			3.50	3.51	3.66											
wind	1.1 m/s	velocity	4.90	7.81	7.95	7.75	7.81	7.88	7.75	7.49	7.49	7.49	8.40	7.27		7.83	7.81	7.49											
Decathlon - Heat 1 - 2019 Japanese National Multi-Event Championships (Nagano, JPN)																					<i>Matsubayashi (2019) - research on athlete performance and technique- 2019 data book</i>								
date	09-Jun-19	time	2.74	3.92	5.11	6.39	7.63	8.83	10.07	11.27	12.47	13.69		15.36	6 / 4														
reaction time		interval		1.18	1.19	1.28	1.24	1.20	1.24	1.20	1.20	1.22	1.67			3.65	3.68	3.62											
wind	1.8 m/s	velocity	5.01	7.75	7.68	7.14	7.37	7.62	7.37	7.62	7.62	7.49	8.40	7.16		7.51	7.45	7.57											
Decathlon - Heat 2 - 2018 Japanese National Multi-Event Championships (Nagano, JPN)																					<i>Matsubayashi (2018) - research on athlete performance and technique</i>								
date	17-Jun-18	time	2.71	3.87	5.03	6.21	7.37	8.55	9.74	10.94	12.17	13.42		15.05	4 / 5														
reaction time		interval		1.16	1.16	1.18	1.16	1.18	1.19	1.20	1.23	1.25	1.63			3.50	3.53	3.68											
wind	0.5 m/s	velocity	5.06	7.88	7.88	7.75	7.88	7.75	7.68	7.62	7.43	7.31	8.60	7.31		7.83	7.77	7.45											
Decathlon - Heat 1 - 2018 Tokyo Combined Event Meeting (Tokyo, JPN)																					<i>Matsubayashi (2018) - research on athlete performance and technique</i>								
date	22-Apr-18	time	2.73	3.90	5.05	6.24	7.39	8.58	9.76	10.94	12.12	13.31		14.92	6 / 3														
reaction time		interval		1.17	1.15	1.19	1.15	1.19	1.18	1.18	1.18	1.19	1.61			3.51	3.52	3.55											
wind	1.8 m/s	velocity	5.03	7.81	7.95	7.68	7.95	7.68	7.75	7.75	7.75	7.68	8.71	7.37		7.81	7.79	7.72											
Decathlon - Heat 1 - 2014 Asian Games (Incheon, KOR)																					<i>Takeo (2014) - decathletes sprint ability and relationship of individual performance</i>								
date	01-Oct-14	time	2.78	3.97	5.15	6.31	7.47	8.65	9.85	11.07	12.30	13.54		15.16	1 / 4														
reaction time	0.196	interval		1.19	1.18	1.16	1.16	1.18	1.20	1.22	1.23	1.24	1.62			3.53	3.54	3.69											
wind	1.7 m/s	velocity	4.94	7.68	7.75	7.88	7.88	7.75	7.62	7.49	7.43	7.37	8.65	7.26		7.77	7.75	7.43											
Decathlon - Heat 1 - 2014 Japanese Multi-Event National Championships (Nagano, JPN)																					<i>Takeo (2014) - decathletes sprint ability and relationship of individual performance</i>								
date	01-Jun-14	time	2.76	3.92	5.06	6.21	7.38	8.54	9.71	10.91	12.08	13.30		14.90	1 / 6														
reaction time		interval		1.16	1.14	1.15	1.17	1.16	1.17	1.20	1.17	1.22	1.60			3.45	3.50	3.59											
wind	0.1 m/s	velocity	4.97	7.88	8.02	7.95	7.81	7.88	7.81	7.62	7.81	7.49	8.76	7.38		7.95	7.83	7.64											
Decathlon - Heat 2 - 2014 Nittai University Distance Meeting (Wakayama, JPN)																					<i>Takeo (2014) - decathletes sprint ability and relationship of individual performance</i>								
date	27-Apr-14	time	2.79	3.92	5.07	6.24	7.41	8.58	9.78	10.97	12.16	13.38		14.95	5 / 1														
reaction time		interval		1.13	1.15	1.17	1.17	1.17	1.20	1.19	1.19	1.22	1.57			3.45	3.54	3.60											
wind	0.0 m/s	velocity	4.92	8.09	7.95	7.81	7.81	7.81	7.62	7.68	7.68	7.49	8.93	7.36		7.95	7.75	7.62											
Decathlon - Heat 3 - 2013 Japanese Multi-Event National Championships (Nagano, JPN)																					<i>Takeo (2014) - decathletes sprint ability and relationship of individual performance</i>								
date	02-Jun-13	time	2.80	4.00	5.20	6.39	7.61	8.83	10.10	11.38	12.69	13.99		15.66	5 / 3														
reaction time		interval		1.20	1.20	1.19	1.22	1.22	1.27	1.28	1.31	1.30	1.67			3.59	3.71	3.89											
wind	0.0 m/s	velocity	4.90	7.62	7.62	7.68	7.49	7.49	7.20	7.14	6.98	7.03	8.40	7.02		7.64	7.39	7.05											

Decathlon - Heat 1 - 2013 Wakayama Athletics Meeting (Wakayama, JPN)*Takeo (2014) - decathletes sprint ability and relationship of individual performance*

date	28-Apr-13	time	2.80	3.97	5.12	6.29	7.46	8.64	9.82	11.03	12.21	13.43	15.05	3 / 1			
reaction time		interval		1.17	1.15	1.17	1.17	1.18	1.18	1.21	1.18	1.22	1.62	3.49	3.53	3.61	
wind	0.8 m/s	velocity	4.90	7.81	7.95	7.81	7.81	7.75	7.75	7.55	7.75	7.49	8.65	7.31	7.86	7.77	7.60

Decathlon - Heat 1 - 2012 Olympic Games (London, GBR)*Takeo (2014) - decathletes sprint ability and relationship of individual performance*

date	09-Aug-12	time	2.80	3.99	5.20	6.42	7.62	8.85	10.06	11.30	12.56	13.84	15.47	6 / 5			
reaction time	0.186	interval		1.19	1.21	1.22	1.20	1.23	1.21	1.24	1.26	1.28	1.63	3.62	3.64	3.78	
wind	-0.9 m/s	velocity	4.90	7.68	7.55	7.49	7.62	7.43	7.55	7.37	7.25	7.14	8.60	7.11	7.57	7.53	7.25

Decathlon - Heat 2 - 2012 Japanese Multi-Event National Championships (Nagano, JPN)*Takeo (2014) - decathletes sprint ability and relationship of individual performance*

date	03-Jun-12	time	2.76	3.93	5.10	6.25	7.41	8.58	9.78	10.98	12.19	13.42	15.01	5 / 2			
reaction time		interval		1.17	1.17	1.15	1.16	1.17	1.20	1.21	1.21	1.23	1.59	3.49	3.53	3.64	
wind	-1.7 m/s	velocity	4.97	7.81	7.81	7.95	7.88	7.81	7.62	7.62	7.55	7.43	8.82	7.33	7.86	7.77	7.53

Decathlon - Heat ?? - 2012 Tokyo Athletics Championships (Chofu, JPN)*Takeo (2014) - decathletes sprint ability and relationship of individual performance*

date	22-Apr-12	time	2.79	3.95	5.15	6.31	7.50	8.73	9.95	11.17	12.41	13.64	15.25	???			
reaction time		interval		1.16	1.20	1.16	1.19	1.23	1.22	1.22	1.24	1.23	1.61	3.52	3.64	3.69	
wind	-0.1 m/s	velocity	4.92	7.88	7.62	7.88	7.68	7.43	7.49	7.49	7.37	7.43	8.71	7.21	7.79	7.53	7.43

Decathlon - Heat 1 - 2011 IAAF World Championships (Daegu, KOR)*Hisashi (2012) - performance analysis of Japanese record holder Keisuke Ushiro*

date	28-Aug-11	time	2.77	3.92	5.09	6.28	7.45	8.66	9.88	11.10	12.34	13.57	15.20	5 / 6			
reaction time	0.167	interval		1.15	1.17	1.19	1.17	1.21	1.22	1.22	1.24	1.23	1.63	3.51	3.60	3.69	
wind	-0.1 m/s	velocity	4.95	7.95	7.81	7.68	7.81	7.55	7.49	7.49	7.37	7.43	8.60	7.24	7.81	7.62	7.43

Decathlon - Heat ?? - 2011 Japanese Multi-Event National Championships (Kawasaki, JPN)*Hisashi (2012) - performance analysis of Japanese record holder Keisuke Ushiro*

date	05-Jun-11	time	2.75	3.92	5.08	6.25	7.41	8.58	9.75	10.92	12.14	13.33	14.93	???			
reaction time		interval		1.17	1.16	1.17	1.16	1.17	1.17	1.17	1.22	1.19	1.60	PB	3.50	3.50	3.58
wind	-0.1 m/s	velocity	4.99	7.81	7.88	7.81	7.88	7.81	7.81	7.81	7.49	7.68	8.76	7.37	7.83	7.83	7.66

Decathlon - Heat 1 - 2011 Wakayama Athletics Meeting (Wakayama, JPN)*Hisashi (2012) - performance analysis of Japanese record holder Keisuke Ushiro*

date	24-Apr-11	time	2.82	3.98	5.17	6.35	7.56	8.77	10.00	11.21	12.43	13.64	15.28	8 / 2			
reaction time		interval		1.16	1.19	1.18	1.21	1.21	1.23	1.21	1.22	1.21	1.64	3.53	3.65	3.64	
wind	-0.1 m/s	velocity	4.87	7.88	7.68	7.75	7.55	7.55	7.43	7.55	7.49	7.55	8.55	7.20	7.77	7.51	7.53

Decathlon - Heat 2 - 2009 Japanese National Championships (Hiroshima, JPN)*Hisashi (2010) - the run performance analysis in the decathlon sprint events*

date	26-Jun-09	time	2.59	3.78	4.97	6.16	7.36	8.57	9.79	11.06	12.33	13.52	15.34	5 / 7			
reaction time		interval		1.19	1.19	1.19	1.20	1.21	1.22	1.27	1.27	1.19	1.82	PB	3.57	3.63	3.73
wind	1.6 m/s	velocity	5.30	7.68	7.68	7.68	7.62	7.55	7.49	7.20	7.20	7.68	7.70	7.17	7.68	7.55	7.35

Vahnyakov, Oleksandr (UKR) (1986)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 2007 European Cup (Munich, GER)***Graubner (2007) - <http://www.fgs.uni-halle.de>*

date	24-Jun-07	time	2.80	3.93	5.02	6.08	7.15	8.24	9.35	10.47	11.57	12.69	14.21	/ 8			
reaction time	0.243	interval		1.13	1.09	1.06	1.07	1.09	1.11	1.12	1.10	1.12	1.52	3.28	3.27	3.34	
wind	0.4 m/s	velocity	4.90	8.09	8.39	8.62	8.54	8.39	8.23	8.16	8.31	8.16	9.22	7.74	8.36	8.39	8.21

Valle, Emilio (CUB) (1967)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****FINAL - 1996 Olympic Games (Atlanta, GA)***Butler (2016) - IAAF statistics handbook- special edition: Games of the XXXI Olympiad- Rio 2016*

date	26-Jul-96	time	2.36	3.44	4.46	5.46	6.48	7.49	8.50	9.54	10.58	11.61	13.20	7 / 5			
reaction time	0.179	interval		1.08	1.02	1.00	1.02	1.01	1.01	1.04	1.04	1.03	1.59	3.10	3.04	3.11	
wind	0.8 m/s	velocity	5.81	8.46	8.96	9.14	8.96	9.05	9.05	8.79	8.79	8.87	8.82	8.33	8.85	9.02	8.82

FINAL - 1992 Olympic Games (Barcelona, ESP)*Knight (1992) - 1992 Olympic report: the hurdling events*

date	03-Aug-92	time	2.60	3.68	4.71	5.74	6.75	7.78	8.82	9.86	10.93	12.02	13.41	2 / 6			
reaction time	0.171	interval		1.08	1.03	1.03	1.01	1.03	1.04	1.04	1.07	1.09	1.39	3.14	3.08	3.20	
wind	0.8 m/s	velocity	5.28	8.46	8.87	8.87	9.05	8.87	8.79	8.79	8.54	8.39	10.09	8.20	8.73	8.90	8.57

FINAL - 1989 IAAF World Cup (Barcelona, ESP)*Gill (1990) - atletismo (I) carreras y marcha*

date	10-Sep-89	time	2.59	3.65	4.67	5.71	6.70	7.70	8.72	9.73	10.77	11.83	13.21	5 / 3			
reaction time		interval		1.06	1.02	1.04	0.99	1.00	1.02	1.01	1.04	1.06	1.38	3.12	3.01	3.11	
wind	2.6 m/s	velocity	5.30	8.62	8.96	8.79	9.23	9.14	8.96	9.05	8.79	8.62	10.16	8.33	8.79	9.11	8.82

FINAL - 1986 IAAF World Junor Championships (Athens, GRE) (1.07m)*Miskos (1986) - IAAF biomechanical research - Athens 1986 - hurdle races*

date	19-Jul-86	time	2.62	3.50	4.83	5.91	6.98	8.07	9.19	10.30	11.42	12.54	14.00	/ 3			
reaction time		interval		0.88	1.33	1.08	1.07	1.09	1.12	1.11	1.12	1.12	1.46	3.29	3.28	3.35	
wind	-0.8 m/s	velocity	5.24	10.39	6.87	8.46	8.54	8.39	8.16	8.23	8.16	8.16	9.60	7.86	8.33	8.36	8.19

Van Der Schaaf, Liam (NED) (1998)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10****Semi-Final 3 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)***Henson (2022) Athlete First: Grant Holloway 2022 Men's 60m Hurdles World Indoor Record*

date	20-Mar-22	time	2.53	3.60	4.63	5.70	6.73						7.69	1 / 7
reaction time	0.129	interval	7 steps	1.07	1.03	1.07	1.03					0.96	PB	3.17
		velocity	5.42	8.54	8.87	8.54	8.87					10.13	7.80	8.65

		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
van der Westen, Marcel (NED) (1976)																	
FINAL - 2010 European Team Championships, 1st League (Budapest, HUN)													<i>Blomkvist (2010) - www.sub13.se</i>				
date	20-Jun-10	time	2.46	3.53	4.57	5.59	6.64	7.68	8.75	9.81	10.90	11.98	13.61	3 / 2			
reaction time	0.130	interval	1.07	1.04	1.02	1.05	1.04	1.07	1.06	1.09	1.08	1.63			3.13	3.16	3.23
wind	1.1 m/s	velocity	5.58	8.54	8.79	8.96	8.70	8.79	8.54	8.62	8.39	8.46	8.60	8.08	8.76	8.68	8.49
FINAL - 2008 IAAF World Athletics Final (Stuttgart, GER)													<i>Graubner (2009) - http://www.fgs.uni-halle.de</i>				
date	14-Sep-08	time	2.64	3.69	4.72	5.76	6.79	7.83	8.87	9.93	11.00	12.09	13.57	1 / 5			
reaction time	0.136	interval	1.05	1.03	1.04	1.03	1.04	1.04	1.06	1.07	1.09	1.48			3.12	3.11	3.22
wind	-1.3 m/s	velocity	5.20	8.70	8.87	8.79	8.87	8.79	8.79	8.62	8.54	8.39	9.47	8.11	8.79	8.82	8.52
Vander-Kuyp, Kyle (AUS) (1971)																	
FINAL - 1996 Olympic Games (Atlanta, GA)													<i>Butler (2016) - IAAF statistics handbook- special edition: Games of the XXXI Olympiad- Rio 2016</i>				
date	26-Jul-96	time	2.40	3.46	4.54	5.58	6.64	7.61	8.68	9.64	10.78	11.83	13.40	2 / 7			
reaction time	0.160	interval	1.06	1.08	1.04	1.06	0.97	1.07	0.96	1.14	1.05	1.57			3.18	3.10	3.15
wind	0.8 m/s	velocity	5.72	8.62	8.46	8.79	8.62	9.42	8.54	9.52	8.02	8.70	8.93	8.21	8.62	8.85	8.70
Vašátko, Stanislav (CZE) (1992)																	
Heat 2 - 2014 Czech Republic National Championships (Ostrava, CZE)													<i>Feher (2014) - Final report from the Czech Republic national championships</i>				
date	02-Aug-14	time	2.87	4.08	5.27	6.48	7.70	8.94	10.18	11.44	12.70	13.98	15.64	1 / 5			
reaction time	0.169	interval	1.21	1.19	1.21	1.22	1.24	1.24	1.26	1.26	1.28	1.66			3.61	3.70	3.80
wind	0.8 m/s	velocity	4.78	7.55	7.68	7.55	7.49	7.37	7.37	7.25	7.25	7.14	8.45	7.03	7.60	7.41	7.22
Véčera, Jindřich (CZE) (1995)																	
FINAL - 2014 Czech Republic National U20 Championships (Trinec, CZE) (99cm)													<i>Feher (2014) - Final report from the U18 & U20 Czech Republic national championships</i>				
date	28-Jun-14	time	2.70	3.83	4.94	6.06	7.17	8.28	9.43	10.56	11.73	12.92	14.55	5 / 4			
reaction time	0.171	interval	1.13	1.11	1.12	1.11	1.11	1.15	1.13	1.17	1.19	1.63			3.36	3.37	3.49
wind	-2.2 m/s	velocity	5.08	8.09	8.23	8.16	8.23	8.23	7.95	8.09	7.81	7.68	8.60	7.56	8.16	8.14	7.86
Heat 2 - 2014 Czech Republic National U20 Championships (Trinec, CZE) (99cm)													<i>Feher (2014) - Final report from the U18 & U20 Czech Republic national championships</i>				
date	28-Jun-14	time	2.75	3.85	4.99	6.09	7.19	8.30	9.45	10.59	11.74	12.92	14.55	3 / 1			
reaction time	0.184	interval	1.10	1.14	1.10	1.10	1.11	1.15	1.14	1.15	1.18	1.63			3.34	3.36	3.47
wind	-2.9 m/s	velocity	4.99	8.31	8.02	8.31	8.31	8.23	7.95	8.02	7.95	7.75	8.60	7.56	8.21	8.16	7.90
Véčera, Vincent (CZE) (1998)																	
Heat 1 - 2014 Czech Republic National U18 Championships (Trinec, CZE) (91cm)													<i>Feher (2014) - Final report from the U18 & U20 Czech Republic national championships</i>				
date	28-Jun-14	time	2.88	4.15	5.37	6.69	8.00	9.28	10.57	11.87	13.16	14.48	16.25	7 / 7			
reaction time	0.219	interval	1.27	1.22	1.32	1.31	1.28	1.29	1.30	1.29	1.32	1.77			3.81	3.88	3.91
wind	-0.3 m/s	velocity	4.76	7.20	7.49	6.92	6.98	7.14	7.09	7.03	7.09	6.92	7.92	6.77	7.20	7.07	7.01
Vega, Javier (ESP) (1975)																	
FINAL - 1998 Spanish National Championships (San Sebastián, ESP)													<i>Ruiz (1998) - campeonato des españa absoluto: análisis de la carreras con villas</i>				
date	02-Aug-98	time	2.66	3.75	4.84	5.95	7.02	8.14	9.24	10.37	11.50	12.64	14.21	7 / 3			
reaction time		interval	1.09	1.09	1.11	1.07	1.12	1.10	1.13	1.13	1.14	1.57			3.29	3.29	3.40
wind	0.1 m/s	velocity	5.16	8.39	8.39	8.23	8.54	8.16	8.31	8.09	8.09	8.02	8.93	7.74	8.33	8.33	8.06
Vésin, Yannick (FRA) (1954)																	
Heat ? - 1986 French National Indoor Championships (Lievín, FRA)													<i>Aubert (1986) - indoor - video - haies, etude des performances</i>				
date	25-Jan-86	time	2.64	3.78	4.88	5.95	7.07						8.06	1 / 6			
reaction time		interval	1.14	1.10	1.07	1.12						0.99			3.31		
		velocity	5.20	8.02	8.31	8.54	8.16					9.82	7.44		8.28		
Viala, Didier (FRA)																	
Heat ? - 1986 French National Indoor Championships (Lievín, FRA)													<i>Aubert (1986) - indoor - video - haies, etude des performances</i>				
date	25-Jan-86	time	2.69	3.82	4.94	6.08	7.22						8.19	1 / 6			
reaction time		interval	1.13	1.12	1.14	1.14						0.97			3.39		
		velocity	5.10	8.09	8.16	8.02	8.02					10.02	7.33		8.09		
Vick, Brahmír (USA) (2002)																	
Semi-Final 1 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)													<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>				
date	27-Jun-24	time	2.57	3.65	4.69	5.74	6.78	7.84	8.90	9.98	11.05	12.18	13.67	1 / 7			
reaction time		interval	1.08	1.04	1.05	1.04	1.06	1.06	1.08	1.07	1.13	1.49			3.17	3.16	3.28
wind	0.3 m/s	velocity	5.34	8.46	8.79	8.70	8.79	8.62	8.62	8.46	8.54	8.09	9.41	8.05	8.65	8.68	8.36
Heat 3 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)													<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>				
date	24-Jun-24	time	2.56	3.62	4.66	5.70	6.73	7.77	8.83	9.87	10.96	12.08	13.54	7 / 7			
reaction time		interval	1.06	1.04	1.04	1.03	1.04	1.06	1.04	1.09	1.12	1.46	PB		3.14	3.13	3.25
wind	1.8 m/s	velocity	5.36	8.62	8.79	8.79	8.87	8.79	8.62	8.79	8.39	8.16	9.60	8.12	8.73	8.76	8.44
Victor, Lindon (GRN) (1993)																	
Decathlon - Heat 1 - 2024 Olympic Games (Paris, FRA)													<i>Paris 2024 Olympc Games - Results Book (2024)</i>				
date	03-Aug-24	time	2.49	3.67	4.83	6.00	7.16	8.31	9.47	10.60	11.77	12.93	14.62	4 / 3			

reaction time	0.147	interval	7 steps	1.18	1.16	1.17	1.16	1.15	1.16	1.13	1.17	1.16	1.69		3.51	3.47	3.46
wind	0.2 m/s	velocity	5.51	7.75	7.88	7.81	7.88	7.95	7.88	8.09	7.81	7.88	8.30	7.52	7.81	7.90	7.92

Videnov, Zhivko (BUL) (1977)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2002 European Championships (Munich, GER)														<i>Graubner (2009) - http://www.fgs.uni-halle.de</i>			
date	10-Aug-02	time	2.63	3.69	4.73	5.75	6.79	7.85	8.90	10.01	11.09	12.25	13.67	/ 8			
reaction time	0.146	interval	1.06	1.04	1.02	1.04	1.06	1.05	1.11	1.08	1.16	1.42		3.12	3.15	3.35	
wind	0.4 m/s	velocity	5.22	8.62	8.79	8.96	8.79	8.62	8.70	8.23	8.46	7.88	9.87	8.05	8.79	8.70	8.19

Semi-Final 2 - 2002 European Championships (Munich, GER)

date	10-Aug-02	time	2.64	3.68	4.70	5.74	6.76	7.80	8.82	9.88	10.94	12.04	13.45	/ 3			
reaction time	0.128	interval	1.04	1.02	1.04	1.02	1.04	1.02	1.06	1.06	1.10	1.41		3.10	3.08	3.22	
wind	0.8 m/s	velocity	5.20	8.79	8.96	8.79	8.96	8.79	8.96	8.62	8.62	8.31	9.94	8.18	8.85	8.90	8.52

Heat 5 - 2002 European Championships (Munich, GER)

date	09-Aug-02	time	2.69	3.72	4.73	5.77	6.79	7.84	8.88	9.93	11.01	12.11	13.52	/ 1			
reaction time	0.139	interval	1.03	1.01	1.04	1.02	1.05	1.04	1.05	1.08	1.10	1.41		3.08	3.11	3.23	
wind	-0.5 m/s	velocity	5.10	8.87	9.05	8.79	8.96	8.70	8.79	8.70	8.46	8.31	9.94	8.14	8.90	8.82	8.49

Villar, Paulo (COL) (1978)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Semi-Final 1 - 2009 IAAF World Championships (Berlin, GER)														<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>			
date	20-Aug-09	time	2.55	3.60	4.63	5.65	6.68	7.71	8.75	9.81	10.89	11.97	13.44	5 / 5			
reaction time	0.171	interval	1.05	1.03	1.02	1.03	1.03	1.04	1.06	1.08	1.08	1.47		3.10	3.10	3.22	
wind	0.9 m/s	velocity	5.38	8.70	8.87	8.96	8.87	8.87	8.79	8.62	8.46	8.46	9.54	8.18	8.85	8.85	8.52

Heat 6 - 2009 IAAF World Championships (Berlin, GER)

date	19-Aug-09	time	2.58	3.66	4.71	5.75	6.77	7.81	8.86	9.91	10.97	12.07	13.52	2 / 2			
reaction time	0.162	interval	1.08	1.05	1.04	1.02	1.04	1.05	1.05	1.06	1.10	1.45		3.17	3.11	3.21	
wind	0.1 m/s	velocity	5.32	8.46	8.70	8.79	8.96	8.79	8.70	8.70	8.62	8.31	9.67	8.14	8.65	8.82	8.54

Vivancos, Felipe (ESP) (1980)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2002 IAAF World Cup (Madrid, ESP)														<i>Sanchez (2002) - copa del mundo de Madrid '02: análisis de la carreras con villas</i>			
date	21-Sep-02	time	2.53	3.61	4.65	5.69	6.74	7.81	8.90	9.99	11.08	12.18	13.79	7 / 5			
reaction time	0.124	interval	1.08	1.04	1.04	1.05	1.07	1.09	1.09	1.09	1.10	1.61		3.16	3.21	3.28	
wind	-2.2 m/s	velocity	5.42	8.46	8.79	8.79	8.70	8.54	8.39	8.39	8.39	8.31	8.71	7.98	8.68	8.54	8.36

Vondráček, Jan (CZE) (1991)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Heat 2 - 2012 Czech Republic National Indoor Championships (Praha, CZE)														<i>Feher (2012) - Czech Republic indoor national championships - men's 60m hurdles</i>			
date	25-Feb-12	time	2.88	4.06	5.27	6.48	7.66						8.68	1 / 6			
reaction time	0.157	interval	1.18	1.21	1.21	1.18						1.02			3.60		
		velocity	4.76	7.75	7.55	7.55	7.75					9.53	6.91		7.62		

Vos, Ingmar (NED) (1986)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Decathlon - Heat 5 - 2009 IAAF World Championships (Berlin, GER)														<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>			
date	20-Aug-09	time	2.76	3.91	5.04	6.16	7.28	8.40	9.52	10.66	11.80	12.99	14.51	4 / 1			
reaction time	0.178	interval	1.15	1.13	1.12	1.12	1.12	1.14	1.14	1.19	1.52	PB		3.40	3.36	3.47	
wind	0.3 m/s	velocity	4.97	7.95	8.09	8.16	8.16	8.16	8.02	8.02	7.68	9.22	7.58	8.06	8.16	7.90	

Vukicevic, Vladimir (NOR) (1991)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2021 Boris Hanžeković Memorial (Zagreb, CRO) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 year end hurdle report</i>			
date	14-Sep-21	time	2.56	3.63	4.66	5.70	6.73	7.76	8.83	9.90	11.00	12.10	13.65	2 / 7			
reaction time	0.136	interval	1.07	1.03	1.04	1.03	1.03	1.07	1.07	1.10	1.10	1.55		3.14	3.13	3.27	
wind	0.7 m/s	velocity	5.36	8.54	8.87	8.79	8.87	8.87	8.54	8.54	8.31	8.31	9.05	8.06	8.73	8.76	8.39

FINAL - 2020 Herculis Meeting International d'Athletisme (Monaco, MON) (TV Analysis)

date	14-Aug-20	time	2.63	3.70	4.77	5.80	6.87	7.91	9.00	10.07	11.14	12.24	13.75	1 / 6			
reaction time	0.130	interval	1.07	1.07	1.03	1.07	1.04	1.09	1.07	1.07	1.10	1.51		3.17	3.20	3.24	
wind	0.8 m/s	velocity	5.22	8.54	8.54	8.87	8.54	8.79	8.39	8.54	8.54	8.31	9.28	8.00	8.65	8.57	8.46

FINAL - 2013 Windsprint (Sundsvall, SWE)

date	28-Jul-13	time	2.62	3.68	4.73	5.80	6.85	7.92	8.99	10.06	11.13	12.23	13.70	(2013) - www.ssg.se/windsprint/Splittider/	4 / 5		
reaction time		interval	1.06	1.05	1.07	1.05	1.07	1.07	1.07	1.07	1.10	1.47			3.18	3.19	3.24
wind	1.7 m/s	velocity	5.24	8.62	8.70	8.54	8.70	8.54	8.54	8.54	8.31	9.54	8.03		8.62	8.60	8.46

FINAL - 2012 Windsprint (Sundsvall, SWE)

date	17-Jun-12	time	2.67	3.76	4.83	5.89	6.94	8.00	9.06	10.12	11.19	12.30	13.77	Blomkvist (2012) - www.sub13.se	3 / 3		
reaction time		interval	1.09	1.07	1.06	1.05	1.06	1.06	1.06	1.07	1.11	1.47			3.22	3.17	3.24
wind	1.1 m/s	velocity	5.14	8.39	8.54	8.62	8.70	8.62	8.62	8.54	8.23	9.54	7.99		8.52	8.65	8.46

FINAL - 2011 Windsprint (Sundsvall, SWE)

date	31-Jul-11	time	2.67	3.74	4.81	5.89	6.98	8.07	9.17	10.28	11.39	12.52	14.04	Blomkvist (2011) - www.sub13.se	/ 2		
reaction time		interval	1.07	1.07	1.08	1.09	1.09	1.10	1.11	1.11	1.13	1.52			3.22	3.28	3.35
wind	2.8 m/s	velocity	5.14	8.54	8.54	8.46	8.39	8.39	8.31	8.23	8.23	8.09	9.22	7.83	8.52	8.36	8.19

FINAL - 2015 Japanese National Championships (Niigata, JPN)*Takashima (2015) - race analysis of 110m & 100m hurdles in Japan- results 2015 competitions*

date	28-Jun-15	time	2.57	3.65	4.71	5.78	6.85	7.93	9.03	10.11	11.23	12.37	13.90	3 / 5			
reaction time	0.121	interval		1.08	1.06	1.07	1.07	1.08	1.10	1.08	1.12	1.14	1.53		3.21	3.25	3.34
wind	-1.4 m/s	velocity	5.34	8.46	8.62	8.54	8.54	8.46	8.31	8.46	8.16	8.02	9.16	7.91	8.54	8.44	8.21

Heat 3 - 2013 Japanese National Championships (Chofu, JPN)*Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13*

date	08-Jun-13	time	2.63	3.74	4.82	5.91	7.02	8.11	9.22	10.32	11.45	12.63	14.15	5 / 4			
reaction time		interval		1.11	1.08	1.09	1.11	1.09	1.11	1.10	1.13	1.18	1.52		3.28	3.31	3.41
wind	-0.4 m/s	velocity	5.22	8.23	8.46	8.39	8.23	8.39	8.23	8.31	8.09	7.75	9.22	7.77	8.36	8.28	8.04

FINAL - 2013 Mito Invitational Athletics Meeting (Mito, JPN)*Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13*

date	04-May-13	time	2.60	3.93	5.15	6.34	7.46	8.60	9.71	10.83	11.97	13.13	14.68	/ 8			
reaction time		interval		1.33	1.22	1.19	1.12	1.14	1.11	1.12	1.14	1.16	1.55		3.74	3.37	3.42
wind	-1.3 m/s	velocity	5.28	6.87	7.49	7.68	8.16	8.02	8.23	8.16	8.02	7.88	9.05	7.49	7.33	8.14	8.02

Heat 2 - 2013 Mito Invitational Athletics Meeting (Mito, JPN)*Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13*

date	04-May-13	time	2.64	3.72	4.84	5.93	7.03	8.11	9.20	10.32	11.46	12.62	14.14	/ 2			
reaction time		interval		1.08	1.12	1.09	1.10	1.08	1.09	1.12	1.14	1.16	1.52		3.29	3.27	3.42
wind	0.8 m/s	velocity	5.20	8.46	8.16	8.39	8.31	8.46	8.39	8.16	8.02	7.88	9.22	7.78	8.33	8.39	8.02

Heat 3 - 2013 Mikio Oda Memorial (Hiroshima, JPN)*Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13*

date	29-Apr-13	time	2.59	3.66	4.75	5.81	6.87	7.95	9.00	10.09	11.12	12.52	14.26	/ 6			
reaction time		interval		1.07	1.09	1.06	1.06	1.08	1.05	1.09	1.03	1.40	1.74		3.22	3.19	3.52
wind	2.4 m/s	velocity	5.30	8.54	8.39	8.62	8.62	8.46	8.70	8.39	8.87	6.53	8.06	7.71	8.52	8.60	7.79

Semi-Final 1 - 2012 Japanese National Championships (Osaka, JPN)*Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13*

date	10-Jun-12	time	2.61	3.70	4.78	5.86	6.93	8.02	9.11	10.23	11.35	12.48	13.98	4 / 8			
reaction time		interval		1.09	1.08	1.08	1.07	1.09	1.09	1.12	1.12	1.13	1.50		3.25	3.25	3.37
wind	2.4 m/s	velocity	5.26	8.39	8.46	8.46	8.54	8.39	8.39	8.16	8.16	8.09	9.35	7.87	8.44	8.44	8.14

Heat 1 - 2012 Japanese National Championships (Osaka, JPN)*Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13*

date	09-Jun-12	time	2.59	3.68	4.76	5.82	6.89	7.98	9.07	10.19	11.30	12.45	13.98	5 / 2			
reaction time		interval		1.09	1.08	1.06	1.07	1.09	1.09	1.12	1.11	1.15	1.53		3.23	3.25	3.38
wind	0.8 m/s	velocity	5.30	8.39	8.46	8.62	8.54	8.39	8.39	8.16	8.23	7.95	9.16	7.87	8.49	8.44	8.11

FINAL - 2012 Seiko Golden Grand Prix (Kawasaki, JPN)*Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13*

date	06-May-12	time	2.55	3.64	4.71	5.75	6.80	7.86	8.93	10.00	11.09	12.22	13.71	1 / 4			
reaction time		interval		1.09	1.07	1.04	1.05	1.06	1.07	1.07	1.09	1.13	1.49	PB	3.20	3.18	3.29
wind	0.2 m/s	velocity	5.38	8.39	8.54	8.79	8.70	8.62	8.54	8.54	8.39	8.09	9.41	8.02	8.57	8.62	8.33

FINAL - 2012 Mito Invitational Athletics Meeting (Mito, JPN)*Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13*

date	04-May-12	time	2.57	3.68	4.75	5.81	6.90	7.96	9.04	10.13	11.26	12.38	13.88	/ 5			
reaction time		interval		1.11	1.07	1.06	1.09	1.06	1.08	1.09	1.13	1.12	1.50		3.24	3.23	3.34
wind	-0.3 m/s	velocity	5.34	8.23	8.54	8.62	8.39	8.62	8.46	8.39	8.09	8.16	9.35	7.93	8.46	8.49	8.21

A FINAL - 2012 Mikio Oda Memorial (Hiroshima, JPN)*Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13*

date	29-Apr-12	time	2.58	3.65	4.73	5.78	6.84	7.92	8.98	10.04	11.15	12.26	13.70	5 / 4			
reaction time		interval		1.07	1.08	1.05	1.06	1.08	1.06	1.06	1.11	1.11	1.44		3.20	3.20	3.28
wind	2.1 m/s	velocity	5.32	8.54	8.46	8.70	8.62	8.46	8.62	8.62	8.23	8.23	9.74	8.03	8.57	8.57	8.36

FINAL - 2011 Japanese National Championships (Kumagaya, JPN)*Hisashi (2012) - performance analysis of Japanese record holder Keisuke Ushiro*

date	11-Jun-11	time	2.59	3.68	4.77	5.85	6.91	7.99	9.09	10.19	11.29	12.44	13.95	/ 4			
reaction time		interval		1.09	1.09	1.08	1.06	1.08	1.10	1.10	1.10	1.15	1.51		3.26	3.24	3.35
wind	-0.1 m/s	velocity	5.30	8.39	8.39	8.46	8.62	8.46	8.31	8.31	8.31	7.95	9.28	7.89	8.41	8.46	8.19

Semi-Final 2 - 2011 Japanese National Championships (Kumagaya, JPN)*Hisashi (2012) - performance analysis of Japanese record holder Keisuke Ushiro*

date	11-Jun-11	time	2.59	3.68	4.75	5.86	6.93	8.03	9.14	10.24	11.36	12.51	14.04	/ 3			
reaction time		interval		1.09	1.07	1.11	1.07	1.10	1.11	1.10	1.12	1.15	1.53		3.27	3.28	3.37
wind	-0.1 m/s	velocity	5.30	8.39	8.54	8.23	8.54	8.31	8.23	8.31	8.16	7.95	9.16	7.83	8.39	8.36	8.14

Heat 3 - 2011 Mikio Oda Memorial (Hiroshima, JPN)*Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13*

date	29-Apr-11	time	2.62	3.70	4.77	5.83	6.95	8.03	9.13	10.22	11.31	12.48	13.97	/ 5			
reaction time		interval		1.08	1.07	1.06	1.12	1.08	1.10	1.09	1.09	1.17	1.49		3.21	3.30	3.35
wind	2.4 m/s	velocity	5.24	8.46	8.54	8.62	8.16	8.46	8.31	8.39	8.39	7.81	9.41	7.87	8.54	8.31	8.19

Walker, Josh (USA) (1982)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane/Place H1-H4 H4-H7 H7-H10****Heat 3 - 2007 USATF National Championships (Indianapolis, IN)***USATF Men's Hurdle Development (2007)*

date	23-Jun-07	time	2.67	3.79	4.85	5.94	6.99	8.09	9.18	10.26	11.36	12.46	13.97	1 / 5			
reaction time		interval		1.12	1.06	1.09	1.05	1.10	1.09	1.08	1.10	1.10	1.51		3.27	3.24	3.28
wind	-3.2 m/s	velocity	5.14	8.16	8.62	8.39	8.70	8.31	8.39	8.46	8.31	8.31	9.28	7.87	8.39	8.46	8.36

FINAL - 2003 USATF National Championships (Palo Alto, CA)*USATF Women's Sprint Development (2003)*

date	21-Jun-03	time	2.37	3.52	4.57	5.64	6.71	7.76	8.83	9.89	10.96	12.08	13.84	1 / 7			
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reaction time	interval	1.15	1.05	1.07	1.07	1.05	1.07	1.06	1.07	1.12	1.76			3.27	3.19	3.25	
wind	-2.4 m/s	velocity	5.79	7.95	8.70	8.54	8.54	8.70	8.54	8.62	8.54	8.16	7.97	7.95	8.39	8.60	8.44

Walters, Ruebin (TTO) (1995)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2022 New York Grand Prix (New York, NY) (TV Analysis)													<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>				
date	12-Jun-22	time	2.53	3.60	4.66	5.73	6.77	7.83	8.90	9.95	11.03	12.12		13.67	2 / 7		
reaction time	0.139	interval	1.07	1.06	1.07	1.04	1.06	1.07	1.05	1.08	1.09	1.55			3.20	3.17	3.22
wind	1.6 m/s	velocity	5.42	8.54	8.62	8.54	8.79	8.62	8.54	8.70	8.46	8.39	9.05	8.05	8.57	8.65	8.52

Semi-Final 1 - 2022 World Athletics Indoor Championships (Belgrade, SRB) (TV Analysis)

date	20-Mar-22	time	2.50	3.56	4.63	5.67	6.70						7.68	7 / 6				
reaction time	0.135	interval	1.06	1.07	1.04	1.03						0.98		3.17				
		velocity	5.49	8.62	8.54	8.79	8.87						9.92	7.81	8.65			

FINAL - 2022 New Balance Indoor Grand Prix (Staten Island, NY) (TV Analysis)

date	06-Feb-22	time	2.61	3.70	4.76	5.79	6.81						7.76	8 / 7				
reaction time	0.176	interval	1.09	1.06	1.03	1.02						0.95		3.18				
		velocity	5.26	8.39	8.62	8.87	8.96						10.23	7.73	8.62			

FINAL - 2021 American Track League 1 (Fayetteville, AR) (TV Analysis)

date	24-Jan-21	time	2.55	3.63	4.68	5.70	6.72						7.65	5 / 3				
reaction time	0.142	interval	1.08	1.05	1.02	1.02						0.93		3.15				
		velocity	5.38	8.46	8.70	8.96	8.96						10.45	7.84	8.70			

FINAL - 2019 Seiko Golden Grand Prix (Osaka, JPN)

date	19-May-19	time	2.67	3.77	4.85	5.92	6.97	8.02	9.06	10.13	11.22	12.34		13.84	4 / 9			
reaction time	0.147	interval	1.10	1.08	1.07	1.05	1.05	1.04	1.07	1.09	1.12	1.50			3.25	3.14	3.28	
wind	2.9 m/s	velocity	5.14	8.31	8.46	8.54	8.70	8.70	8.79	8.54	8.39	8.16	9.35	7.95	8.44	8.73	8.36	

Wang Chi (CHN) (1997)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
Decathlon - Heat 3 - 2019 Chinese National Championships (Shenyang, CHN)													<i>CAA Hurdle Development (2019)</i>					
date	11-Jul-19	time	2.82	4.04	5.24	6.44	7.67	8.89	10.12	11.39	12.64	13.91		15.55	6 / 4			
reaction time	0.177	interval	1.22	1.20	1.20	1.23	1.22	1.23	1.27	1.25	1.27	1.64		PB	3.62	3.68	3.79	
wind	0.0 m/s	velocity	4.87	7.49	7.62	7.62	7.43	7.49	7.43	7.20	7.31	7.20	8.55	7.07	7.57	7.45	7.23	

Wang Jiawei (CHN) (2004)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
FINAL - 2021 National Grand Prix (Chengdu, CHN)													<i>CAA Hurdle Development (2021)</i>					
date	02-Apr-21	time	2.90	4.12	5.34	6.52	7.72	8.90	10.10	11.32	12.52	13.78		15.43	2 / 6			
reaction time	0.210	interval	1.22	1.22	1.18	1.20	1.18	1.20	1.22	1.20	1.26	1.65			3.62	3.58	3.68	
wind	-0.1 m/s	velocity	4.73	7.49	7.49	7.75	7.62	7.75	7.62	7.49	7.62	7.25	8.50	7.13	7.57	7.66	7.45	

Heat 1 - 2021 National Grand Prix (Chengdu, CHN)

date	02-Apr-21	time	2.88	4.12	5.34	6.56	7.78	9.02	10.30	11.56	12.80	14.06		15.75	3 / 3			
reaction time	0.195	interval	1.24	1.22	1.22	1.22	1.24	1.28	1.26	1.24	1.26	1.69			3.68	3.74	3.76	
wind	0.5 m/s	velocity	4.76	7.37	7.49	7.49	7.49	7.37	7.14	7.25	7.37	7.25	8.30	6.98	7.45	7.33	7.29	

Wang Luoxi (CHN) (2001)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
U20 Heat 1 - 2019 Chinese National Youth Games (Taiyuan, CHN) (99cm)													<i>CAA Hurdle Development (2019)</i>					
date	14-Aug-19	time	2.57	3.67	4.74	5.80	6.87	7.96	9.04	10.14	11.24	12.39		14.04	3 / 4			
reaction time	0.178	interval	1.10	1.07	1.06	1.07	1.09	1.08	1.10	1.10	1.15	1.65			3.23	3.24	3.35	
wind	0.5 m/s	velocity	5.34	8.31	8.54	8.62	8.54	8.39	8.46	8.31	8.31	7.95	8.50	7.83	8.49	8.46	8.19	

Wang Weihao (CHN) (2001)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
U20 Heat 2 - 2019 Chinese National Youth Games (Taiyuan, CHN) (99cm)													<i>CAA Hurdle Development (2019)</i>					
date	14-Aug-19	time	2.64	3.72	4.80	5.87	6.96	8.09	9.20	10.33	11.45	12.63		14.15	4 / 4			
reaction time	0.174	interval	1.08	1.08	1.07	1.09	1.13	1.11	1.13	1.12	1.18	1.52			3.23	3.33	3.43	
wind	-0.3 m/s	velocity	5.20	8.46	8.46	8.54	8.39	8.09	8.23	8.09	8.16	7.75	9.22	7.77	8.49	8.23	7.99	

Wang Yanbo (CHN) (2002)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
Heat 2 - 2021 East China District Meeting (Zhaoqing, CHN)													<i>CAA Hurdle Development (2021)</i>					
date	24-Apr-21	time	2.77	3.97	5.13	6.33	7.57	8.84	10.08	11.38	12.66	13.94		15.70	8 / 8			
reaction time	0.164	interval	1.20	1.16	1.20	1.24	1.27	1.24	1.30	1.28	1.28	1.76			3.56	3.75	3.86	
wind	-1.2 m/s	velocity	4.95	7.62	7.88	7.62	7.37	7.20	7.37	7.03	7.14	7.14	7.97	7.01	7.70	7.31	7.10	

Wang Zhipeng (CHN) (2001)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
Decathlon - Heat 3 - 2021 Chinese National Championships (Chongqing, CHN)													<i>CAA Hurdle Development (2021)</i>					
date	27-Jun-21	time	2.77	3.94	5.12	6.30	7.50	8.71	9.94	11.19	12.46	13.75		15.41	3 / 6			
reaction time	0.188	interval	7 steps	1.17	1.18	1.18	1.20	1.21	1.23	1.25	1.27	1.29	1.66		3.53	3.64	3.81	
wind	-0.2 m/s	velocity	4.95	7.81	7.75	7.75	7.62	7.55	7.43	7.31	7.20	7.09	8.45	7.14	7.77	7.53	7.20	

Warner, Damion (CAN) (1989)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10		
Decathlon - Heat 3 - 2024 Olympic Games (Paris, FRA)													<i>Paris 2024 Olympic Games - Results Book (2024)</i>					
date	03-Aug-24	time	2.44	3.53	4.57	5.63	6.67	7.71	8.76	9.83	10.92	12.00		13.62	3 / 1			

reaction time	0.144	interval	7 steps	1.09	1.04	1.06	1.04	1.04	1.05	1.07	1.09	1.08	1.62			3.19	3.13	3.24
wind	0.7 m/s	velocity	5.62	8.39	8.79	8.62	8.79	8.79	8.70	8.54	8.39	8.46	8.65	8.08		8.60	8.76	8.46

Decathlon - Heat 3 - 2019 IAAF World Championships (Doha, QAT) (TV Analysis)*Henson (2021) - Athlete First: 2019 year end hurdle report*

date	03-Oct-19	time	2.48	3.56	4.58	5.62	6.66	7.70	8.76	9.82	10.88	11.96			13.56		5 / 1			
reaction time	0.143	interval	7 steps	1.08	1.02	1.04	1.04	1.04	1.06	1.06	1.06	1.08	1.60					3.14	3.14	3.20
wind	0.8 m/s	velocity	5.53	8.46	8.96	8.79	8.79	8.79	8.62	8.62	8.62	8.46	8.76	8.11				8.73	8.73	8.57

Watase, Yuto (JPN) (1997)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10				
FINAL - 2017 Kansai Regional University Championships (Osaka, JPN)																				
<i>(2017) - tfdata-store.com/2017/05/13/post-441/</i>																				
date	11-May-17	time	2.65	3.75	4.87	5.97	7.08	8.21	9.33	10.48	11.63	12.81			14.38		2 / 7			
reaction time		interval		1.10	1.12	1.10	1.11	1.13	1.12	1.15	1.15	1.18	1.57					3.32	3.36	3.48
wind	1.6 m/s	velocity	5.18	8.31	8.16	8.31	8.23	8.09	8.16	7.95	7.95	7.75	8.93	7.65				8.26	8.16	7.88

FINAL - 2017 Osaka University Athletics Championships (Osaka, JPN)*(2017) - tfdata-store.com/2017/04/07/post-249/*

date	06-Apr-17	time	2.67	3.82	4.95	6.08	7.22	8.38	9.56	10.75	11.92	13.15			14.67		8 / 2				
reaction time		interval		1.15	1.13	1.13	1.14	1.16	1.18	1.19	1.17	1.23	1.52						3.41	3.48	3.59
wind	-1.8 m/s	velocity	5.14	7.95	8.09	8.09	8.02	7.88	7.75	7.68	7.81	7.43	9.22	7.50					8.04	7.88	7.64

Wearing, Giovanni (USA) (2004)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10			
Heat 4 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)																			
<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>																			
date	24-Jun-24	time	2.60	3.63	4.65	5.76									dnf		1 / --		
reaction time		interval		1.03	1.02	1.11													3.16
wind	1.2 m/s	velocity	5.28	8.87	8.96	8.23													8.68

Wei Peng (CHN) (2002)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10					
Decathlon - Heat 3 - 2019 Chinese National Championships (Shenyang, CHN)																					
<i>CAA Hurdle Development (2019)</i>																					
date	11-Jul-19	time	2.95	4.27	5.60	6.97	8.32	9.71	11.09	12.48	13.88	15.66			18.65		4 / 5				
reaction time	0.189	interval		1.32	1.33	1.37	1.35	1.39	1.38	1.39	1.40	1.78	2.99	PB					4.02	4.12	4.57
wind	0.0 m/s	velocity	4.65	6.92	6.87	6.67	6.77	6.58	6.62	6.58	6.53	5.13	4.69	5.90					6.82	6.66	6.00

Wen Qingming (CHN) (2002)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10					
Decathlon - Heat 3 - 2021 Chinese National Championships (Chongqing, CHN)																					
<i>CAA Hurdle Development (2021)</i>																					
date	27-Jul-21	time	2.85	4.07	5.24	6.42	7.57	8.74	9.91	11.11	12.29	13.53			15.07		7 / 2				
reaction time	0.172	interval		1.22	1.17	1.18	1.15	1.17	1.17	1.20	1.18	1.24	1.54						3.57	3.49	3.62
wind	-0.2 m/s	velocity	4.81	7.49	7.81	7.75	7.95	7.81	7.81	7.62	7.75	7.37	9.10	7.30					7.68	7.86	7.57

Werrmann, Jens (GER) (1985)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10						
FINAL - 2006 German National Championships (Ulm, GER)																						
<i>Killing (2006) - Werrmann und Dittmer im vergleich</i>																						
date	15-Jul-06	time	2.65	3.75	4.80	5.85	6.91	7.98	9.02	10.08	11.15	12.21			13.62		1 / 2					
reaction time	0.137	interval		1.10	1.05	1.05	1.06	1.07	1.04	1.06	1.07	1.06	1.41	PB					3.20	3.17	3.19	
wind	1.0 m/s	velocity	5.18	8.31	8.70	8.70	8.62	8.54	8.79	8.62	8.54	8.62	9.94	8.08					8.57	8.65	8.60	
Heat 1 - 2006 German National Championships (Ulm, GER)																						
<i>Killing (2006) - Werrmann und Dittmer im vergleich</i>																						
date	15-Jul-06	time	2.68	3.78	4.84	5.90	6.95	8.03	9.09	10.16	11.24	12.37			13.78		1 / 1					
reaction time	0.146	interval		1.10	1.06	1.06	1.05	1.08	1.06	1.07	1.08	1.13	1.41	PB						3.22	3.19	3.28
wind	-0.3 m/s	velocity	5.12	8.31	8.62	8.62	8.70	8.46	8.62	8.54	8.46	8.09	9.94	7.98					8.52	8.60	8.36	

Whitely, Aaron (USA)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10					
FINAL - 2003 USATF National Junior Championships (Palo Alto, CA) (99cm)																					
<i>USATF Women's Sprint Development (2003)</i>																					
date	21-Jun-03	time	2.68	3.77	4.90	5.96	7.07	8.19	9.33	10.46	11.64	12.82			14.48		3 / 6				
reaction time		interval		1.09	1.13	1.06	1.11	1.12	1.14	1.13	1.18	1.18	1.66						3.28	3.37	3.49
wind	-2.4 m/s	velocity	5.12	8.39	8.09	8.62	8.23	8.16	8.02	8.09	7.75	7.75	8.45	7.60					8.36	8.14	7.86

Wiberg, Nicklas (SWE) (1985)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10					
Decathlon - Heat 5 - 2009 IAAF World Championships (Berlin, GER)																					
<i>Graubner (2009) - biomechanical analyses at the 12th IAAF world championships</i>																					
date	20-Aug-09	time	2.84	4.00	5.11	6.20	7.33	8.48	9.64	10.86	12.02	13.22			14.75		7 / 3				
reaction time	0.208	interval		1.16	1.11	1.09	1.13	1.15	1.16	1.22	1.16	1.20	1.53						3.36	3.44	3.58
wind	0.3 m/s	velocity	4.83	7.88	8.23	8.39	8.09	7.95	7.88	7.49	7.88	7.62	9.16	7.46					8.16	7.97	7.66

Widlund, Hampus (SWE) (1993)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10					
FINAL - 2013 Windsprint (Sundsvall, SWE)																					
<i>(2013) - www.ssg.se/windsprint/Splittider/</i>																					
date	28-Jul-13	time	2.76	3.89	5.00	6.11	7.23	8.38	9.53	10.65	11.78	12.93			14.46		1 / 7				
reaction time		interval	7 steps	1.13	1.11	1.11	1.12	1.15	1.15	1.12	1.13	1.15	1.53						3.35	3.42	3.40
wind	1.7 m/s	velocity	4.97	8.09	8.23	8.23	8.16	7.95	7.95	8.16	8.09	7.95	9.16	7.61					8.19	8.02	8.06

Wignall, Maurice (JAM) (1976)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10			
FINAL - 2010 IAAF World Indoor Championships (Doha, QAT)																			
<i>Kuitunen (2010) - biomechanical analysis of the 14th IAAF World Indoor championships</i>																			
date	14-Mar-10	time	2.60	3.66	4.68	5.70	6.75								7.60		1 / 6		
reaction time	0.135	interval		1.06	1.02	1.02	1.05						0.85						3.10
		velocity	5.28	8.62	8.96	8.96	8.70						11.44	7.89					8.85

FINAL - 2010 GE Galan (Stockholm, SWE)*Blomkvist (2010) - www.sub13.se*

Heat 5 - 2024 Olympic Games (Paris, FRA)

Paris 2024 Olympic Games - Results Book (2024)

date	04-Aug-24	time	2.37	3.46	4.53	5.58	6.62	7.69	8.75	9.84	10.94	12.04	13.63	2 / 5				
reaction time	0.153	interval		1.09	1.07	1.05	1.04	1.07	1.06	1.09	1.10	1.10	1.59			3.21	3.17	3.29
wind	0.7 m/s	velocity	5.79	8.39	8.54	8.70	8.79	8.54	8.62	8.39	8.31	8.31	8.82	8.07		8.54	8.65	8.33

Wilson, De'vion (USA) (2000)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

FINAL - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)

Henson (2024) - Athlete First: 2024 year end hurdle report

date	28-Jun-24	time	2.56	3.64	4.67	5.71	6.72	7.74	8.76	9.78	10.81	11.86	13.28	9 / 8				
reaction time		interval	7 steps	1.08	1.03	1.04	1.01	1.02	1.02	1.02	1.03	1.05	1.42			3.15	3.05	3.10
wind	2.0 m/s	velocity	5.36	8.46	8.87	8.79	9.05	8.96	8.96	8.96	8.87	8.70	9.87	8.28		8.70	8.99	8.85

Heat 3 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)

Henson (2024) - Athlete First: 2024 year end hurdle report

date	24-Jun-24	time	2.54	3.63	4.66	5.67	6.70	7.73	8.73	9.78	10.83	11.93	13.34	6 / 3				
reaction time		interval	7 steps	1.09	1.03	1.01	1.03	1.03	1.00	1.05	1.05	1.10	1.41			3.13	3.06	3.20
wind	1.8 m/s	velocity	5.40	8.39	8.87	9.05	8.87	8.87	9.14	8.70	8.70	8.31	9.94	8.25		8.76	8.96	8.57

FINAL - 2024 NCAA Championships (Eugene, OR) (TV Analysis)

Henson (2024) - Athlete First: 2024 year end hurdle report

date	07-Jun-24	time	2.53	3.58	4.60	5.60	6.61	7.61	8.62	9.74	10.84	11.91	13.36	4 / 5				
reaction time		interval	7 steps	1.05	1.02	1.00	1.01	1.00	1.01	1.12	1.10	1.07	1.45			3.07	3.02	3.29
wind	0.1 m/s	velocity	5.42	8.70	8.96	9.14	9.05	9.14	9.05	8.16	8.31	8.54	9.67	8.23		8.93	9.08	8.33

FINAL - 2023 NCAA Championships (Austin, TX) (TV Analysis)

Henson (2023) - Athlete First: 2023 year end hurdle report

date	09-Jun-23	time	2.50	3.57	4.60	5.64	6.64	7.64	8.65	9.69	10.72	11.78	13.26	2 / 2				
reaction time		interval	7 steps	1.07	1.03	1.04	1.00	1.00	1.01	1.04	1.03	1.06	1.48	PB		3.14	3.01	3.13
wind	1.8 m/s	velocity	5.49	8.54	8.87	8.79	9.14	9.14	9.05	8.79	8.87	8.62	9.47	8.30		8.73	9.11	8.76

Semi-Final 2 - 2022 USATF National Championships (Eugene, OR)

USATF (2022) - Results powered by Karmarush.com

date	26-Jun-22	time	2.58	3.70	4.77	5.80	6.87	7.94	9.01	10.10	11.17	12.28	13.86	9 / 8				
reaction time		interval		1.12	1.07	1.03	1.07	1.07	1.07	1.09	1.07	1.11	1.58			3.22	3.21	3.27
wind	0.1 m/s	velocity	5.32	8.16	8.54	8.87	8.54	8.54	8.54	8.39	8.54	8.23	8.87	7.94		8.52	8.54	8.39

Wilson, Ryan (USA) (1980)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

FINAL - 2013 IAAF World Championships (Moscow, RUS) (TV Analysis)

Henson (2021) - Athlete First: major championships report

date	12-Aug-13	time	2.52	3.56	4.56	5.54	6.52	7.50	8.50	9.52	10.54	11.62	13.13	9 / 2				
reaction time	0.167	interval	7 steps	1.04	1.00	0.98	0.98	0.98	1.00	1.02	1.02	1.08	1.51			3.02	2.96	3.12
wind	0.3 m/s	velocity	5.44	8.79	9.14	9.33	9.33	9.33	9.14	8.96	8.96	8.46	9.28	8.38		9.08	9.26	8.79

FINAL - 2012 Memorial Van Damme (Brussels, BEL) (TV Analysis)

Henson (2020) - Athlete First: 2012 Aries Merritt world record season

date	07-Sep-12	time	2.52	3.56	4.56	5.56	6.58	7.60	8.64	9.66	10.70	11.76	13.26	8 / 7				
reaction time	0.144	interval	7 steps	1.04	1.00	1.00	1.02	1.02	1.04	1.02	1.04	1.06	1.50			3.04	3.08	3.12
wind	0.3 m/s	velocity	5.44	8.79	9.14	9.14	8.96	8.96	8.79	8.96	8.79	8.62	9.35	8.30		9.02	8.90	8.79

FINAL - 2012 ISTAF (Berlin, GER) (TV Analysis)

Henson (2021) - Athlete First: 2012 Aries Merritt world record season

date	02-Sep-12	time	2.57	3.63	4.67	5.70	6.70	7.74	8.74	9.77	10.84	11.91	13.45	7 / 2				
reaction time	0.192	interval	7 steps	1.06	1.04	1.03	1.00	1.04	1.00	1.03	1.07	1.07	1.54			3.13	3.04	3.17
wind	1.2 m/s	velocity	5.34	8.62	8.79	8.87	9.14	8.79	9.14	8.87	8.54	8.54	9.10	8.18		8.76	9.02	8.65

FINAL - 2012 AVIVA Grand Prix (Birmingham, GBR) (TV Analysis)

Henson (2020) - Athlete First: 2012 Aries Merritt world record season

date	26-Aug-12	time	2.54	3.60	4.63	5.64	6.64	7.66	8.70	9.73	10.77	11.83	13.34	1 / 4				
reaction time	0.156	interval	7 steps	1.06	1.03	1.01	1.00	1.02	1.04	1.03	1.04	1.06	1.51			3.10	3.06	3.13
wind	-0.9 m/s	velocity	5.40	8.62	8.87	9.05	9.14	8.96	8.79	8.87	8.79	8.62	9.28	8.25		8.85	8.96	8.76

FINAL - 2012 AVIVA London Grand Prix (London, GBR) (TV Analysis)

Henson (2020) - Athlete First: 2012 Aries Merritt world record season

date	13-Jul-12	time	2.52	3.56	4.60	5.58	6.56	7.56	8.58	9.60	10.64	11.70	13.18	7 / 3				
reaction time	0.153	interval	7 steps	1.04	1.04	0.98	0.98	1.00	1.02	1.02	1.04	1.06	1.48			3.06	3.00	3.12
wind	0.6 m/s	velocity	5.44	8.79	8.79	9.33	9.33	9.14	8.96	8.96	8.79	8.62	9.47	8.35		8.96	9.14	8.79

Heat 2 - 2012 AVIVA London Grand Prix (London, GBR) (TV Analysis)

Henson (2021) - Athlete First: 2012 Aries Merritt world record season

date	13-Jul-12	time	2.56	3.60	4.60	5.60	6.60	7.62	8.64	9.68	10.72	11.78	13.28	5 / 3				
reaction time	0.157	interval	7 steps	1.04	1.00	1.00	1.00	1.02	1.02	1.04	1.04	1.06	1.50			3.04	3.04	3.14
wind	-0.9 m/s	velocity	5.36	8.79	9.14	9.14	9.14	8.96	8.96	8.79	8.79	8.62	9.35	8.28		9.02	9.02	8.73

FINAL - 2012 USA Olympic Trials (Eugene, OR)

Henson (2020) - Athlete First: 2012 Aries Merritt world record season

date	30-Jun-12	time	2.43	3.45	4.45	5.42	6.40	7.39	8.37	9.47	10.54	11.61	13.24	7 / 7				
reaction time	0.179	interval	7 steps	1.02	1.00	0.97	0.98	0.99	0.98	1.10	1.07	1.07	1.63			2.99	2.95	3.24
wind	1.2 m/s	velocity	5.65	8.96	9.14	9.42	9.33	9.23	9.33	8.31	8.54	8.54	8.60	8.31		9.17	9.29	8.46

FINAL - 2012 Prefontaine Classic (Eugene, OR) (TV Analysis)

Henson (2020) - Athlete First: 2012 Aries Merritt world record season

date	02-Jun-12	time	2.62	3.66	4.68	5.68	6.68	7.70	8.74	9.76	10.80	11.88	13.29	8 / 6				
reaction time	0.194	interval	7 steps	1.04	1.02	1.00	1.00	1.02	1.04	1.02	1.04	1.08	1.41			3.06	3.06	3.14
wind	2.4 m/s	velocity	5.24	8.79	8.96	9.14	9.14	8.96	8.79	8.96	8.79	8.46	9.94	8.28		8.96	8.96	8.73

FINAL - 2009 ISTAF (Berlin, GER)Graubner (2009) - <http://www.fgs.uni-halle.de>

date	14-Jun-09	time	2.59	3.64	4.65	5.66	6.65	7.69	8.71	9.73	10.77	11.83	13.21	6 / 2			
reaction time	0.171	interval		1.05	1.01	1.01	0.99	1.04	1.02	1.02	1.04	1.06	1.38		3.07	3.05	3.12
wind	0.7 m/s	velocity	5.30	8.70	9.05	9.05	9.23	8.79	8.96	8.96	8.79	8.62	10.16	8.33	8.93	8.99	8.79

FINAL - 2008 IAAF World Athletics Final (Stuttgart, GER)Graubner (2009) - <http://www.fgs.uni-halle.de>

date	14-Sep-08	time	2.71	3.78	4.80	5.83	6.85	7.88	8.92	9.98	11.05	12.13	13.54	3 / 3			
reaction time	0.163	interval		1.07	1.02	1.03	1.02	1.03	1.04	1.06	1.07	1.08	1.41		3.12	3.09	3.21
wind	-1.3 m/s	velocity	5.06	8.54	8.96	8.87	8.96	8.87	8.79	8.62	8.54	8.46	9.94	8.12	8.79	8.87	8.54

FINAL - 2007 IAAF World Athletics Final (Stuttgart, GER)Graubner (2007) - <http://www.fgs.uni-halle.de>

date	23-Sep-07	time	2.67	3.71	4.73	5.74	6.75	7.75	8.75	9.77			dnf	6 / --			
reaction time	0.142	interval		1.04	1.02	1.01	1.01	1.00	1.00	1.02					3.07	3.01	
wind	0.0 m/s	velocity	5.14	8.79	8.96	9.05	9.05	9.14	9.14	8.96					8.93	9.11	

FINAL - 2007 USATF National Championships (Indianapolis, IN)

USATF Men's Hurdle Development (2007)

date	24-Jun-07	time	2.62	3.79	4.80	5.91	7.02	8.41					dnf	1 / --			
reaction time		interval		1.17	1.01	1.11	1.11	1.39							3.29		
wind	0.5 m/s	velocity	5.24	7.81	9.05	8.23	8.23	6.58							8.33		

Semi-Final 2 - 2007 USATF National Championships (Indianapolis, IN)

USATF Men's Hurdle Development (2007)

date	24-Jun-07	time	2.65	3.70	4.74	5.74	6.72	7.74	8.78	9.81	10.86	11.91	13.33	3 / 3			
reaction time		interval		1.05	1.04	1.00	0.98	1.02	1.04	1.03	1.05	1.05	1.42		3.09	3.04	3.13
wind	-0.9 m/s	velocity	5.18	8.70	8.79	9.14	9.33	8.96	8.79	8.87	8.70	8.70	9.87	8.25	8.87	9.02	8.76

Heat 3 - 2007 USATF National Championships (Indianapolis, IN)

USATF Men's Hurdle Development (2007)

date	23-Jun-07	time	2.65	3.70	4.77	5.86	6.89	7.93	8.98	10.04	11.11	12.18	13.64	5 / 2			
reaction time		interval		1.05	1.07	1.09	1.03	1.04	1.05	1.06	1.07	1.07	1.46		3.21	3.12	3.20
wind	-3.2 m/s	velocity	5.18	8.70	8.54	8.39	8.87	8.79	8.70	8.62	8.54	8.54	9.60	8.06	8.54	8.79	8.57

FINAL - 2006 USATF National Championships (Indianapolis, IN)

USATF Men's Hurdle Development (2006)

date	25-Jun-06	time	2.62	3.65	4.66	5.66	6.66	7.64	8.64	9.68	10.71	11.76	13.22	1 / 3			
reaction time		interval		1.03	1.01	1.00	1.00	0.98	1.00	1.04	1.03	1.05	1.46		PB	3.04	2.98
wind	-0.4 m/s	velocity	5.24	8.87	9.05	9.14	9.14	9.33	9.14	8.79	8.87	8.70	9.60	8.32		9.02	9.20

Wilt, Caleb (USA) (1997)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

Semi-Final 2 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)

CAA Hurdle Development (2020)

date	15-Feb-20	time	2.58	3.67	4.75	5.82	6.89						7.85	7 / 6			
reaction time	0.112	interval	7 Steps	1.09	1.08	1.07	1.07						0.96		3.24		
		velocity	5.32	8.39	8.46	8.54	8.54						10.13	7.64	8.46		

Heat 1 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)

CAA Hurdle Development (2020)

date	14-Feb-20	time	2.59	3.65	4.74	5.80	6.87						7.82	2 / 3			
reaction time	0.144	interval	7 Steps	1.06	1.09	1.06	1.07						0.95		=PB	3.21	
		velocity	5.30	8.62	8.39	8.62	8.54						10.23	7.67		8.54	

Wright, Don (AUS) (1959)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

Semi-Final 2 - 1983 IAAF World Championships (Helsinki, FIN)

Knoke (1984) - the hurdles

date	12-Aug-83	time	2.66	3.82	4.96	5.98	7.04	8.42	9.57	10.58	11.72	12.88	14.28	3 / 7			
reaction time		interval		1.16	1.14	1.02	1.06	1.38	1.15	1.01	1.14	1.16	1.40		3.32	3.59	3.31
wind	-0.7 m/s	velocity	5.16	7.88	8.02	8.96	8.62	6.62	7.95	9.05	8.02	7.88	10.01	7.70	8.26	7.64	8.28

Heat 4 - 1983 IAAF World Championships (Helsinki, FIN)

Knoke (1984) - the hurdles

date	11-Aug-83	time	2.55	3.68	4.77	5.75	6.81	7.82	9.00	10.04	11.10	12.19	13.70	1 / 2			
reaction time		interval		1.13	1.09	0.98	1.06	1.01	1.18	1.04	1.06	1.09	1.51		3.20	3.25	3.19
wind	2.1 m/s	velocity	5.38	8.09	8.39	9.33	8.62	9.05	7.75	8.79	8.62	8.39	9.28	8.03	8.57	8.44	8.60

Wu Zhenhua (CHN) (1998)

H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane / Place H1-H4 H4-H7 H7-H10

FINAL - 2021 Chinese National Championships (Chongqing, CHN)

CAA Hurdle Development (2021)

date	25-Jun-21	time	2.65	3.75	4.82	5.90	6.99	8.07	9.16	10.26	11.38	12.53	13.98	2 / 7			
reaction time	0.164	interval		1.10	1.07	1.08	1.09	1.08	1.09	1.10	1.12	1.15	1.45		PB	3.25	3.26
wind	1.6 m/s	velocity	5.18	8.31	8.54	8.46	8.39	8.46	8.39	8.31	8.16	7.95	9.67	7.87		8.44	8.41

Heat 3 - 2021 Chinese National Championships (Chongqing, CHN)

CAA Hurdle Development (2021)

date	25-Jun-21	time	2.69	3.77	4.87	5.94	7.02	8.11	9.19	10.29	11.38	12.51	14.01	3 / 4			
reaction time	0.201	interval		1.08	1.10	1.07	1.08	1.09	1.08	1.10	1.09	1.13	1.50		PB	3.25	3.25
wind	0.5 m/s	velocity	5.10	8.46	8.31	8.54	8.46	8.39	8.46	8.31	8.39	8.09	9.35	7.85		8.44	8.44

FINAL - 2021 East China District Meeting (Zhaoqing, CHN)

CAA Hurdle Development (2021)

date	24-Apr-21	time	2.70	3.79	4.90	5.98	7.06	8.16	9.26	10.35	11.46	12.59	14.04	9 / 4			
reaction time	0.174	interval		1.09	1.11	1.08	1.08	1.10	1.10	1.09	1.11	1.13	1.45		PB	3.28	3.28
wind	-0.3 m/s	velocity	5.08	8.39	8.23	8.46	8.46	8.31	8.31	8.39	8.23	8.09	9.67	7.83		8.36	8.36

Heat 1 - 2021 East China District Meeting (Zhaoqing, CHN)

date	24-Apr-21	time	2.68	3.80	4.88	5.98	7.08	8.20	9.32	10.44	11.59	12.72		14.21
reaction time	0.156	interval		1.12	1.08	1.10	1.10	1.12	1.12	1.12	1.15	1.13	1.49	
wind	-1.1 m/s	velocity	5.12	8.16	8.46	8.31	8.31	8.16	8.16	8.16	7.95	8.09	9.41	7.74

CAA Hurdle Development (2021)

9 / 3			
	3.30	3.34	3.40
	8.31	8.21	8.06

Heat 2 - 2020 Chinese National Championships (Shaoxing, CHN)

date	16-Sep-20	time	2.73	3.89	5.03	6.14	7.27	8.39	9.59	10.79	11.97	13.18		14.73
reaction time	0.150	interval		1.16	1.14	1.11	1.13	1.12	1.20	1.20	1.18	1.21	1.55	
wind	-0.5 m/s	velocity	5.03	7.88	8.02	8.23	8.09	8.16	7.62	7.62	7.75	7.55	9.05	7.47

CAA Hurdle Development (2020)

5 / 8			
	3.41	3.45	3.59
	8.04	7.95	7.64

FINAL - 2019 Chinese National Grand Prix Final (Daqing, CHN)

date	24-Aug-19	time	2.74	3.87	5.00	6.12	7.23	8.36	9.50	10.73	11.92	13.16		14.83
reaction time	0.184	interval		1.13	1.13	1.12	1.11	1.13	1.14	1.23	1.19	1.24	1.67	
wind	-0.1 m/s	velocity	5.01	8.09	8.09	8.16	8.23	8.09	8.02	7.43	7.68	7.37	8.40	7.42

CAA Hurdle Development (2019)

9 / 8			
	3.38	3.38	3.66
	8.11	8.11	7.49

Heat 1 - 2019 Chinese National Grand Prix Final (Daqing, CHN)

date	23-Aug-19	time	2.74	3.84	4.95	6.06	7.20	8.31	9.44	10.59	11.73	12.88		14.41
reaction time	0.175	interval		1.10	1.11	1.11	1.14	1.11	1.13	1.15	1.14	1.15	1.53	
wind	-0.2 m/s	velocity	5.01	8.31	8.23	8.23	8.02	8.23	8.09	7.95	8.02	7.95	9.16	7.63

CAA Hurdle Development (2019)

9 / 4			
	3.32	3.38	3.44
	8.26	8.11	7.97

FINAL - 2019 Chinese World Championship Trials (Shenyang, CHN)

date	02-Aug-19	time	2.70	3.82	4.93	6.02	7.12	8.21	9.32	10.43	11.58	12.75		14.25
reaction time	0.151	interval		1.12	1.11	1.09	1.10	1.09	1.11	1.11	1.15	1.17	1.50	
wind	0.0 m/s	velocity	5.08	8.16	8.23	8.39	8.31	8.39	8.23	8.23	7.95	7.81	9.35	7.72

CAA Hurdle Development (2019)

7 / 7			
	3.32	3.30	3.43
	8.26	8.31	7.99

Heat 2 - 2019 Chinese World Championship Trials (Shenyang, CHN)

date	02-Aug-19	time	2.74	3.87	4.98	6.10	7.21	8.34	9.48	10.61	11.74	12.91		14.43
reaction time	0.174	interval		1.13	1.11	1.12	1.11	1.13	1.14	1.13	1.13	1.17	1.52	
wind	-0.2 m/s	velocity	5.01	8.09	8.23	8.16	8.23	8.09	8.02	8.09	8.09	7.81	9.22	7.62

CAA Hurdle Development (2019)

8 / 3			
	3.36	3.38	3.43
	8.16	8.11	7.99

Heat 2 - 2019 Chinese National Championships (Shenyang, CHN)

date	08-Jul-19	time	2.70	3.81	4.94	6.04	7.20	8.34	9.51	10.68	11.86	13.05		14.69
reaction time	0.157	interval		1.11	1.13	1.10	1.16	1.14	1.17	1.17	1.18	1.19	1.64	
wind	0.4 m/s	velocity	5.08	8.23	8.09	8.31	7.88	8.02	7.81	7.81	7.75	7.68	8.55	7.49

CAA Hurdle Development (2019)

7 / 6			
	3.34	3.47	3.54
	8.21	7.90	7.75

FINAL - 2019 Chinese National Grand Prix 4 (Luoyang, CHN)

date	30-May-19	time	2.67	3.78	4.87	5.97	7.06	8.17	9.27	10.36	11.46	12.63		14.09
reaction time	0.145	interval		1.11	1.09	1.10	1.09	1.11	1.10	1.09	1.10	1.17	1.46	PB
wind	0.0 m/s	velocity	5.14	8.23	8.39	8.31	8.39	8.23	8.31	8.39	8.31	7.81	9.60	7.81

CAA Hurdle Development (2019)

7 / 5			
	3.30	3.30	3.36
	8.31	8.31	8.16

FINAL - 2019 Chinese National Grand Prix 2 (Huangshi, CHN)

date	13-Apr-19	time	2.72	3.81	4.92	6.03	7.10	8.19	9.34	10.45	11.57	12.73		14.19
reaction time	0.178	interval		1.09	1.11	1.11	1.07	1.09	1.15	1.11	1.12	1.16	1.46	PB
wind	-0.3 m/s	velocity	5.04	8.39	8.23	8.23	8.54	8.39	7.95	8.23	8.16	7.88	9.60	7.75

CAA Hurdle Development (2019)

8 / 6			
	3.31	3.31	3.39
	8.28	8.28	8.09

Heat 4 - 2019 Chinese National Grand Prix 2 (Huangshi, CHN)

date	13-Apr-19	time	2.70	3.80	4.90	5.99	7.11	8.22	9.36	10.46	11.60	12.72		14.23
reaction time	0.174	interval		1.10	1.10	1.09	1.12	1.11	1.14	1.10	1.14	1.12	1.51	PB
wind	-0.8 m/s	velocity	5.08	8.31	8.31	8.39	8.16	8.23	8.02	8.31	8.02	8.16	9.28	7.73

CAA Hurdle Development (2019)

6 / 1			
	3.29	3.37	3.36
	8.33	8.14	8.16

B-FINAL - 2019 Chinese Indoor National Grand Prix 4 (Xi'an, CHN)

date	4-Mar-19	time	2.66	3.80	4.91	6.03	7.11							8.07
reaction time		interval		1.14	1.11	1.12	1.08						0.96	PB
		velocity	5.16	8.02	8.23	8.16	8.46						10.13	7.43

CAA Hurdle Development (2019)

5 / 3			
	3.37		
	8.14		

Heat 1 - 2018 Chinese National Championships (Taiyuan, CHN)

date	15-Sep-18	time	2.72	3.84	4.96	6.06	7.17	8.31	9.43	10.56	11.68	12.84		14.36
reaction time		interval		1.12	1.12	1.10	1.11	1.14	1.12	1.13	1.12	1.16	1.52	
wind	-0.2 m/s	velocity	5.04	8.16	8.16	8.31	8.23	8.02	8.16	8.09	8.16	7.88	9.22	7.66

Henson (2018) - coaching observations

6 / 7			
	3.34	3.37	3.41
	8.21	8.14	8.04

Xiang Qingqiang (CHN) (1999)**Decathlon - Heat 1 - 2021 Chinese National Championships (Chongqing, CHN)**

date	27-Jun-21	time	2.87	4.15	5.40	6.66	7.89	9.14	10.38	11.66	12.96	14.26		15.98
reaction time	0.170	interval		1.28	1.25	1.26	1.23	1.25	1.24	1.28	1.30	1.30	1.72	
wind	0.5 m/s	velocity	4.78	7.14	7.31	7.25	7.43	7.31	7.37	7.14	7.03	7.03	8.15	6.88

CAA Hurdle Development (2021)

6 / 6			
	3.79	3.72	3.88
	7.23	7.37	7.07

Decathlon - Heat 1 - 2019 Chinese National Grand Prix Final (Daqing, CHN)

date	23-Aug-19	time	2.90	4.12	5.37	6.65	7.96	9.28	10.59	11.89	13.28	14.65		16.43
reaction time	0.183	interval		1.22	1.25	1.28	1.31	1.32	1.31	1.30	1.39	1.37	1.78	
wind	?? m/s	velocity	4.73	7.49	7.31	7.14	6.98	6.92	6.98	7.03	6.58	6.67	7.88	6.70

CAA Hurdle Development (2019)

3 / 6			
	3.75	3.94	4.06
	7.31	6.96	6.75

Xie Wenjun (CHN) (1990)**FINAL - 2021 Flavour Hangzhou Athletics Meeting (Hangzhou, CHN)**

CAA Hurdle Development (2021)

															258 of 283	M110H athlete		
date	09-Jul-21	time	2.64	3.70	4.74	5.77	6.79	7.82	8.86	9.91	10.98	12.06		13.49	4 / 1			
reaction time	0.154	interval		1.06	1.04	1.03	1.02	1.03	1.04	1.05	1.07	1.08	1.43			3.13	3.09	3.20
wind	0.4 m/s	velocity	5.20	8.62	8.79	8.87	8.96	8.87	8.79	8.70	8.54	8.46	9.80	8.15		8.76	8.87	8.57
FINAL - 2020 Chinese Olympic Trials (Shaoxing, CHN)															<i>CAA Hurdle Development (2021)</i>			
date	12-Jun-21	time	2.68	3.77	4.84	5.89	6.96	8.04	9.14	10.27	11.39	12.53		14.06	2 / 6			
reaction time	0.152	interval		1.09	1.07	1.05	1.07	1.08	1.10	1.13	1.12	1.14	1.53			3.21	3.25	3.39
wind	0.9 m/s	velocity	5.12	8.39	8.54	8.70	8.54	8.46	8.31	8.09	8.16	8.02	9.16	7.82		8.54	8.44	8.09
Heat 2 - 2020 Chinese Olympic Trials (Shaoxing, CHN)															<i>CAA Hurdle Development (2021)</i>			
date	12-Jun-21	time	2.59	3.69	4.76	5.83	6.90	8.01	9.13	10.28	11.42	12.59		14.25	8 / 4			
reaction time	0.162	interval		1.10	1.07	1.07	1.07	1.11	1.12	1.15	1.14	1.17	1.66			3.24	3.30	3.46
wind	-0.8 m/s	velocity	5.30	8.31	8.54	8.54	8.54	8.23	8.16	7.95	8.02	7.81	8.45	7.72		8.46	8.31	7.92
FINAL - 2020 Chinese National Championships (Shaoxing, CHN)															<i>CAA Hurdle Development (2020)</i>			
date	16-Sep-20	time	2.57	3.62	4.65	5.68	6.69	7.71	8.73	9.75	10.78	11.83		13.24	5 / 1			
reaction time	0.162	interval	7 steps	1.05	1.03	1.03	1.01	1.02	1.02	1.02	1.03	1.05	1.41			3.11	3.05	3.10
wind	0.4 m/s	velocity	5.34	8.70	8.87	8.87	9.05	8.96	8.96	8.96	8.87	8.70	9.94	8.31		8.82	8.99	8.85
Heat 2 - 2020 Chinese National Championships (Shaoxing, CHN)															<i>CAA Hurdle Development (2020)</i>			
date	16-Sep-20	time	2.60	3.67	4.72	5.77	6.82	7.87	8.94	10.01	11.08	12.18		13.63	2 / 1			
reaction time	0.175	interval	7 steps	1.07	1.05	1.05	1.05	1.05	1.07	1.07	1.07	1.10	1.45			3.17	3.17	3.24
wind	-0.5 m/s	velocity	5.28	8.54	8.70	8.70	8.70	8.70	8.54	8.54	8.54	8.31	9.67	8.07		8.65	8.65	8.46
FINAL - 2020 CAA Shanghai Training Base Permit Meeting (Shanghai, CHN)															<i>Shanghai Sport Institute (2020) - competition analysis</i>			
date	19-Jul-20	time	2.69	3.70	4.70	5.71	6.70	7.70	8.72	9.75	10.77	11.82		13.20	/ 1			
reaction time		interval	7 steps	1.01	1.00	1.01	0.99	1.00	1.02	1.03	1.02	1.05	1.38			3.02	3.01	3.10
wind	2.5 m/s	velocity	5.10	9.05	9.14	9.05	9.23	9.14	8.96	8.87	8.96	8.70	10.16	8.33		9.08	9.11	8.85
FINAL - 2020 Millrose Games (New York, NY) (TV Analysis)															<i>Henson (2020) - Athlete First: 2020 year end hurdle report</i>			
date	08-Feb-20	time	2.53	3.60	4.64	5.67	6.70							7.69	6 / 2			
reaction time	0.156	interval	7 steps	1.07	1.04	1.03	1.03						0.99			3.14		
		velocity	5.42	8.54	8.79	8.87	8.87						9.82	7.80		8.73		
FINAL - 2020 Mountain T's Invitational (Flagstaff AZ) (Altitude)															<i>CAA Hurdle Development (2020)</i>			
date	01-Feb-20	time	2.65	3.70	4.75	5.78	6.82							7.75	4 / 2			
reaction time		interval	7 steps	1.05	1.05	1.03	1.04						0.93			3.13		
		velocity	5.18	8.70	8.70	8.87	8.79						10.45	7.74		8.76		
Heat 3 - 2020 Mountain T's Invitational (Flagstaff AZ) (Altitude)															<i>CAA Hurdle Development (2020)</i>			
date	01-Feb-20	time	2.64	3.74	4.79	5.83	6.87							7.80	4 / 1			
reaction time		interval	7 steps	1.10	1.05	1.04	1.04						0.93			3.19		
		velocity	5.20	8.31	8.70	8.79	8.79						10.45	7.69		8.60		
FINAL - 2019 IAAF World Championships (Doha, QAT)															<i>CAA Hurdle Development (2019)</i>			
date	02-Oct-19	time	2.59	3.64	4.66	5.68	6.69	7.71	8.73	9.76	10.80	11.86		13.29	2 / 5			
reaction time	0.140	interval	7 steps	1.05	1.02	1.02	1.01	1.02	1.02	1.03	1.04	1.06	1.43			3.09	3.05	3.13
wind	0.6 m/s	velocity	5.30	8.70	8.96	8.96	9.05	8.96	8.96	8.87	8.79	8.62	9.80	8.28		8.87	8.99	8.76
Semi-Final 2 - 2019 IAAF World Championships (Doha, QAT)															<i>CAA Hurdle Development (2019)</i>			
date	02-Oct-19	time	2.56	3.60	4.63	5.64	6.66	7.67	8.68	9.69	10.73	11.78		13.22	7 / 3			
reaction time	0.137	interval	7 steps	1.04	1.03	1.01	1.02	1.01	1.01	1.01	1.04	1.05	1.44			3.08	3.04	3.10
wind	0.9 m/s	velocity	5.36	8.79	8.87	9.05	8.96	9.05	9.05	9.05	8.79	8.70	9.74	8.32		8.90	9.02	8.85
FINAL - 2019 AG Memorial van Damme (Brussels, BEL) (TV Analysis)															<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>			
date	06-Sep-19	time	2.54	3.60	4.66	5.70	6.72	7.74	8.80	9.84	10.88	11.98		13.49	4 / 5			
reaction time	0.150	interval	7 steps	1.06	1.06	1.04	1.02	1.02	1.06	1.04	1.04	1.10	1.51			3.16	3.10	3.18
wind	0.0 m/s	velocity	5.40	8.62	8.62	8.79	8.96	8.96	8.62	8.79	8.79	8.31	9.28	8.15		8.68	8.85	8.62
FINAL - 2019 Meeting de Paris (Paris, FRA) (TV Analysis)															<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>			
date	24-Aug-19	time	2.56	3.60	4.66	5.68	6.70	7.74	8.76	9.80	10.86	11.98		13.46	7 / 7			
reaction time	0.162	interval	7 steps	1.04	1.06	1.02	1.02	1.04	1.02	1.04	1.06	1.12	1.48			3.12	3.08	3.22
wind	0.8 m/s	velocity	5.36	8.79	8.62	8.96	8.96	8.79	8.96	8.79	8.62	8.16	9.47	8.17		8.79	8.90	8.52
FINAL - 2019 Müller Grand Prix (Birmingham, GBR) (TV Analysis)															<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>			
date	18-Aug-19	time	2.58	3.63	4.66	5.68	6.70	7.72	8.73	9.77	10.81	11.90		13.43	7 / 3			
reaction time	0.140	interval	7 steps	1.05	1.03	1.02	1.02	1.02	1.01	1.04	1.04	1.09	1.53			3.10	3.05	3.17
wind	-0.2 m/s	velocity	5.32	8.70	8.87	8.96	8.96	8.96	9.05	8.79	8.79	8.39	9.16	8.19		8.85	8.99	8.65
FINAL - 2019 Chinese World Championship Trials (Shenyang, CHN)															<i>CAA Hurdle Development (2019)</i>			
date	02-Aug-19	time	2.61	3.64	4.67	5.70	6.72	7.74	8.77	9.80	10.87	11.97		13.43	4 / 1			
reaction time	0.153	interval	7 steps	1.03	1.03	1.03	1.02	1.02	1.03	1.03	1.07	1.10	1.46			3.09	3.07	3.20
wind	0.0 m/s	velocity	5.26	8.87	8.87	8.87	8.96	8.96	8.87	8.87	8.54	8.31	9.60	8.19		8.87	8.93	8.57

Heat 1 - 2019 Chinese World Championship Trials (Shenyang, CHN)														<i>CAA Hurdle Development (2019)</i>			
date	02-Aug-19	time	2.63	3.72	4.80	5.88	6.97	8.06	9.12	10.21	11.31	12.42	13.94	6 / 1			
reaction time	0.175	interval	7 steps	1.09	1.08	1.08	1.09	1.09	1.06	1.09	1.10	1.11	1.52		3.25	3.24	3.30
wind	-0.3 m/s	velocity	5.22	8.39	8.46	8.46	8.39	8.39	8.62	8.39	8.31	8.23	9.22	7.89	8.44	8.46	8.31
FINAL - 2019 Müller Anniversary Games (London, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>			
date	21-Jul-19	time	2.46	3.53	4.55	5.57	6.58	7.59	8.63	9.66	10.69	11.72	13.28	5 / 1			
reaction time	0.135	interval	7 steps	1.07	1.02	1.02	1.01	1.01	1.04	1.03	1.03	1.03	1.56		3.11	3.06	3.09
wind	0.4 m/s	velocity	5.58	8.54	8.96	8.96	9.05	9.05	8.79	8.87	8.87	8.87	8.99	8.28	8.82	8.96	8.87
FINAL - 2019 Athletissima (Lausanne, SUI) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>			
date	05-Jul-19	time	2.52	3.56	4.60	5.60	6.60	7.64	8.68	9.72	10.76	11.84	13.29	3 / 5			
reaction time	0.135	interval	7 steps	1.04	1.04	1.00	1.00	1.04	1.04	1.04	1.04	1.08	1.45		3.08	3.08	3.16
wind	1.0 m/s	velocity	5.44	8.79	8.79	9.14	9.14	8.79	8.79	8.79	8.79	8.46	9.67	8.28	8.90	8.90	8.68
FINAL - 2019 Prefontaine Classic (Stanford, CA) (TV Analysis)														<i>Henson (2020) - Athlete First: 2019 year end hurdle report</i>			
date	30-Jun-19	time	2.56	3.60	4.63	5.66	6.70	7.73	8.76	9.80	10.83	11.88	13.36	7 / 6			
reaction time	0.175	interval	7 steps	1.04	1.03	1.03	1.04	1.03	1.03	1.04	1.03	1.05	1.48		3.10	3.10	3.12
wind	0.3 m/s	velocity	5.36	8.79	8.87	8.87	8.79	8.87	8.87	8.79	8.87	8.70	9.47	8.23	8.85	8.85	8.79
FINAL - 2019 Shanghai Diamond League (Shanghai, CHN)														<i>CAA Hurdle Development (2019)</i>			
date	18-May-19	time	2.58	3.62	4.62	5.64	6.62	7.64	8.64	9.68	10.70	11.78	13.17	3 / 2			
reaction time	0.145	interval	7 steps	1.04	1.00	1.02	0.98	1.02	1.00	1.04	1.02	1.08	1.39	PB	3.06	3.00	3.14
wind	0.7 m/s	velocity	5.32	8.79	9.14	8.96	9.33	8.96	9.14	8.79	8.96	8.46	10.09	8.35	8.96	9.14	8.73
FINAL - 2019 Asian Athletics Championships (Doha, QAT)														<i>CAA Hurdle Development (2019)</i>			
date	24-Apr-19	time	2.55	3.58	4.63	5.63	6.64	7.65	8.65	9.67	10.72	11.79	13.21	7 / 1			
reaction time	0.151	interval	7 steps	1.03	1.05	1.00	1.01	1.01	1.00	1.02	1.05	1.07	1.42	CR / PB	3.08	3.02	3.14
wind	1.7 m/s	velocity	5.38	8.87	8.70	9.14	9.05	9.05	9.14	8.96	8.70	8.54	9.87	8.33	8.90	9.08	8.73
Heat 3 - 2019 Asian Athletics Championships (Doha, QAT)														<i>CAA Hurdle Development (2019)</i>			
date	23-Apr-19	time	2.61	3.67	4.71	5.77	6.79	7.82	8.86	9.91	10.95	12.01	13.47	3 / 1			
reaction time	0.159	interval	7 steps	1.06	1.04	1.06	1.02	1.03	1.04	1.05	1.04	1.06	1.46		3.16	3.09	3.15
wind	1.6 m/s	velocity	5.26	8.62	8.79	8.62	8.96	8.87	8.79	8.70	8.79	8.62	9.60	8.17	8.68	8.87	8.70
FINAL - 2018 Chinese National Championships (Taiyuan, CHN)														<i>Henson (2018) - coaching observations</i>			
date	16-Sep-18	time	2.59	3.64	4.67	5.71	6.72	7.76	8.77	9.83	10.88	11.96	13.40	6 / 1			
reaction time	0.159	interval	7 steps	1.05	1.03	1.04	1.01	1.04	1.01	1.06	1.05	1.08	1.44		3.12	3.06	3.19
wind	-0.3 m/s	velocity	5.30	8.70	8.87	8.79	9.05	8.79	9.05	8.62	8.70	8.46	9.74	8.21	8.79	8.96	8.60
Heat 1 - 2018 Chinese National Championships (Taiyuan, CHN)														<i>Henson (2018) - coaching observations</i>			
date	15-Sep-18	time	2.63	3.69	4.74	5.77	6.82	7.87	8.93	10.02	11.11	12.21	13.76	5 / 1			
reaction time	0.159	interval	7 steps	1.06	1.05	1.03	1.05	1.05	1.06	1.09	1.09	1.10	1.55		3.14	3.16	3.28
wind	-0.2 m/s	velocity	5.22	8.62	8.70	8.87	8.70	8.70	8.62	8.39	8.39	8.31	9.05	7.99	8.73	8.68	8.36
FINAL - 2018 Asian Games (Jakarta, INA)														<i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>			
date	28-Aug-18	time	2.58	3.63	4.66	5.69	6.71	7.73	8.76	9.81	10.85	11.93	13.34	6 / 1			
reaction time	0.142	interval	7 steps	1.05	1.03	1.03	1.02	1.02	1.03	1.05	1.04	1.08	1.41		3.11	3.07	3.17
wind	0.0 m/s	velocity	5.32	8.70	8.87	8.87	8.96	8.96	8.87	8.70	8.79	8.46	9.94	8.25	8.82	8.93	8.65
FINAL - 2017 Chinese National Games (Tianjin, CHN)														<i>Henson (2017) - coaching observations</i>			
date	03-Sep-17	time	2.68	3.75	4.79	5.80	6.82	7.86	8.89	9.92	10.99	12.07	13.52	6 / 1			
reaction time		interval		1.07	1.04	1.01	1.02	1.04	1.03	1.03	1.07	1.08	1.45		3.12	3.09	3.18
wind	0.3 m/s	velocity	5.12	8.54	8.79	9.05	8.96	8.79	8.87	8.87	8.54	8.46	9.67	8.14	8.79	8.87	8.62
Semi-Final 3 - 2017 IAAF World Championships (London, GBR)														<i>Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 110m Hurdles</i>			
date	06-Aug-17	time	2.50	3.60	4.63	5.65	6.67	7.70	8.71	9.74	10.78	11.85	13.36	4 / 3			
reaction time	0.171	interval		1.10	1.03	1.02	1.02	1.03	1.01	1.03	1.04	1.07	1.51		3.15	3.06	3.14
wind	0.3 m/s	velocity	5.49	8.31	8.87	8.96	8.96	8.87	9.05	8.87	8.79	8.54	9.28	8.23	8.70	8.96	8.73
FINAL - 2017 Müller's Anniversary Games (London, GBR) (TV Analysis)														<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>			
date	09-Jul-17	time	2.60	3.66	4.74	5.78	6.82	7.90	8.98	10.08	11.26	12.46	14.34	2 / 9			
reaction time	0.157	interval		1.06	1.08	1.04	1.04	1.08	1.08	1.10	1.18	1.20	1.88		3.18	3.20	3.48
wind	0.0 m/s	velocity	5.28	8.62	8.46	8.79	8.79	8.46	8.46	8.31	7.75	7.62	7.46	7.67	8.62	8.57	7.88
FINAL - 2017 Seiko Golden Grand Prix (Kawasaki, JPN)														<i>(2017) - tfdata-store.com/2017/05/22/post-599/</i>			
date	21-May-17	time	2.61	3.66	4.71	5.75	6.79	7.82	8.86	9.92	10.98	12.06	13.51	3 / 1			
reaction time	0.153	interval		1.05	1.05	1.04	1.04	1.03	1.04	1.06	1.06	1.08	1.45		3.14	3.11	3.20
wind	-1.8 m/s	velocity	5.26	8.70	8.70	8.79	8.79	8.87	8.79	8.62	8.62	8.46	9.67	8.14	8.73	8.82	8.57
FINAL - 2017 Shanghai Diamond League (Shanghai, CHN) (TV Analysis)														<i>Henson (2020) - Athlete First: 2017 year end hurdle report</i>			
date	13-May-17	time	2.56	3.62	4.66	5.66	6.68	7.70	8.72	9.74	10.78	11.86	13.31	2 / 3			

reaction time	0.156	interval	1.06	1.04	1.00	1.02	1.02	1.02	1.02	1.04	1.08	1.45		3.10	3.06	3.14									
wind	0.5 m/s	velocity	5.36	8.62	8.79	9.14	8.96	8.96	8.96	8.96	8.79	8.46	9.67	8.26	8.85	8.96	8.73								
FINAL - 2016 Shanghai Golden Grand Prix (Shanghai, CHN)														<i>Henson (2021) - Athlete First: 2016 year end hurdle report</i>											
date	14-May-16	time	2.52	3.58	4.62	5.64	6.66	7.68	8.70	9.74	10.78	11.84	13.34	8 / 3											
reaction time	0.155	interval	1.06	1.04	1.02	1.02	1.02	1.02	1.04	1.04	1.06	1.50		3.12	3.06	3.14									
wind	1.2 m/s	velocity	5.44	8.62	8.79	8.96	8.96	8.96	8.96	8.79	8.79	8.62	9.35	8.25	8.79	8.96	8.73								
FINAL - 2016 Seiko Golden Grand Prix (Kawasaki, JPN)														<i>Kota (2016) - race analysis of japanese top-ranked men 110m and women 100m hurdlers</i>											
date	08-May-16	time	2.58	3.63	4.66	5.68	6.70	7.72	8.76	9.79	10.85	11.93	13.36	5 / 1											
reaction time	0.160	interval	1.05	1.03	1.02	1.02	1.02	1.04	1.03	1.06	1.08	1.43		3.10	3.08	3.17									
wind	-0.6 m/s	velocity	5.32	8.70	8.87	8.96	8.96	8.96	8.79	8.87	8.62	8.46	9.80	8.23	8.85	8.90	8.65								
FINAL - 2015 Golden Grand Prix (Shanghai, CHN)														<i>Wang (2016) - analysis of technical characteristes and performace prediction of rising star Xie Wenjun in 110m Hurdles</i>											
date	17-May-15	time	2.55	3.58	4.61	5.64	6.65	7.67	8.69	9.74	10.82	11.92	13.36	/ 6											
reaction time	0.165	interval	1.03	1.03	1.03	1.01	1.02	1.02	1.05	1.08	1.10	1.44		3.09	3.05	3.23									
wind	0.4 m/s	velocity	5.38	8.87	8.87	8.87	9.05	8.96	8.96	8.70	8.46	8.31	9.74	8.23	8.87	8.99	8.49								
Semi-Final 2 - 2015 IAAF World Championships (Beijing, CHN)														<i>Xu (2015) - the 15th world track and field special report: Men's and women's hurdle project</i>											
date	27-Aug-15	time	4.70					8.83					11.99			13.39		7 / 6							
reaction time	0.163	interval	6.81					8.85					8.68			10.01		8.22		8.83		3.16			
wind	-0.2 m/s	velocity	6.81					8.85					8.68			10.01		8.22		8.83		3.11		8.68	
FINAL - 2014 Asian Games (Incheon, KOR)														<i>Wang (2016) - comparative analysis of the grey relational grade of segment times and final results of the 110m hurdles</i>											
date	30-Sep-14	time	2.60	3.66	4.70	5.74	6.76	7.80	8.82	9.85	10.90	11.96	13.36	/ 1											
reaction time	0.176	interval	1.06	1.04	1.04	1.02	1.04	1.02	1.03	1.05	1.06	1.40		3.14	3.08	3.14									
wind	0.4 m/s	velocity	5.28	8.62	8.79	8.79	8.96	8.79	8.96	8.87	8.70	8.62	10.01	8.23	8.73	8.90	8.73								
FINAL - 2014 Golden Grand Prix (Shanghai, CHN)														<i>Wang (2016) - comparative analysis of the grey relational grade of segment times and final results of the 110m hurdles</i>											
date	18-May-14	time	2.54	3.60	4.62	5.62	6.62	7.64	8.66	9.70	10.74	11.82	13.23	/ 1											
reaction time	0.136	interval	1.06	1.02	1.00	1.00	1.02	1.02	1.04	1.04	1.08	1.41	PB		3.08	3.04	3.16								
wind	-0.5 m/s	velocity	5.40	8.62	8.96	9.14	9.14	8.96	8.96	8.79	8.79	8.46	9.94	8.31	8.90	9.02	8.68								
FINAL - 2013 Golden Grand Prix (Shanghai, CHN)														<i>Wang (2016) - comparative analysis of the grey relational grade of segment times and final results of the 110m hurdles</i>											
date	18-May-13	time	2.54	3.60	4.63	5.64	6.68	7.70	8.74	9.77	10.81	11.87	13.28	/ 3											
reaction time	0.137	interval	1.06	1.03	1.01	1.04	1.02	1.04	1.03	1.04	1.06	1.41	PB		3.10	3.10	3.13								
wind	-0.5 m/s	velocity	5.40	8.62	8.87	9.05	8.79	8.96	8.79	8.87	8.79	8.62	9.94	8.28	8.85	8.85	8.76								
FINAL - 2013 Chinese National Grand Prix (Zhaoqing, CHN)														<i>Wang (2016) - comparative analysis of the grey relational grade of segment times and final results of the 110m hurdles</i>											
date	28-Apr-12	time	2.60	3.66	4.69	5.75	6.79	7.83	8.87	9.91	10.95	12.03	13.44	/ 1											
reaction time		interval	1.06	1.03	1.06	1.04	1.04	1.04	1.04	1.04	1.08	1.41		3.15	3.12	3.16									
wind	0.1 m/s	velocity	5.28	8.62	8.87	8.62	8.79	8.79	8.79	8.79	8.79	8.46	9.94	8.18	8.70	8.79	8.68								
Semi-Final 2 - 2012 Olympic Games (London, GBR)														<i>Wang (2016) - comparative analysis of the grey relational grade of segment times and final results of the 110m hurdles</i>											
date	08-Aug-12	time	2.60	3.68	4.72	5.73	6.74	7.78	8.80	9.84	10.89	11.96	13.34	9 / 3											
reaction time	0.158	interval	1.08	1.04	1.01	1.01	1.04	1.02	1.04	1.05	1.07	1.38	PB		3.13	3.07	3.16								
wind	0.1 m/s	velocity	5.28	8.46	8.79	9.05	9.05	8.79	8.96	8.79	8.70	8.54	10.16	8.25	8.76	8.93	8.68								
Heat 5 - 2012 Olympic Games (London, GBR)														<i>Wang (2016) - comparative analysis of the grey relational grade of segment times and final results of the 110m hurdles</i>											
date	07-Aug-12	time	2.55	3.61	4.65	5.70	6.75	7.79	8.85	9.89	10.95	12.03	13.43	2 / 3											
reaction time	0.143	interval	1.06	1.04	1.05	1.05	1.04	1.06	1.04	1.06	1.08	1.40		3.15	3.15	3.18									
wind	0.7 m/s	velocity	5.38	8.62	8.79	8.70	8.70	8.79	8.62	8.79	8.62	8.46	10.01	8.19	8.70	8.70	8.62								
FINAL - 2012 Chinese National Grand Prix Final (Fuzhou, CHN)														<i>Wang (2016) - comparative analysis of the grey relational grade of segment times and final results of the 110m hurdles</i>											
date	24-Jun-12	time	2.64	3.70	4.76	5.78	6.80	7.84	8.88	9.92	10.98	12.06	13.42	/ 1											
reaction time		interval	1.06	1.06	1.02	1.02	1.04	1.04	1.04	1.06	1.08	1.36	PB		3.14	3.10	3.18								
wind	0.5 m/s	velocity	5.20	8.62	8.62	8.96	8.96	8.79	8.79	8.79	8.62	8.46	10.31	8.20	8.73	8.85	8.62								
FINAL - 2012 Chinese National Grand Prix (Zibo, CHN)														<i>Wang (2016) - comparative analysis of the grey relational grade of segment times and final results of the 110m hurdles</i>											
date	27-May-12	time	2.64	3.72	4.76	5.82	6.86	7.88	8.92	9.95	11.00	12.08	13.48	/ 1											
reaction time		interval	1.08	1.04	1.06	1.04	1.02	1.04	1.03	1.05	1.08	1.40		3.18	3.10	3.16									
wind	0.1 m/s	velocity	5.20	8.46	8.79	8.62	8.79	8.96	8.79	8.87	8.70	8.46	10.01	8.16	8.62	8.85	8.68								
FINAL - 2012 Golden Grand Prix (Shanghai, CHN) (TV Analysis)														<i>Henson (2020) - Athlete First: 2012 Aries Merritt world record season</i>											
date	19-May-12	time	2.54	3.64	4.68	5.74	6.78	7.82	8.88	9.96	11.06	12.14	13.64	8 / 8											
reaction time	0.179	interval	1.10	1.04	1.06	1.04	1.04	1.06	1.08	1.10	1.08	1.50		3.20	3.14	3.26									
wind	0.4 m/s	velocity	5.40	8.31	8.79	8.62	8.79	8.79	8.62	8.46	8.31	8.46	9.35	8.06	8.57	8.73	8.41								
FINAL - 2012 Chinese National Grand Prix (Wuhan, CHN)														<i>Wang (2016) - comparative analysis of the grey relational grade of segment times and final results of the 110m hurdles</i>											
date	29-Apr-12	time	2.64	3.72	4.76	5.82	6.86	7.88	8.92	9.95	11.00	12.08	13.48	/ 1											
reaction time		interval	1.08	1.04	1.06	1.04	1.02	1.04	1.03	1.05	1.08	1.40		3.18	3.10	3.16									
wind	1.1 m/s	velocity	5.20	8.46	8.79	8.62	8.79	8.96	8.79	8.87	8.70	8.46	10.01	8.16	8.62	8.85	8.68								

FINAL - 2010 Shanghai Diamond League (Shanghai, CHN)*He (2014) - kinematic analysis of Xie Wenjun's hurdle technique*

date	23-May-10	time	2.64	3.54	4.54	5.44	6.64	7.74	8.84	9.84	10.84	11.84	13.58	/ 4			
reaction time	0.165	interval		0.90	1.00	0.90	1.20	1.10	1.10	1.00	1.00	1.00	1.74		2.80	3.40	3.00
wind	-0.4 m/s	velocity	5.20	10.16	9.14	10.16	7.62	8.31	8.31	9.14	9.14	9.14	8.06	8.10	9.79	8.06	9.14

FINAL - 2008 Golden Grand Prix (Shanghai, CHN)*Wang (2016) - comparative analysis of the grey relational grade of segment times and final results of the 110m hurdles*

date	20-Sep-08	time	2.66	3.70	4.74	5.78	6.80	7.84	8.90	9.94	11.04	12.08	13.47	/ 2				
reaction time	0.223	interval		1.04	1.04	1.04	1.02	1.04	1.06	1.04	1.10	1.04	1.39		PB	3.12	3.12	3.18
wind	0.2 m/s	velocity	5.16	8.79	8.79	8.79	8.96	8.79	8.62	8.79	8.31	8.79	10.09	8.17		8.79	8.79	8.62

FINAL - 2008 Good Luck Beijing 2008 Chinese Open (Beijing, CHN)*Wang (2016) - comparative analysis of grey relational grade of segment times & final results of 110m hurdles*

date	23-May-08	time	2.62	3.68	4.74	5.80	6.82	7.86	8.92	9.98	11.04	12.12	13.51	/ 4				
reaction time	0.162	interval		1.06	1.06	1.06	1.02	1.04	1.06	1.06	1.06	1.08	1.39		PB	3.18	3.12	3.20
wind	0.0 m/s	velocity	5.24	8.62	8.62	8.62	8.96	8.79	8.62	8.62	8.62	8.46	10.09	8.14		8.62	8.79	8.57

Xu Jialin (CHN) (2001)**U20 Heat 2 - 2019 Chinese National Youth Games (Taiyuan, CHN) (99cm)** *CAA Hurdle Development (2019)*

date	14-Aug-19	time	2.69	3.81	4.91	6.04	7.17	8.29	9.44	10.59	11.80	12.98	14.63	8 / 6				
reaction time	0.166	interval		1.12	1.10	1.13	1.13	1.12	1.15	1.15	1.21	1.18	1.65		3.35	3.40	3.54	
wind	-0.3 m/s	velocity	5.10	8.16	8.31	8.09	8.09	8.16	7.95	7.95	7.55	7.75	8.50	7.52		8.19	8.06	7.75

Xu Xin (MAC) (2000)**U20 Heat 3 - 2019 Chinese National Youth Games (Taiyuan, CHN) (99cm)** *CAA Hurdle Development (2019)*

date	14-Aug-19	time	2.69	3.87	5.02	6.22	7.44	8.61	9.83	11.06	12.31	13.56	15.26	3 / 7				
reaction time	0.138	interval		1.18	1.15	1.20	1.22	1.17	1.22	1.23	1.25	1.25	1.70		3.53	3.61	3.73	
wind	0.6 m/s	velocity	5.10	7.75	7.95	7.62	7.49	7.81	7.49	7.43	7.31	7.31	8.25	7.21		7.77	7.60	7.35

Xu Zhuoyi (CHN) (2003)**Semi-Final 3 - 2024 Olympic Games (Paris, FRA)** *Paris 2024 Olympc Games - Results Book (2024)*

date	07-Aug-24	time	2.44	3.54	4.58	5.62	6.69	7.74	8.79	9.82	10.85	11.90	13.48	4 / 7				
reaction time	0.166	interval	7 steps	1.10	1.04	1.04	1.07	1.05	1.05	1.03	1.03	1.05	1.58		3.18	3.17	3.11	
wind	0.6 m/s	velocity	5.62	8.31	8.79	8.79	8.54	8.70	8.70	8.87	8.87	8.70	8.87	8.16		8.62	8.65	8.82

Heat 3 - 2024 Olympic Games (Paris, FRA)*Paris 2024 Olympc Games - Results Book (2024)*

date	04-Aug-24	time	2.46	3.55	4.59	5.62	6.63	7.65	8.67	9.68	10.73	11.79	13.40	7 / 1				
reaction time	0.159	interval	7 steps	1.09	1.04	1.03	1.01	1.02	1.02	1.01	1.05	1.06	1.61		3.16	3.05	3.12	
wind	1.1 m/s	velocity	5.58	8.39	8.79	8.87	9.05	8.96	8.96	9.05	8.70	8.62	8.71	8.21		8.68	8.99	8.79

FINAL - 2024 Yangtze River Delta Athletics Diamond Gala (Suzhou, CHN) (TV Analysis)*Omega Timing (2024) - diamond league race analysis*

date	27-Apr-24	time	2.67	3.74	4.80	5.84	6.86	7.91	8.89	9.91	10.96	12.01	13.43	2 / 6				
reaction time	0.155	interval	7 steps	1.07	1.06	1.04	1.02	1.05	0.98	1.02	1.05	1.05	1.42		3.17	3.05	3.12	
wind	0.8 m/s	velocity	5.14	8.54	8.62	8.79	8.96	8.70	9.33	8.96	8.70	8.70	9.87	8.19		8.65	8.99	8.79

FINAL - 2023 Xiamen Diamond League (Xiamen, CHN)*Omega Timing (2023) - diamond league race analysis*

date	02-Sep-23	time	2.49	3.56	4.63	5.68	6.72	7.75	8.80	9.85	10.92	11.98	13.56	9 / 10				
reaction time	0.166	interval	7 steps	1.07	1.07	1.05	1.04	1.03	1.05	1.05	1.07	1.06	1.58		3.19	3.12	3.18	
wind	0.0 m/s	velocity	5.51	8.54	8.54	8.70	8.79	8.87	8.70	8.70	8.54	8.62	8.87	8.11		8.60	8.79	8.62

Heat 1 - 2021 Chinese National Championships (Chongqing, CHN)*CAA Hurdle Development (2021)*

date	25-Jun-21	time	2.68	3.80	4.89	5.97	7.06	8.15	9.26	10.38	11.54	12.71	14.23	6 / 3				
reaction time	0.156	interval	7 steps	1.12	1.09	1.08	1.09	1.09	1.11	1.12	1.16	1.17	1.52		3.29	3.29	3.45	
wind	-1.0 m/s	velocity	5.12	8.16	8.39	8.46	8.39	8.39	8.23	8.16	7.88	7.81	9.22	7.73		8.33	8.33	7.95

Heat 1 - 2020 Chinese Olympic Trials (Shaoxing, CHN)*CAA Hurdle Development (2021)*

date	12-Jun-21	time	2.64	3.73	4.85	5.94	7.04	8.14	9.26	10.38	11.52	12.70	14.33	5 / 6				
reaction time	0.173	interval	7 steps	1.09	1.12	1.09	1.10	1.10	1.12	1.12	1.14	1.18	1.63		3.30	3.32	3.44	
wind	-0.4 m/s	velocity	5.20	8.39	8.16	8.39	8.31	8.31	8.16	8.16	8.02	7.75	8.60	7.68		8.31	8.26	7.97

Heat 1 - 2021 East China District Meeting (Zhaoqing, CHN)*CAA Hurdle Development (2021)*

date	24-Apr-21	time	2.74	3.88	5.02	6.15	7.25	8.38	9.50	10.62	11.75	12.91	14.42	8 / 5				
reaction time	0.179	interval	7 steps	1.14	1.14	1.13	1.10	1.13	1.12	1.12	1.13	1.16	1.51		3.41	3.35	3.41	
wind	-1.1 m/s	velocity	5.01	8.02	8.02	8.09	8.31	8.09	8.16	8.16	8.09	7.88	9.28	7.63		8.04	8.19	8.04

FINAL - 2021 Yangtze River Delta Athletics Meeting (Shaoxing, CHN)*CAA Hurdle Development (2021)*

date	08-Apr-21	time	2.72	3.84	4.96	6.04	7.12	8.24	9.32	10.44	11.56	12.68	14.17	5 / 4				
reaction time		interval	7 steps	1.12	1.12	1.08	1.08	1.12	1.08	1.12	1.12	1.12	1.49		PB	3.32	3.28	3.36
wind	-0.1 m/s	velocity	5.04	8.16	8.16	8.46	8.46	8.16	8.46	8.16	8.16	8.16	9.41	7.76		8.26	8.36	8.16

FINAL - 2021 National Indoor Grand Prix (Jinan, CHN)*CAA Hurdle Development (2021)*

date	18-Mar-21	time	2.76	3.90	5.03	6.15	7.29						8.30	2 / 6				
reaction time	0.171	interval	7 steps	1.14	1.13	1.12	1.14						1.01		3.39			
		velocity	4.97	8.02	8.09	8.16	8.02						9.62	7.23		8.09		

B FINAL - 2021 National Indoor Grand Prix (Chengdu, CHN)

CAA Hurdle Development (2021)

date	13-Mar-21	time	2.66	3.77	4.88	5.98	7.06							7.97	3 / 2			
reaction time	0.173	interval	7 steps	1.11	1.11	1.10	1.08							0.91	PB	3.32		
		velocity	5.16	8.23	8.23	8.31	8.46							10.68	7.53	8.26		

Yada, Gen (JPN) (1994)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Semi-Final 1 - 2016 Japanese University Championships (Kumagaya, JPN)											<i>(2016.09.05) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>						
date	04-Sep-16	time	2.70	3.85	4.95	6.03	7.12	8.21	9.31	10.40	11.50	12.63	14.01	5 / 1			
reaction time	0.135	interval		1.15	1.10	1.08	1.09	1.09	1.10	1.09	1.10	1.13	1.38		3.33	3.28	3.32
wind	0.6 m/s	velocity	5.08	7.95	8.31	8.46	8.39	8.39	8.31	8.39	8.31	8.09	10.16	7.85	8.23	8.36	8.26

Yahata, Kenji (JPN) (1980)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Heat 4 - 2009 Japanese National Championships (Hiroshima, JPN)											<i>Akirabun (2010) - analysis of speed and stride on straight track events in the 2009 season</i>						
date	26-Jun-09	time	2.44	3.52	4.60	5.66	6.73	7.81	8.91	10.01	11.11	12.23	13.91	3 / 1			
reaction time		interval		1.08	1.08	1.06	1.07	1.08	1.10	1.10	1.10	1.12	1.68		3.22	3.25	3.32
wind	0.3 m/s	velocity	5.62	8.46	8.46	8.62	8.54	8.46	8.31	8.31	8.31	8.16	8.35	7.91	8.52	8.44	8.26

FINAL - 2009 Mikio Oda Memorial (Hiroshima, JPN)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
											<i>Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdles</i>						
date	29-Apr-09	time	2.63	3.71	4.78	5.83	6.88	7.94	8.99	10.08	11.17	12.29	13.77	/ 4			
reaction time		interval		1.08	1.07	1.05	1.05	1.06	1.05	1.09	1.09	1.12	1.48		3.20	3.16	3.30
wind	1.9 m/s	velocity	5.22	8.46	8.54	8.70	8.70	8.62	8.70	8.39	8.39	8.16	9.47	7.99	8.57	8.68	8.31

Heat 1 - 2008 Nambu Chuhei Memorial (Harodate, JPN)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
											<i>Akirabun (2009) - race analysis of 2008 men's and women's 100m and 110m & 100m hurdles</i>						
date	06-Jul-08	time	2.56	3.67	4.76	5.84	6.93	8.09	9.31	10.51	11.70	12.89	14.67	???			
reaction time		interval		1.11	1.09	1.08	1.09	1.16	1.22	1.20	1.19	1.19	1.78		3.28	3.47	3.58
wind	0.2 m/s	velocity	5.36	8.23	8.39	8.46	8.39	7.88	7.49	7.62	7.68	7.68	7.88	7.50	8.36	7.90	7.66

Yamada, Masahiro (JPN) (2003)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2022 Japanese U20 National Championships (Osaka, JPN) (99cm)											<i>Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season</i>						
date	12-Jun-22	time	2.67	3.77	4.87	5.93	6.98	8.04	9.10	10.17	11.25	12.35	13.82	8 / 5			
reaction time	0.155	interval		1.10	1.10	1.06	1.05	1.06	1.06	1.07	1.08	1.10	1.47	PB	3.26	3.17	3.25
wind	1.1 m/s	velocity	5.14	8.31	8.31	8.62	8.70	8.62	8.62	8.54	8.46	8.31	9.54	7.96	8.41	8.65	8.44

Yamada, Nash (JPN) (1999)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2017 Japanese National High School Championships (Yamagata, JPN) (99cm)											<i>Kota (2017) - 70th high school championships: JAF scientific committee- biomechanics data</i>						
date	02-Aug-17	time	2.71	3.86	5.11	6.31	7.46	8.58	9.72	10.87	12.03	13.22	14.79	3 / 8			
reaction time	0.153	interval		1.15	1.25	1.20	1.15	1.12	1.14	1.15	1.16	1.19	1.57		3.60	3.41	3.50
wind	-0.7 m/s	velocity	5.06	7.95	7.31	7.62	7.95	8.16	8.02	7.95	7.88	7.68	8.93	7.44	7.62	8.04	7.83

Yamamoto, Kenta (JPN) (1995)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
Heat 2 - 2017 Japanese National Championships (Osaka, JPN)											<i>(2017) - tfdata-store.com/2017/07/13/post-1040/</i>						
date	24-Jun-17	time	2.68	3.75	4.83	5.91	6.97	8.04	9.13	10.23	11.32	12.43	13.84	3 / 5			
reaction time	0.161	interval		1.07	1.08	1.08	1.06	1.07	1.09	1.10	1.09	1.11	1.41	PB	3.23	3.22	3.30
wind	0.0 m/s	velocity	5.12	8.54	8.46	8.46	8.62	8.54	8.39	8.31	8.39	8.23	9.94	7.95	8.49	8.52	8.31

FINAL - 2016 Tokai Student Autumn Championships (Gifu, JPN)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
											<i>(2016.10.10) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>						
date	09-Oct-16	time	2.72	3.82	4.91	6.01	7.11	8.21	9.30	10.39	11.54	12.68	14.11	5 / 1			
reaction time		interval		1.10	1.09	1.10	1.10	1.10	1.09	1.09	1.15	1.14	1.43		3.29	3.29	3.38
wind	1.3 m/s	velocity	5.04	8.31	8.39	8.31	8.31	8.31	8.39	8.39	7.95	8.02	9.80	7.80	8.33	8.33	8.11

FINAL - 2016 West Japan University Championships (Kyoto, JPN)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
											<i>(2016.07.02) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>						
date	01-Jul-16	time	2.66	3.78	4.86	5.97	7.07	8.17	9.26	10.38	11.50	12.63	14.08	6 / 2			
reaction time		interval		1.12	1.08	1.11	1.10	1.10	1.09	1.12	1.12	1.13	1.45		3.31	3.29	3.37
wind	-2.1 m/s	velocity	5.16	8.16	8.46	8.23	8.31	8.31	8.39	8.16	8.16	8.09	9.67	7.81	8.28	8.33	8.14

Yamamura, Keita (JPN) (1999)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2018 Japanese National High School Championships (Nagoya, JPN) (99cm)											<i>Kota (2018) - 71st high school championships: JAF scientific committee - biomechanics data collection</i>						
date	06-Aug-18	time	2.69	3.82	4.95	6.05	7.15	8.26	9.38	10.50	11.65	12.80	14.32	9 / 6			
reaction time		interval		1.13	1.13	1.10	1.10	1.11	1.12	1.12	1.15	1.15	1.52		3.36	3.33	3.42
wind	1.6 m/s	velocity	5.10	8.09	8.09	8.31	8.31	8.23	8.16	8.16	7.95	7.95	9.22	7.68	8.16	8.23	8.02

Yamanaka, Kyosuke (JPN)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
FINAL - 2023 Japanese National High School Championships (Sapporo, JPN)											<i>Takashima (2023) - national high school sports festival - biomechanics data</i>						
date	06-Aug-23	time	2.72	3.79	4.88	5.97	7.05	8.15	9.23	10.33	11.44	12.55	14.01	4 / 1			
reaction time	0.187	interval		1.07	1.09	1.09	1.08	1.10	1.08	1.10	1.11	1.11	1.46		3.25	3.26	3.32
wind	0.8 m/s	velocity	5.04	8.54	8.39	8.39	8.46	8.31	8.46	8.31	8.23	8.23	9.60	7.85	8.44	8.41	8.26

Yamashita, Tomoki (JPN) (2000)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
U20 FINAL - 2018 National Sports Festival (Fukui, JPN) (99cm)											<i>Joshi (2018) - research on athlete performance and technique- 2018 data book</i>						
date	07-Oct-18	time	2.65	3.75	4.81	5.85	6.91	7.97	9.04	10.12	11.20	12.28	13.71	4 / 4			
reaction time	0.134	interval		1.10	1.06	1.04	1.06	1.06	1.07	1.08	1.08	1.08	1.43		3.20	3.19	3.24
wind	1.5 m/s	velocity	5.18	8.31	8.62	8.79	8.62	8.62	8.54	8.46	8.46	8.46	9.80	8.02	8.57	8.60	8.46

		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Yamauti, Masanari (JPN)																	
FINAL - 2021 Japanese U16 National Championships (Matsuyama, JPN) (99cm)																	
date		24-Oct-21											14.83	1 / 5			
reaction time	interval	2.74	3.90	5.06	6.21	7.37	8.50	9.69	10.85	12.03	13.22				3.47	3.48	3.53
wind	1.0 m/s	velocity	5.01	7.88	7.88	7.95	7.88	8.09	7.68	7.88	7.75	7.68	8.71	7.42	7.90	7.88	7.77
Yan Chenyu (CHN) (2003)																	
Heat 2 - 2021 Chinese National Championships (Chongqing, CHN)																	
date		25-Jun-21											14.74	2 / 6			
reaction time	interval	2.72	3.85	4.97	6.11	7.27	8.38	9.58	10.77	11.96	13.17				3.39	3.47	3.59
wind	-1.2 m/s	velocity	5.04	8.09	8.16	8.02	7.88	8.23	7.62	7.68	7.68	7.55	8.93	7.46	8.09	7.90	7.64
FINAL - 2021 National Grand Prix (Chengdu, CHN)																	
date		02-Apr-21											14.50	8 / 5			
reaction time	interval	2.74	3.88	5.00	6.14	7.27	8.40	9.54	10.68	11.81	12.94				3.40	3.40	3.40
wind	-0.1 m/s	velocity	5.01	8.02	8.16	8.02	8.09	8.09	8.02	8.02	8.09	8.09	8.99	7.59	8.06	8.06	8.06
Heat 1 - 2021 National Grand Prix (Chengdu, CHN)																	
date		02-Apr-21											14.79	5 / 2			
reaction time	interval	2.74	3.94	5.10	6.26	7.40	8.56	9.70	10.84	12.02	13.20				3.52	3.44	3.50
wind	0.5 m/s	velocity	5.01	7.62	7.88	7.88	8.02	7.88	8.02	8.02	7.75	7.75	8.82	7.44	7.79	7.97	7.83
Yan Yuwei (CHN) (2002)																	
U18 FINAL - 2019 Chinese National Youth Games (Taiyuan, CHN) (91cm)																	
date		14-Aug-19											15.15	3 / 7			
reaction time	interval	2.75	3.93	5.12	6.29	7.47	8.64	9.84	11.03	12.24	13.46				3.54	3.55	3.62
wind	-0.1 m/s	velocity	4.99	7.75	7.68	7.81	7.75	7.81	7.62	7.68	7.55	7.49	8.30	7.26	7.75	7.72	7.57
Yang Haoran (CHN) (2001)																	
Heat 1 - 2021 Chinese National Championships (Chongqing, CHN)																	
date		25-Jun-21											14.54	7 / 8			
reaction time	interval	2.71	3.83	4.94	6.06	7.20	8.35	9.50	10.67	11.83	12.99				3.35	3.44	3.49
wind	-1.0 m/s	velocity	5.06	8.16	8.23	8.16	8.02	7.95	7.95	7.81	7.88	7.88	9.05	7.57	8.19	7.97	7.86
FINAL - 2021 National Grand Prix (Chengdu, CHN)																	
date		02-Apr-21											14.44	6 / 4			
reaction time	interval	2.69	3.82	4.97	6.10	7.25	8.38	9.52	10.66	11.82	12.96				3.41	3.42	3.44
wind	-0.1 m/s	velocity	5.10	8.09	7.95	8.09	7.95	8.09	8.02	8.02	7.88	8.02	9.47	7.62	8.04	8.02	7.97
Heat 2 - 2021 National Grand Prix (Chengdu, CHN)																	
date		02-Apr-21											14.54	5 / 3			
reaction time	interval	2.70	3.82	4.94	6.10	7.22	8.32	9.48	10.60	11.78	12.96				3.40	3.38	3.48
wind	0.3 m/s	velocity	5.08	8.16	8.16	7.88	8.16	8.31	7.88	8.16	7.75	7.75	8.87	7.81	8.06	8.11	7.88
B FINAL - 2021 National Indoor Grand Prix (Chengdu, CHN)																	
date		13-Mar-21											8.05	6 / 3			
reaction time	interval	2.68	3.80	4.94	6.04	7.14									3.36		
	velocity		5.12	8.16	8.02	8.31	8.31					10.68	7.45		8.16		
Yang Jiajun (CHN) (2002)																	
Heat 1 - 2021 Chinese National Championships (Chongqing, CHN)																	
date		25-Jun-21											14.40	9 / 6			
reaction time	interval	2.71	3.85	4.97	6.06	7.16	8.26	9.37	10.52	11.67	12.84				3.35	3.31	3.47
wind	-1.0 m/s	velocity	5.06	8.02	8.16	8.39	8.31	8.31	8.23	7.95	7.95	7.81	8.99	7.64	8.19	8.28	7.90
FINAL - 2021 Philippe Cup Athletics Invitational (Wuhan, CHN)																	
date		19-May-21											14.40	8 / 4			
reaction time	interval	2.72	3.83	4.94	6.06	7.16	8.26	9.39	10.56	11.71	12.88				3.34	3.33	3.49
wind	1.9 m/s	velocity	5.04	8.23	8.23	8.16	8.31	8.31	8.09	7.81	7.95	7.81	9.22	7.64	8.21	8.23	7.86
Heat 2 - 2021 East China District Meeting (Zhaoqing, CHN)																	
date		24-Apr-21											14.72	6 / 6			
reaction time	interval	2.76	3.93	5.04	6.17	7.30	8.46	9.61	10.78	11.96	13.15				3.41	3.44	3.54
wind	-1.2 m/s	velocity	4.97	7.81	8.23	8.09	8.09	7.88	7.95	7.81	7.75	7.68	8.93	7.47	8.04	7.97	7.75
U18 FINAL - 2019 Chinese National Youth Games (Taiyuan, CHN) (91cm)																	
date		14-Aug-19											13.30	6 / 1			
reaction time	interval	2.62	3.69	4.69	5.70	6.71	7.69	8.71	9.73	10.78	11.81				3.08	3.01	3.10
wind	-0.1 m/s	velocity	5.24	8.54	9.14	9.05	9.05	9.33	8.96	8.96	8.70	8.87	9.41	8.27	8.90	9.11	8.85
Yang Jianxing (CHN) (1996)																	
Heat 1 - 2019 Chinese National Grand Prix Final (Daqing, CHN)																	
date		23-Aug-19											14.79	3 / 6			
reaction time	interval	2.70	3.85	4.97	6.10	7.22	8.37	9.53	10.69	11.89	13.15						

reaction time	0.174	interval	1.15	1.12	1.13	1.12	1.15	1.16	1.16	1.20	1.26	1.64			3.40	3.43	3.62
wind	-0.2 m/s	velocity	5.08	7.95	8.16	8.09	8.16	7.95	7.88	7.88	7.62	7.25	8.55	7.44	8.06	7.99	7.57

Heat 1 - 2019 Chinese National Championships (Shenyang, CHN)

date	08-Jul-19	time	2.69	3.82	4.94	6.07	7.16	8.31	9.44	10.57	11.73	12.88		14.43	CAA Hurdle Development (2019)		
reaction time	0.141	interval	1.13	1.12	1.13	1.09	1.15	1.13	1.13	1.16	1.15	1.55			3.38	3.37	3.44
wind	0.1 m/s	velocity	5.10	8.09	8.16	8.09	8.39	7.95	8.09	8.09	7.88	7.95	9.05	7.62	8.11	8.14	7.97

A-FINAL - 2019 Chinese Indoor National Grand Prix 2 (Nanjing, CHN)

date	24-Feb-19	time	2.68	3.82	4.94	6.04	7.16							8.10	CAA Hurdle Development (2019)		
reaction time		interval	1.14	1.12	1.10	1.12						0.94			2 / 4	0.00	
		velocity	5.12	8.02	8.16	8.31	8.16					10.34	7.41			3.36	
																8.16	

Heat 2 - 2018 Chinese National Championships (Taiyuan, CHN)

date	15-Sep-18	time	2.67	3.77	4.87	5.98	7.07	8.16	9.29	10.44	11.61	12.80		14.34	Henson (2018) - coaching observations			
reaction time		interval	1.10	1.10	1.11	1.09	1.09	1.13	1.15	1.17	1.19	1.54			6 / 6	3.31	3.31	3.51
wind	0.7 m/s	velocity	5.14	8.31	8.31	8.23	8.39	8.39	8.09	7.95	7.81	7.68	9.10	7.67	8.28	8.28	7.81	

Yang Quanlei (CHN) (1999)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10	
CAA Hurdle Development (2021)																	
date	25-Jun-21	time	2.68	3.78	4.88	5.96	7.05	8.14	9.22	10.33	11.45	12.57	14.05	5 / 2			
reaction time	0.164	interval	1.10	1.10	1.08	1.09	1.09	1.08	1.11	1.12	1.12	1.48		3.28	3.26	3.35	
wind	-1.0 m/s	velocity	5.12	8.31	8.31	8.46	8.39	8.39	8.46	8.23	8.16	8.16	9.47	7.83	8.36	8.41	8.19

FINAL - 2020 Chinese Olympic Trials (Shaoxing, CHN)

date	12-Jun-21	time	2.72	3.79	4.88	5.97	7.05	8.17	9.24	10.36	11.51	12.65		14.16	CAA Hurdle Development (2021)			
reaction time	0.172	interval	1.07	1.09	1.09	1.08	1.12	1.07	1.12	1.15	1.14	1.51			6 / 7	3.25	3.27	3.41
wind	0.9 m/s	velocity	5.04	8.54	8.39	8.39	8.46	8.16	8.54	8.16	7.95	8.02	9.28	7.77	8.44	8.39	8.04	

Heat 2 - 2020 Chinese Olympic Trials (Shaoxing, CHN)

date	12-Jun-21	time	2.55	3.63	4.71	5.77	6.85	7.92	9.01	10.09	11.19	12.29		13.87	CAA Hurdle Development (2021)			
reaction time	0.161	interval	1.08	1.08	1.06	1.08	1.07	1.09	1.08	1.10	1.10	1.58	PB		5 / 1	3.22	3.24	3.28
wind	-0.8 m/s	velocity	5.38	8.46	8.46	8.62	8.46	8.54	8.39	8.46	8.31	8.31	8.87	7.93	8.52	8.46	8.36	

FINAL - 2021 East China District Meeting (Zhaoqing, CHN)

date	24-Apr-21	time	2.64	3.74	4.80	5.88	6.95	8.02	9.11	10.20	11.31	12.43		13.89	CAA Hurdle Development (2021)			
reaction time	0.185	interval	1.10	1.06	1.08	1.07	1.07	1.09	1.09	1.11	1.12	1.46	PB		6 / 1	3.24	3.23	3.32
wind	-0.3 m/s	velocity	5.20	8.31	8.62	8.46	8.54	8.39	8.39	8.23	8.16	9.60	7.92	7.92	8.46	8.49	8.26	

Heat 1 - 2021 East China District Meeting (Zhaoqing, CHN)

date	24-Apr-21	time	2.66	3.76	4.85	5.94	7.02	8.10	9.20	10.28	11.39	12.51		14.00	CAA Hurdle Development (2021)			
reaction time	0.164	interval	1.10	1.09	1.09	1.08	1.08	1.10	1.08	1.11	1.12	1.49			4 / 1	3.28	3.26	3.31
wind	-1.1 m/s	velocity	5.16	8.31	8.39	8.39	8.46	8.46	8.31	8.46	8.23	8.16	9.41	7.86	8.36	8.41	8.28	

FINAL - 2021 Yangtze River Delta Athletics Meeting (Shaoxing, CHN)

date	08-Apr-21	time	2.64	3.76	4.84	5.92	7.00	8.08	9.18	10.26	11.36	12.44		13.90	CAA Hurdle Development (2021)			
reaction time		interval	1.12	1.08	1.08	1.08	1.08	1.10	1.08	1.10	1.08	1.46	PB		4 / 2	3.28	3.26	3.26
wind	-0.1 m/s	velocity	5.20	8.16	8.46	8.46	8.46	8.46	8.31	8.46	8.31	8.46	9.60	7.91	8.36	8.41	8.41	

FINAL - 2021 National Indoor Grand Prix (Jinan, CHN)

date	18-Mar-21	time	2.63	3.74	4.82	5.90	6.96							7.86	CAA Hurdle Development (2021)		
reaction time	0.173	interval	1.11	1.08	1.08	1.06							0.90	PB		3.27	
		velocity	5.22	8.23	8.46	8.46	8.62						10.80	7.63		8.39	

B FINAL - 2021 National Indoor Grand Prix (Chengdu, CHN)

date	13-Mar-21	time	2.66	3.77	4.89	5.98	7.06							7.97	CAA Hurdle Development (2021)		
reaction time	0.186	interval	1.11	1.12	1.09	1.08							0.91	PB		3.32	
		velocity	5.16	8.23	8.16	8.39	8.46						10.68	7.53		8.26	

Heat 1 - 2020 Chinese National Championships (Shaoxing, CHN)

date	16-Sep-20	time	2.70	3.79	4.89	6.00	7.08	8.18	9.29	10.43	11.56	12.68		14.17	CAA Hurdle Development (2020)			
reaction time	0.175	interval	1.09	1.10	1.11	1.08	1.10	1.11	1.14	1.13	1.12	1.49			5 / 4	3.30	3.29	3.39
wind	0.3 m/s	velocity	5.08	8.39	8.31	8.23	8.46	8.31	8.23	8.02	8.09	8.16	9.41	7.76	8.31	8.33	8.09	

Heat 2 - 2019 Chinese National Grand Prix Final (Daqing, CHN)

date	23-Aug-19	time	2.74	3.89	5.03	6.19	7.35	8.52	9.72	10.93	12.16	13.38		14.97	CAA Hurdle Development (2019)			
reaction time	0.193	interval	1.15	1.14	1.16	1.16	1.17	1.20	1.21	1.23	1.22	1.59			8 / 7	3.45	3.53	3.66
wind	-0.2 m/s	velocity	5.01	7.95	8.02	7.88	7.88	7.81	7.62	7.55	7.43	7.49	8.82	7.35	7.95	7.77	7.49	

B-FINAL - 2019 Chinese Indoor National Grand Prix 3 (Xi'an, CHN)

date	28-Feb-19	time	2.67	3.81	4.91	6.01	7.15							8.10	CAA Hurdle Development (2019)		
reaction time		interval	1.14	1.10	1.10	1.14							0.95		2 / 4	3.34	
		velocity	5.14	8.02	8.31	8.31	8.02						10.23	7.41		8.21	

FINAL - 2018 Chinese National U20 Championships (Nanchang, CHN) (99.1cm)													<i>Zhang (2019) - comparative analysis characteristics Chinese elite 110m hurdles in different age</i>				
date	13-May-18	time	2.70	3.82	4.90	5.98	7.06	8.15	9.22	10.32	11.44	12.57	14.13	/ 6			
reaction time		interval		1.12	1.08	1.08	1.08	1.09	1.07	1.10	1.12	1.13	1.56	3.28	3.24	3.35	
wind	1.0 m/s	velocity	5.08	8.16	8.46	8.46	8.46	8.39	8.54	8.31	8.16	8.09	8.99	7.78	8.36	8.46	8.19

Yang Wei-Ting (TPE) (1994)

FINAL - 2018 Asian Games (Jakarta, INA)													<i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>				
date	28-Aug-18	time	2.62	3.68	4.72	5.76	6.82	7.87	8.95	10.05	11.13	12.29	13.75	8 / 8			
reaction time	0.136	interval		1.06	1.04	1.04	1.06	1.05	1.08	1.10	1.08	1.16	1.46	3.14	3.19	3.34	
wind	0.0 m/s	velocity	5.24	8.62	8.79	8.79	8.62	8.70	8.46	8.31	8.46	7.88	9.60	8.00	8.73	8.60	8.21

FINAL - 2017 Seiko Golden Grand Prix (Kawasaki, JPN)

													<i>(2017) - tfdata-store.com/2017/05/22/post-599/</i>				
date	21-May-17	time	2.67	3.75	4.83	5.89	6.94	7.99	9.06	10.13	11.20	12.31	13.79	8 / 8			
reaction time	0.145	interval		1.08	1.08	1.06	1.05	1.05	1.07	1.07	1.07	1.11	1.48	3.22	3.17	3.25	
wind	-1.8 m/s	velocity	5.14	8.46	8.46	8.62	8.70	8.70	8.54	8.54	8.54	8.23	9.47	7.98	8.52	8.65	8.44

Yang Yuxuan (CHN) (2002)

Heat 1 - 2021 Chinese National Championships (Chongqing, CHN)													<i>CAA Hurdle Development (2021)</i>				
date	25-Jun-21	time	2.72	3.83	4.94	6.05	7.14	8.24	9.36	10.49	11.64	12.80	14.29	3 / 4			
reaction time	0.146	interval		1.11	1.11	1.11	1.09	1.10	1.12	1.13	1.15	1.16	1.49	3.33	3.31	3.44	
wind	-1.0 m/s	velocity	5.04	8.23	8.23	8.23	8.39	8.31	8.16	8.09	7.95	7.88	9.41	7.70	8.23	8.28	7.97

Heat 1 - 2020 Chinese National Championships (Shaoxing, CHN)

													<i>CAA Hurdle Development (2020)</i>				
date	16-Sep-20	time	2.72	3.88	4.98	6.10	7.20	8.32	9.45	10.59	11.75	12.91	14.43	4 / 9			
reaction time	0.138	interval		1.16	1.10	1.12	1.10	1.12	1.13	1.14	1.16	1.16	1.52	3.38	3.35	3.46	
wind	0.3 m/s	velocity	5.04	7.88	8.31	8.16	8.31	8.16	8.09	8.02	7.88	7.88	9.22	7.62	8.11	8.19	7.92

Heat 2 - 2019 Chinese National Championships (Shenyang, CHN)

													<i>CAA Hurdle Development (2019)</i>				
date	08-Jul-19	time	2.70	3.82	4.90	6.00	7.11	8.22	9.34	10.46	11.59	12.74	14.23	8 / 5			
reaction time	0.158	interval		1.12	1.08	1.10	1.11	1.11	1.12	1.12	1.13	1.15	1.49	PB	3.30	3.34	3.40
wind	0.4 m/s	velocity	5.08	8.16	8.46	8.31	8.23	8.23	8.16	8.16	8.09	7.95	9.41	7.73	8.31	8.21	8.06

FINAL - 2019 Chinese National Grand Prix 3 (Jinhau, CHN)

													<i>CAA Hurdle Development (2019)</i>				
date	23-May-19	time	2.70	3.82	4.90	5.98	7.06	8.12	9.22	10.30	11.38	12.50	13.94	8 / 5			
reaction time	0.166	interval		1.12	1.08	1.08	1.08	1.06	1.10	1.08	1.08	1.12	1.44	3.28	3.24	3.28	
wind	2.5 m/s	velocity	5.08	8.16	8.46	8.46	8.46	8.62	8.31	8.46	8.46	8.16	9.74	7.89	8.36	8.46	8.36

FINAL - 2019 Chinese National Grand Prix 1 (Zhaoqing, CHN)

													<i>CAA Hurdle Development (2019)</i>				
date	09-Apr-19	time	2.76	3.88	4.98	6.08	7.18	8.26	9.38	10.52	11.66	12.82	14.36	3 / 6			
reaction time	0.180	interval		1.12	1.10	1.10	1.10	1.08	1.12	1.14	1.14	1.16	1.54	3.32	3.30	3.44	
wind	0.2 m/s	velocity	4.97	8.16	8.31	8.31	8.31	8.46	8.16	8.02	8.02	7.88	9.10	7.66	8.26	8.31	7.97

Heat 3 - 2019 Chinese National Grand Prix 1 (Zhaoqing, CHN)

													<i>CAA Hurdle Development (2019)</i>				
date	08-Apr-19	time	2.76	3.88	4.99	6.13	7.25	8.36	9.46	10.58	11.70	12.83	14.34	8 / 2			
reaction time	0.165	interval		1.12	1.11	1.14	1.12	1.11	1.10	1.12	1.12	1.13	1.51	PB	3.37	3.33	3.37
wind	0.0 m/s	velocity	4.97	8.16	8.23	8.02	8.16	8.23	8.31	8.16	8.16	8.09	9.28	7.67	8.14	8.23	8.14

B-FINAL - 2019 Chinese Indoor National Grand Prix 2 (Nanjing, CHN)

													<i>CAA Hurdle Development (2019)</i>				
date	24-Feb-19	time	2.73	3.85	4.99	6.09	7.20						8.12	5 / 2			
reaction time		interval		1.12	1.14	1.10	1.11						0.92	PB	3.36		
		velocity	5.03	8.16	8.02	8.31	8.23						10.57	7.39	8.16		

B-FINAL - 2019 Chinese Indoor National Grand Prix 1 (Nanjing, CHN)

													<i>CAA Hurdle Development (2019)</i>				
date	20-Feb-19	time	2.75	3.85	4.95	6.02	7.12						8.19	2 / 4			
reaction time		interval		1.10	1.10	1.07	1.10						1.07	3.27			
		velocity	4.99	8.31	8.31	8.54	8.31						9.08	7.33	8.39		

Yang Zihao (CHN) (1998)

Decathlon - Heat 1 - 2021 Chinese National Championships (Chongqing, CHN)													<i>CAA Hurdle Development (2021)</i>				
date	27-Jun-21	time	2.72	3.89	5.04	6.17	7.32	8.44	9.56	10.73	11.91	13.08	14.63	8 / 2			
reaction time	0.172	interval		1.17	1.15	1.13	1.15	1.12	1.12	1.17	1.18	1.17	1.55	3.45	3.39	3.52	
wind	0.5 m/s	velocity	5.04	7.81	7.95	8.09	7.95	8.16	8.16	7.81	7.75	7.81	9.05	7.52	7.95	8.09	7.79

Decathlon - Heat 1 - 2019 Chinese National Grand Prix Final (Daqing, CHN)

													<i>CAA Hurdle Development (2019)</i>				
date	23-Aug-19	time	2.82	4.00	5.16	6.32	7.49	8.69	9.89	11.13	12.33	13.61	15.25	7 / 2			
reaction time	0.187	interval		1.18	1.16	1.16	1.17	1.20	1.20	1.24	1.20	1.28	1.64	3.50	3.57	3.72	
wind	?? m/s	velocity	4.87	7.75	7.88	7.88	7.81	7.62	7.62	7.37	7.62	7.14	8.55	7.21	7.83	7.68	7.37

Decathlon - Heat 2 - 2019 Chinese National Championships (Shenyang, CHN)

													<i>CAA Hurdle Development (2019)</i>				
date	11-Jul-19	time	2.75	3.90	5.05	6.19	7.32	8.49	9.69	10.84	12.04	13.21	14.78	5 / 2			
reaction time	0.171	interval		1.15	1.15	1.14	1.13	1.17	1.20	1.15	1.20	1.17	1.57	PB	3.44	3.50	3.52
wind	-0.1 m/s	velocity	4.99	7.95	7.95	8.02	8.09	7.81	7.62	7.95	7.62	7.81	8.93	7.44	7.97	7.83	7.79

Yarbrough, John (USA) (1985)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Semi-Final 2 - 2007 USATF National Championships (Indianapolis, IN)													USATF Men's Hurdle Development (2007)				
date	24-Jun-07	time	2.69	3.75	4.80	5.84	6.87	7.92	8.98	10.02	11.08	12.16	13.61	7 / 7			
reaction time		interval		1.06	1.05	1.04	1.03	1.05	1.06	1.04	1.06	1.08	1.45		3.15	3.14	3.18
wind	-0.9 m/s	velocity	5.10	8.62	8.70	8.79	8.87	8.70	8.62	8.79	8.62	8.46	9.67	8.08	8.70	8.73	8.62
Heat 2 - 2007 USATF National Championships (Indianapolis, IN)													USATF Men's Hurdle Development (2007)				
date	23-Jun-07	time	2.70	3.77	4.84	5.86	6.89	7.94	9.03	10.09	11.18	12.26	13.69	4 / 3			
reaction time		interval		1.07	1.07	1.02	1.03	1.05	1.09	1.06	1.09	1.08	1.43		3.16	3.17	3.23
wind	-1.9 m/s	velocity	5.08	8.54	8.54	8.96	8.87	8.70	8.39	8.62	8.39	8.46	9.80	8.04	8.68	8.65	8.49
Yarbrough, Linnie (USA) (1982)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Semi-Final 2 - 2007 USATF National Championships (Indianapolis, IN)													USATF Men's Hurdle Development (2007)				
date	24-Jun-07	time	2.70	3.75	4.79	5.82	6.86	7.89	8.94	9.99	11.06	12.11	13.55	6 / 6			
reaction time		interval		1.05	1.04	1.03	1.04	1.03	1.05	1.05	1.07	1.05	1.44		3.12	3.12	3.17
wind	-0.9 m/s	velocity	5.08	8.70	8.79	8.87	8.79	8.87	8.70	8.70	8.54	8.70	9.74	8.12	8.79	8.79	8.65
Heat 4 - 2007 USATF National Championships (Indianapolis, IN)													USATF Men's Hurdle Development (2007)				
date	23-Jun-07	time	2.64	3.70	4.74	5.79	6.87	7.92	8.98	10.04	11.11	12.18	13.61	5 / 2			
reaction time		interval		1.06	1.04	1.05	1.08	1.05	1.06	1.06	1.07	1.07	1.43		3.15	3.19	3.20
wind	-2.8 m/s	velocity	5.20	8.62	8.79	8.70	8.46	8.70	8.62	8.62	8.54	8.54	9.80	8.08	8.70	8.60	8.57
Yashiro, Koki (JPN) (1998)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2016 Aichi Prefecture High School Meeting (Nagoya, JPN)													(2016.05.29) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en				
date	20-May-16	time	2.73	3.89	5.04	6.20	7.34	8.47	9.60	10.76	11.91	13.11	14.58	6 / 1			
reaction time		interval		1.16	1.15	1.16	1.14	1.13	1.13	1.16	1.15	1.20	1.47		3.47	3.40	3.51
wind	-0.7 m/s	velocity	5.03	7.88	7.95	7.88	8.02	8.09	8.09	7.88	7.95	7.62	9.54	7.54	7.90	8.06	7.81
Yazawa, Wataru (JPN) (1991)		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2021 Michitaka Kinami Memorial (Osaka, JPN)													Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season				
date	01-Jun-21	time	2.68	3.80	4.89	5.96	7.03	8.11	9.19	10.29	11.40	12.55	14.09	3 / 7			
reaction time	0.176	interval	7 steps	1.12	1.09	1.07	1.07	1.08	1.10	1.11	1.15	1.54			3.28	3.23	3.36
wind	0.3 m/s	velocity	5.12	8.16	8.39	8.54	8.54	8.46	8.46	8.31	8.23	7.95	9.10	7.81	8.36	8.49	8.16
Race 2 - 2020 World Athletics Trials (Fuji, JPN)													Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season				
date	06-Sep-20	time	2.83	4.00	5.18	6.38	7.56	8.74	9.93	11.12	12.36	13.61	15.21	2 / 6			
reaction time		interval	7 steps	1.17	1.18	1.20	1.18	1.19	1.19	1.24	1.25	1.60			3.55	3.55	3.68
wind	1.3 m/s	velocity	4.85	7.81	7.75	7.62	7.75	7.75	7.68	7.68	7.37	7.31	8.76	7.23	7.72	7.72	7.45
FINAL - 2020 Seiko Golden Grand Prix (Tokyo, JPN)													Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season				
date	23-Aug-20	time	2.67	3.80	4.90	6.00	7.10	8.19	9.29	10.42	11.56	12.72	14.29	8 / 8			
reaction time	0.158	interval	7 steps	1.13	1.10	1.10	1.10	1.09	1.10	1.13	1.14	1.16	1.57		3.33	3.29	3.43
wind	-0.4 m/s	velocity	5.14	8.09	8.31	8.31	8.31	8.39	8.31	8.09	8.02	7.88	8.93	7.70	8.23	8.33	7.99
FINAL - 2019 Japanese World Championships Trials (Fujiiyoshida, JPN)													Shibayama (2019) - race analysis of men's 110m hurdles in the 2019 season				
date	01-Sep-19	time	2.62	3.70	4.73	5.76	6.81	7.85	8.90	9.96	11.04	12.12	13.51	7 / 4			
reaction time		interval	7 steps	1.08	1.03	1.03	1.05	1.04	1.05	1.06	1.08	1.08	1.39		3.14	3.14	3.22
wind	1.4 m/s	velocity	5.24	8.46	8.87	8.87	8.70	8.79	8.70	8.62	8.46	8.46	10.09	8.14	8.73	8.73	8.52
FINAL - 2019 Japanese National Championships (Fukuoka, JPN)													Yamanaka (2019) - research on athlete performance and technique- 2019 data book				
date	30-Jun-19	time	2.64	3.71	4.77	5.83	6.87	7.92	9.00	10.07	11.18	12.29	13.76	9 / 4			
reaction time	0.138	interval	7 steps	1.07	1.06	1.06	1.04	1.05	1.08	1.07	1.11	1.11	1.47		3.19	3.17	3.29
wind	-0.6 m/s	velocity	5.20	8.54	8.62	8.62	8.79	8.70	8.46	8.54	8.23	8.23	9.54	7.99	8.60	8.65	8.33
FINAL - 2019 Fuse Sprint (Tottori, JPN)													Kijima (2019) - research on athlete performance and technique- 2019 data book				
date	02-Jun-19	time	2.61	3.69	4.78	5.83	6.86	7.91	8.95	10.01	11.08	12.16	13.60	4 / 3			
reaction time	0.128	interval	7 steps	1.08	1.09	1.05	1.03	1.05	1.04	1.06	1.07	1.08	1.44		3.22	3.12	3.21
wind	1.9 m/s	velocity	5.26	8.46	8.39	8.70	8.87	8.70	8.79	8.62	8.54	8.46	9.74	8.09	8.52	8.79	8.54
FINAL - 2019 Kinami Memorial (Osaka, JPN)													Matsubayashi (2019) - research on athlete performance and technique- 2019 data book				
date	06-May-19	time	2.64	3.73	4.80	5.86	6.92	7.97	9.04	10.11	11.19	12.27	13.71	8 / 4			
reaction time		interval	7 steps	1.09	1.07	1.06	1.06	1.05	1.07	1.07	1.08	1.08	1.44		3.22	3.18	3.23
wind	0.3 m/s	velocity	5.20	8.39	8.54	8.62	8.62	8.70	8.54	8.54	8.46	8.46	9.74	8.02	8.52	8.62	8.49
A FINAL - 2019 Mikio Oda Memorial (Hiroshima, JPN)													Kobayashi (2019) - research on athlete performance and technique- 2019 data book				
date	28-Apr-19	time	2.70	3.80	4.86	5.92	6.97	8.03	9.10	10.19	11.29	12.41	13.83	7 / 4			
reaction time		interval	7 steps	1.10	1.06	1.06	1.05	1.06	1.07	1.09	1.10	1.12	1.42		3.22	3.18	3.31
wind	0.6 m/s	velocity	5.08	8.31	8.62	8.62	8.70	8.62	8.54	8.39	8.31	8.16	9.87	7.95	8.52	8.62	8.28
FINAL - 2017 All Star Night (Hiratsuka, JPN)													(2017) - tfdata-store.com/2017/07/26/post-1072/				
date	22-Jul-17	time	2.59	3.66	4.71	5.74	6.78	7.82	8.87	9.93	11.00	12.07	13.49	6 / 1			
reaction time	0.146	interval	7 steps	1.07	1.05	1.03	1.04	1.04	1.05	1.06	1.07	1.07	1.42		3.15	3.13	3.20

wind	1.8 m/s	velocity	5.30	8.54	8.70	8.87	8.79	8.79	8.70	8.62	8.54	8.54	9.87	8.15	8.70	8.76	8.57
FINAL - 2017 Japanese National Championships (Osaka, JPN)														(2017) - tfdata-store.com/2017/07/13/post-1040/			
date	25-Jun-17	time	2.61	3.69	4.74	5.78	6.83	7.88	8.93	9.99	11.07	12.17		13.61	8 / 2		
reaction time	0.144	interval	7 steps	1.08	1.05	1.04	1.05	1.05	1.06	1.08	1.10	1.44			3.17	3.15	3.24
wind	-0.2 m/s	velocity	5.26	8.46	8.70	8.79	8.70	8.70	8.70	8.62	8.46	8.31	9.74	8.08	8.65	8.70	8.46
Semi-Final 1 - 2017 Japanese National Championships (Osaka, JPN)														(2017) - tfdata-store.com/2017/07/13/post-1040/			
date	24-Jun-17	time	2.61	3.68	4.73	5.78	6.82	7.88	8.95	10.03	11.12	12.23		13.66	6 / 3		
reaction time	0.146	interval	7 steps	1.07	1.05	1.05	1.04	1.06	1.07	1.08	1.09	1.11	1.43		3.17	3.17	3.28
wind	0.6 m/s	velocity	5.26	8.54	8.70	8.70	8.79	8.62	8.54	8.46	8.39	8.23	9.80	8.05	8.65	8.65	8.36
Heat 4 - 2017 Japanese National Championships (Osaka, JPN)														(2017) - tfdata-store.com/2017/07/13/post-1040/			
date	24-Jun-17	time	2.61	3.69	4.76	5.80	6.85	7.90	8.96	10.03	11.12	12.23		13.65	8 / 3		
reaction time	0.143	interval	7 steps	1.08	1.07	1.04	1.05	1.05	1.06	1.07	1.09	1.11	1.42		3.19	3.16	3.27
wind	0.0 m/s	velocity	5.26	8.46	8.54	8.79	8.70	8.70	8.62	8.54	8.39	8.23	9.87	8.06	8.60	8.68	8.39
Heat 5 - 2017 Fuse Sprint (Tottori, JPN)														(2017) - tfdata-store.com/2017/06/04/post-848/			
date	04-Jun-17	time	2.60	3.68	4.74	5.78	6.82	7.87	8.93	9.99	11.07	12.16		13.60	6 / 2		
reaction time		interval	7 steps	1.08	1.06	1.04	1.04	1.05	1.06	1.06	1.08	1.09	1.44		3.18	3.15	3.23
wind	1.5 m/s	velocity	5.28	8.46	8.62	8.79	8.79	8.70	8.62	8.62	8.46	8.39	9.74	8.09	8.62	8.70	8.49
FINAL - 2017 Seiko Golden Grand Prix (Kawasaki, JPN)														(2017) - tfdata-store.com/2017/05/22/post-599/			
date	21-May-17	time	2.64	3.72	4.78	5.84	6.89	7.95	9.02	10.07	11.15	12.24		13.69	6 / 4		
reaction time	0.151	interval	7 steps	1.08	1.06	1.06	1.05	1.06	1.07	1.05	1.08	1.09	1.45		3.20	3.18	3.22
wind	-1.8 m/s	velocity	5.20	8.46	8.62	8.62	8.70	8.62	8.54	8.70	8.46	8.39	9.67	8.04	8.57	8.62	8.52
Open FINAL - 2017 Michitaka Memorial (Osaka, JPN)														(2017) - tfdata-store.com/2017/05/08/post-413/			
date	07-May-17	time	2.62	3.70	4.77	5.83	6.89	7.97	9.04	10.11	11.21	12.33		13.77	6 / 3		
reaction time		interval	7 steps	1.08	1.07	1.06	1.06	1.08	1.07	1.07	1.10	1.12	1.44		3.21	3.21	3.29
wind	-1.5 m/s	velocity	5.24	8.46	8.54	8.62	8.62	8.46	8.54	8.54	8.31	8.16	9.74	7.99	8.54	8.54	8.33
FINAL - 2017 Michitaka Memorial (Osaka, JPN)														(2017) - tfdata-store.com/2017/05/08/post-413/			
date	07-May-17	time	2.64	3.72	4.79	5.85	6.91	7.98	9.04	10.11	11.20	12.30		13.71	5 / 4		
reaction time		interval	7 steps	1.08	1.07	1.06	1.06	1.07	1.06	1.07	1.09	1.10	1.41		3.21	3.19	3.26
wind	-0.8 m/s	velocity	5.20	8.46	8.54	8.62	8.62	8.54	8.62	8.54	8.39	8.31	9.94	8.02	8.54	8.60	8.41
FINAL - 2017 Mikio Oda Memorial (Hiroshima, JPN)														(2017) - tfdata-store.com/2017/05/01/458/			
date	29-Apr-17	time	2.66	3.75	4.82	5.88	6.93	8.01	9.07	10.13	11.21	12.30		13.74	3 / 5		
reaction time		interval	7 steps	1.09	1.07	1.06	1.05	1.08	1.06	1.06	1.08	1.09	1.44		3.22	3.19	3.23
wind	1.5 m/s	velocity	5.16	8.39	8.54	8.62	8.70	8.46	8.62	8.62	8.46	8.39	9.74	8.01	8.52	8.60	8.49
FINAL - 2016 National Sports Festival (Kitakami, JPN)														(2016.10.11) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en			
date	10-Oct-16	time	2.64	3.72	4.78	5.82	6.87	7.92	8.97	10.03	11.10	12.18		13.62	4 / 1		
reaction time	0.146	interval	7 steps	1.08	1.06	1.04	1.05	1.05	1.05	1.06	1.07	1.08	1.44		3.18	3.15	3.21
wind	0.3 m/s	velocity	5.20	8.46	8.62	8.79	8.70	8.70	8.70	8.62	8.54	8.46	9.74	8.08	8.62	8.70	8.54
FINAL - 2016 Japanese National Corporate Championships (Osaka, JPN)														(2016.09.28) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en			
date	25-Sep-16	time	2.63	3.71	4.78	5.84	6.88	7.93	8.99	10.04	11.12	12.20		13.65	4 / 1		
reaction time	0.153	interval	7 steps	1.08	1.07	1.06	1.04	1.05	1.06	1.05	1.08	1.08	1.45		3.21	3.15	3.21
wind	0.7 m/s	velocity	5.22	8.46	8.54	8.62	8.79	8.70	8.62	8.70	8.46	8.46	9.67	8.06	8.54	8.70	8.54
FINAL - 2016 Japanese National Championships (Nagoya, JPN)														Kota (2016) - race analysis of japanese top-ranked men 110m and women 100m hurdlers			
date	26-Jun-16	time	2.62	3.69	4.73	5.77	6.81	7.85	8.88	9.93	10.98	12.06		13.48	7 / 1		
reaction time	0.138	interval		1.07	1.04	1.04	1.04	1.04	1.03	1.05	1.05	1.08	1.42		3.15	3.11	3.18
wind	2.4 m/s	velocity	5.24	8.54	8.79	8.79	8.79	8.79	8.87	8.70	8.70	8.46	9.87	8.16	8.70	8.82	8.62
FINAL - 2016 Fuse Sprint (Tottori, JPN)														Kota (2016) - race analysis of japanese top-ranked men 110m and women 100m hurdlers			
date	05-Jun-16	time	2.61	3.67	4.72	5.76	6.79	7.84	8.88	9.93	11.00	12.07		13.47	5 / 1		
reaction time		interval	7 steps	1.06	1.05	1.04	1.03	1.05	1.04	1.05	1.07	1.07	1.40	PB	3.15	3.12	3.19
wind	1.4 m/s	velocity	5.26	8.62	8.70	8.79	8.87	8.70	8.79	8.70	8.54	8.54	10.01	8.17	8.70	8.79	8.60
Heat 3 - 2016 Fuse Sprint (Tottori, JPN)														(2016.06.05) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en			
date	05-Jun-16	time	2.64	3.71	4.75	5.80	6.85	7.89	8.94	10.00	11.06	12.14		13.54	6 / 1		
reaction time		interval	7 steps	1.07	1.04	1.05	1.05	1.04	1.05	1.06	1.06	1.08	1.40	PB	3.16	3.14	3.20
wind	1.6 m/s	velocity	5.20	8.54	8.79	8.70	8.70	8.79	8.70	8.62	8.62	8.46	10.01	8.12	8.68	8.73	8.57
FINAL - 2016 East Japan Corporate Championships (Kumagaya, JPN)														(2016.05.21) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en			
date	21-May-16	time	2.66	3.74	4.79	5.85	6.90	7.96	9.03	10.09	11.16	12.24		13.64	5 / 1		
reaction time		interval	7 steps	1.08	1.05	1.06	1.05	1.06	1.07	1.06	1.07	1.08	1.40		3.19	3.18	3.21
wind	-0.7 m/s	velocity	5.16	8.46	8.70	8.62	8.70	8.62	8.54	8.62	8.54	8.46	10.01	8.06	8.60	8.62	8.54
FINAL - 2016 Kinan Memorial (Osaka, JPN)														(2016.05.17) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en			

date	08-May-16	time	2.66	3.74	4.80	5.85	6.91	7.97	9.02	10.08	11.14	12.22	13.62	6 / 1			
reaction time		interval	7 steps	1.08	1.06	1.05	1.06	1.06	1.05	1.06	1.06	1.08	1.40		3.19	3.17	3.20
wind	-0.2 m/s	velocity	5.16	8.46	8.62	8.70	8.62	8.62	8.70	8.62	8.62	8.46	10.01	8.08	8.60	8.65	8.57
FINAL - 2016 Mikio Oda Memorial (Hiroshima, JPN)			<i>Kota (2016) - race analysis of japanese top-ranked men 110m and women 100m hurdlers</i>														
date	29-Apr-16	time	2.69	3.78	4.84	5.89	6.94	8.00	9.06	10.13	11.22	12.33	13.78	/ 1			
reaction time		interval		1.09	1.06	1.05	1.05	1.06	1.06	1.07	1.09	1.11	1.45		3.20	3.17	3.27
wind	-0.5 m/s	velocity	5.10	8.39	8.62	8.70	8.70	8.62	8.62	8.54	8.39	8.23	9.67	7.98	8.57	8.65	8.39
FINAL - 2014 Japanese National Championships (Fukushima, JPN)			<i>(2017.02.22) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>														
date	08-Jun-14	time	2.60	3.69	4.74	5.78	6.81	7.87	8.93	10.00	11.07	12.15	13.59	4 / 2			
reaction time	0.137	interval	7 steps	1.09	1.05	1.04	1.03	1.06	1.06	1.07	1.07	1.08	1.44	=PB	3.18	3.15	3.22
wind	0.4 m/s	velocity	5.28	8.39	8.70	8.79	8.87	8.62	8.62	8.54	8.54	8.46	9.74	8.09	8.62	8.70	8.52
Semi-Final 2 - 2014 Japanese National Championships (Fukushima, JPN)			<i>(2017.02.26) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>														
date	08-Jun-14	time	2.63	3.71	4.75	5.79	6.84	7.89	8.94	10.01	11.08	12.17	13.60	6 / 1			
reaction time	0.147	interval	7 steps	1.08	1.04	1.04	1.05	1.05	1.05	1.07	1.07	1.09	1.43		3.16	3.15	3.23
wind	-0.5 m/s	velocity	5.22	8.46	8.79	8.79	8.70	8.70	8.70	8.54	8.54	8.39	9.80	8.09	8.68	8.70	8.49
FINAL - 2013 Japanese Corporate Championships (Hiratsuka, JPN)			<i>(2016.11.18) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en</i>														
date	19-Oct-13	time	2.72	3.80	4.85	5.89	6.93	7.95	9.00	10.06	11.12	12.21	13.60	4 / 1			
reaction time		interval		1.08	1.05	1.04	1.04	1.02	1.05	1.06	1.06	1.09	1.39		3.17	3.11	3.21
wind	6.7 m/s	velocity	5.04	8.46	8.70	8.79	8.79	8.96	8.70	8.62	8.62	8.39	10.09	8.09	8.65	8.82	8.54
FINAL - 2013 Japanese National Championships (Chofu, JPN)			<i>Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13</i>														
date	09-Jun-13	time	2.60	3.69	4.76	5.81	6.86	7.89	8.95	10.01	11.07	12.18	13.59	7 / 1			
reaction time		interval	7 steps	1.09	1.07	1.05	1.05	1.03	1.06	1.06	1.06	1.11	1.41	PB	3.21	3.14	3.23
wind	1.3 m/s	velocity	5.28	8.39	8.54	8.70	8.70	8.87	8.62	8.62	8.62	8.23	9.94	8.09	8.54	8.73	8.49
Semi-Final 2 - 2013 Japanese National Championships (Chofu, JPN)			<i>Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13</i>														
date	09-Jun-13	time	2.62	3.71	4.75	5.82	6.86	7.91	8.97	10.03	11.11	12.21	13.63	6 / 1			
reaction time		interval	7 steps	1.09	1.04	1.07	1.04	1.05	1.06	1.06	1.08	1.10	1.42		3.20	3.15	3.24
wind	1.2 m/s	velocity	5.24	8.39	8.79	8.54	8.79	8.70	8.62	8.62	8.46	8.31	9.87	8.07	8.57	8.70	8.46
Heat 4 - 2013 Japanese National Championships (Chofu, JPN)			<i>Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13</i>														
date	08-Jun-13	time	2.61	3.70	4.75	5.79	6.83	7.88	8.95	10.03	11.12	12.21	13.62	6 / 1			
reaction time		interval	7 steps	1.09	1.05	1.04	1.04	1.05	1.07	1.08	1.09	1.09	1.41	PB	3.18	3.16	3.26
wind	0.1 m/s	velocity	5.26	8.39	8.70	8.79	8.79	8.70	8.54	8.46	8.39	8.39	9.94	8.08	8.62	8.68	8.41
FINAL - 2013 Mito Invitational Athletics Meeting (Mito, JPN)			<i>Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13</i>														
date	04-May-13	time	2.67	3.80	4.90	5.99	7.06	8.13	9.22	10.32	11.42	12.53	13.97	/ 1			
reaction time		interval		1.13	1.10	1.09	1.07	1.07	1.09	1.10	1.10	1.11	1.44		3.32	3.23	3.31
wind	-1.3 m/s	velocity	5.14	8.09	8.31	8.39	8.54	8.54	8.39	8.31	8.31	8.23	9.74	7.87	8.26	8.49	8.28
Heat 1 - 2013 Mito Invitational Athletics Meeting (Mito, JPN)			<i>Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13</i>														
date	04-May-13	time	2.63	3.73	4.79	5.85	6.91	7.97	9.05	10.12	11.22	12.32	13.74	/ 1			
reaction time		interval		1.10	1.06	1.06	1.06	1.06	1.08	1.07	1.10	1.10	1.42		3.22	3.20	3.27
wind	0.8 m/s	velocity	5.22	8.31	8.62	8.62	8.62	8.62	8.46	8.54	8.31	8.31	9.87	8.01	8.52	8.57	8.39
FINAL - 2013 Mikio Oda Memorial (Hiroshima, JPN)			<i>Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13</i>														
date	29-Apr-13	time	2.64	3.74	4.82	5.90	6.98	8.03	9.11	10.18	11.27	12.40	13.86	/ 4			
reaction time		interval		1.10	1.08	1.08	1.08	1.05	1.08	1.07	1.09	1.13	1.46		3.26	3.21	3.29
wind	0.7 m/s	velocity	5.20	8.31	8.46	8.46	8.46	8.70	8.46	8.54	8.39	8.09	9.60	7.94	8.41	8.54	8.33
Heat 1 - 2013 Mikio Oda Memorial (Hiroshima, JPN)			<i>Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13</i>														
date	29-Apr-13	time	2.63	3.73	4.79	5.86	6.91	8.00	9.08	10.18	11.28	12.42	13.85	/ 4			
reaction time		interval		1.10	1.06	1.07	1.05	1.09	1.08	1.10	1.10	1.14	1.43		3.23	3.22	3.34
wind	1.5 m/s	velocity	5.22	8.31	8.62	8.54	8.70	8.39	8.46	8.31	8.31	8.02	9.80	7.94	8.49	8.52	8.21
Semi-Final 2 - 2012 Japanese National Championships (Osaka, JPN)			<i>Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13</i>														
date	10-Jun-12	time	2.61	3.67	4.72	5.78	6.85	7.90	8.99	10.08	11.18	12.32	13.75	5 / 1			
reaction time		interval		1.06	1.05	1.06	1.07	1.05	1.09	1.09	1.10	1.14	1.43		3.17	3.21	3.33
wind	0.5 m/s	velocity	5.26	8.62	8.70	8.62	8.54	8.70	8.39	8.39	8.31	8.02	9.80	8.00	8.65	8.54	8.23
Heat 2 - 2012 Japanese National Championships (Osaka, JPN)			<i>Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13</i>														
date	09-Jun-12	time	2.62	3.71	4.77	5.84	6.91	7.99	9.10	10.21	11.32	12.46	13.94	5 / 2			
reaction time		interval		1.09	1.06	1.07	1.07	1.08	1.11	1.11	1.11	1.14	1.48		3.22	3.26	3.36
wind	-1.1 m/s	velocity	5.24	8.39	8.62	8.54	8.54	8.46	8.23	8.23	8.23	8.02	9.47	7.89	8.52	8.41	8.16
A FINAL - 2012 Mikio Oda Memorial (Hiroshima, JPN)			<i>Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13</i>														
date	29-Apr-12	time	2.59	3.65	4.71	5.78	6.85	7.93	8.99	10.06	11.15	12.27	13.69	6 / 3			
reaction time		interval		1.06	1.06	1.07	1.07	1.08	1.06	1.07	1.09	1.12	1.42		3.19	3.21	3.28
wind	2.1 m/s	velocity	5.30	8.62	8.62	8.54	8.54	8.46	8.62	8.54	8.39	8.16	9.87	8.04	8.60	8.54	8.36

FINAL - 2011 Asian Championships (Kobe, JPN)*Hisashi (2012) - performance analysis of Japanese record holder Keisuke Ushiro*

date	10-Jul-11	time	2.62	3.72	4.80	5.91	7.01	8.11	9.23	10.37	11.51	12.69	14.21	/ 4				
reaction time		interval		1.10	1.08	1.11	1.10	1.10	1.12	1.14	1.14	1.18	1.52		3.29	3.32	3.46	
wind	-2.1 m/s	velocity	5.24	8.31	8.46	8.23	8.31	8.31	8.16	8.02	8.02	7.75	9.22	7.74	8.33	8.26	7.92	

FINAL - 2011 Japanese National Championships (Kumagaya, JPN)*Hisashi (2012) - performance analysis of Japanese record holder Keisuke Ushiro*

date	11-Jun-11	time	2.64	3.72	4.80	5.87	6.94	8.01	9.11	10.20	11.30	12.42	13.86	/ 1				
reaction time		interval		1.08	1.08	1.07	1.07	1.07	1.10	1.09	1.10	1.12	1.44	PB	3.23	3.24	3.31	
wind	-0.1 m/s	velocity	5.20	8.46	8.46	8.54	8.54	8.54	8.31	8.39	8.31	8.16	9.74	7.94	8.49	8.46	8.28	

Semi-Final 2 - 2011 Japanese National Championships (Kumagaya, JPN)*Hisashi (2012) - performance analysis of Japanese record holder Keisuke Ushiro*

date	11-Jun-11	time	2.59	3.70	4.79	5.87	6.95	8.03	9.12	10.23	11.34	12.48	13.95	/ 1				
reaction time		interval		1.11	1.09	1.08	1.08	1.08	1.09	1.11	1.11	1.14	1.47		3.28	3.25	3.36	
wind	-0.1 m/s	velocity	5.30	8.23	8.39	8.46	8.46	8.46	8.39	8.23	8.23	8.02	9.54	7.89	8.36	8.44	8.16	

Heat 2 - 2011 Japanese National Championships (Kumagaya, JPN)*Hisashi (2012) - performance analysis of Japanese record holder Keisuke Ushiro*

date	10-Jun-11	time	2.61	3.68	4.74	5.81	6.87	7.95	9.05	10.16	11.29	12.43	13.89	/ 1				
reaction time		interval		1.07	1.06	1.07	1.06	1.08	1.10	1.11	1.13	1.14	1.46	PB	3.20	3.24	3.38	
wind	0.1 m/s	velocity	5.26	8.54	8.62	8.54	8.62	8.46	8.31	8.23	8.09	8.02	9.60	7.92	8.57	8.46	8.11	

FINAL - 2011 Mikio Oda Memorial (Hiroshima, JPN)*Kota (2013) - race analysis of leading Japanese men's 110m hurdlers - from 2011-13*

date	29-Apr-11	time	2.62	3.71	4.78	5.84	6.90	7.96	9.04	10.14	11.25	12.36	13.79	/ 6				
reaction time		interval		1.09	1.07	1.06	1.06	1.06	1.08	1.10	1.11	1.11	1.43		3.22	3.20	3.32	
wind	2.4 m/s	velocity	5.24	8.39	8.54	8.62	8.62	8.62	8.46	8.31	8.23	8.23	9.80	7.98	8.52	8.57	8.26	

Yefremov, David (KAZ) (1999)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane/Place H1-H4 H4-H7 H7-H10****Heat 2 - 2024 Olympic Games (Paris, FRA)***Paris 2024 Olympic Games - Results Book (2024)*

date	04-Aug-24	time	2.44	3.54	4.63	5.69	6.75	7.82	8.91	10.00	11.11	12.23	13.88	4 / 7				
reaction time	0.170	interval	7 steps	1.10	1.09	1.06	1.06	1.07	1.09	1.09	1.11	1.12	1.65		3.25	3.22	3.32	
wind	1.2 m/s	velocity	5.62	8.31	8.39	8.62	8.62	8.54	8.39	8.39	8.23	8.16	8.50	7.93	8.44	8.52	8.26	

Ylöstalo, Mikael (FIN) (1963)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane/Place H1-H4 H4-H7 H7-H10****Semi-Final 2 - 1988 Olympic Games (Seoul, KOR)***Brüggemann (1990) - scientific research project at the games of the XXXIV Olympiad, Seoul 1988*

date	26-Sep-88	time	2.61	3.70	4.78	5.86	6.98	8.06	9.18	10.28	11.39	12.51	14.09	2 / 8				
reaction time	0.146	interval		1.09	1.08	1.08	1.12	1.08	1.12	1.10	1.11	1.12	1.58		3.25	3.32	3.33	
wind	-0.7 m/s	velocity	5.26	8.39	8.46	8.46	8.16	8.46	8.16	8.31	8.23	8.16	8.87	7.81	8.44	8.26	8.23	

Yin Jing (CHN) (1988)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane/Place H1-H4 H4-H7 H7-H10****FINAL - 2009 Mikio Oda Memorial (Hiroshima, JPN)***Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdlers*

date	29-Apr-09	time	2.60	3.67	4.70	5.73	6.75	7.77	8.81	9.86	10.90	11.96	13.40	/ 1				
reaction time		interval		1.07	1.03	1.03	1.02	1.02	1.04	1.05	1.04	1.06	1.44	PB	3.13	3.08	3.15	
wind	1.9 m/s	velocity	5.28	8.54	8.87	8.87	8.96	8.96	8.79	8.70	8.79	8.62	9.74	8.21	8.76	8.90	8.70	

Yokochi, Taiga (JPN) (2000)**H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 Run-In Official Time Lane/Place H1-H4 H4-H7 H7-H10****Semi-Final 2 - 2023 World Athletics Championships (Budapest, HUN)***Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season*

date	21-Aug-23	time	2.63	3.75	4.83	5.95	7.08	8.18	9.35	10.53	11.79	13.08	14.93	1 / 9				
reaction time	0.173	interval	7 steps	1.12	1.08	1.12	1.13	1.10	1.17	1.18	1.26	1.29	1.85		3.32	3.40	3.73	
wind	-0.2 m/s	velocity	5.22	8.16	8.46	8.16	8.09	8.31	7.81	7.75	7.25	7.09	7.58	7.37	8.26	8.06	7.35	

Heat 3 - 2023 World Athletics Championships (Budapest, HUN)*Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season*

date	20-Aug-23	time	2.66	3.74	4.79	5.81	6.90	7.97	9.02	10.09	11.18		14.39	9 / 8				
reaction time	0.170	interval	7 steps	1.08	1.05	1.02	1.09	1.07	1.05	1.07	1.09				3.15	3.21	-9.02	
wind	0.0 m/s	velocity	5.16	8.46	8.70	8.96	8.39	8.54	8.70	8.54	8.39		7.64		8.70	8.54	-3.04	

FINAL - 2023 Japanese National Championships (Osaka, JPN)*Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season*

date	04-Jun-23	time	2.64	3.73	4.77	5.80	6.85	7.87	8.92	9.97	11.03	12.10	13.51	8 / 3				
reaction time	0.177	interval	7 steps	1.09	1.04	1.03	1.05	1.02	1.05	1.05	1.06	1.07	1.41		3.16	3.12	3.18	
wind	-0.9 m/s	velocity	5.20	8.39	8.79	8.87	8.70	8.96	8.70	8.70	8.62	8.54	9.94	8.14	8.68	8.79	8.62	

FINAL - 2023 Seiko Golden Grand Prix (Yokohama, JPN)*Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season*

date	21-May-23	time	2.63	3.73	4.75	5.76	6.80	7.82	8.83	9.90	10.97	12.05	13.46	1 / 6				
reaction time	0.156	interval	7 steps	1.10	1.02	1.01	1.04	1.02	1.01	1.07	1.07	1.08	1.41		3.13	3.07	3.22	
wind	0.8 m/s	velocity	5.22	8.31	8.96	9.05	8.79	8.96	9.05	8.54	8.54	8.46	9.94	8.17	8.76	8.93	8.52	

FINAL - 2023 Michitaka Kinami Memorial (Osaka, JPN)*Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season*

date	07-May-23	time	2.66	3.79	4.85	5.90	6.93	7.97	9.02	10.07	11.13	12.21	13.60	9 / 4				
reaction time	0.158	interval	7 steps	1.13	1.06	1.05	1.03	1.04	1.05	1.05	1.06	1.08	1.39		3.24	3.12	3.19	
wind	-0.3 m/s	velocity	5.16	8.09	8.62	8.70	8.87	8.79	8.70	8.70	8.62	8.46	10.09	8.09	8.46	8.79	8.60	

FINAL - 2023 Mikio Oda Memorial (Hiroshima, JPN)*Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season*

date	29-Apr-23	time	2.64	3.74	4.79	5.82	6.88	7.91	8.97	10.05	11.13	12.19	13.60	6 / 4				
reaction time	0.160	interval	7 steps	1.10	1.05	1.03	1.06	1.03	1.06	1.08	1.08	1.06	1.41		3.18	3.15	3.22	

wind	0.3 m/s	velocity	5.20	8.31	8.70	8.87	8.62	8.87	8.62	8.46	8.46	8.62	9.94	8.09	8.62	8.70	8.52	
FINAL - 2022 Japanese National Championships (Osaka, JPN)															<i>Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season</i>			
date	12-Jun-22	time	2.64	3.73	4.77	5.82	6.85	7.92	8.97	10.05	11.13	12.25		13.72	3 / 8			
reaction time	0.161	interval	7 steps	1.09	1.04	1.05	1.03	1.07	1.05	1.08	1.08	1.12	1.47		3.18	3.15	3.28	
wind	-1.2 m/s	velocity	5.20	8.39	8.79	8.70	8.87	8.54	8.70	8.46	8.46	8.16	9.54	8.02	8.62	8.70	8.36	
FINAL - 2022 Seiko Golden Grand Prix (Tokyo, JPN)															<i>Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season</i>			
date	08-May-22	time	2.65	3.75	4.79	5.83	6.88	7.94	9.00	10.07	11.17	12.27		13.73	8 / 6			
reaction time	0.155	interval	7 steps	1.10	1.04	1.04	1.05	1.06	1.06	1.07	1.10	1.10	1.46		3.18	3.17	3.27	
wind	0.1 m/s	velocity	5.18	8.31	8.79	8.79	8.70	8.62	8.62	8.54	8.31	8.31	9.60	8.01	8.62	8.65	8.39	
FINAL - 2022 Mikio Oda Memorial (Hiroshima, JPN)															<i>Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season</i>			
date	29-Apr-22	time	2.67	3.77	4.83	5.90	6.95	8.00	9.05	10.20	11.33	12.48		13.98	2 / 7			
reaction time	0.157	interval	7 steps	1.10	1.06	1.07	1.05	1.05	1.05	1.15	1.13	1.15	1.50		3.23	3.15	3.43	
wind	-1.5 m/s	velocity	5.14	8.31	8.62	8.54	8.70	8.70	8.70	7.95	8.09	7.95	9.35	7.87	8.49	8.70	7.99	
FINAL - 2021 Japanese National Championships (Osaka, JPN)															<i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>			
date	27-Jun-21	time	2.62	3.70	4.72	5.75	6.76	7.77	8.84	9.89	10.96	12.03		13.47	8 / 5			
reaction time	0.167	interval	7 steps	1.08	1.02	1.03	1.01	1.01	1.07	1.05	1.07	1.07	1.44	PB	3.13	3.09	3.19	
wind	1.2 m/s	velocity	5.24	8.46	8.96	8.87	9.05	9.05	8.54	8.70	8.54	8.54	9.74	8.17	8.76	8.87	8.60	
FINAL - 2021 Ready Steady Tokyo (Tokyo, JPN)															<i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>			
date	09-May-21	time	2.58	3.64	4.69	5.73	6.78	7.83	8.88	9.98	11.09	12.20		13.67	6 / 7			
reaction time	0.139	interval	7 steps	1.06	1.05	1.04	1.05	1.05	1.05	1.10	1.11	1.11	1.47		3.15	3.15	3.32	
wind	-0.8 m/s	velocity	5.32	8.62	8.70	8.79	8.70	8.70	8.70	8.31	8.23	8.23	9.54	8.05	8.70	8.70	8.26	
FINAL - 2021 Mikio Oda Memorial (Hiroshima, JPN)															<i>Shibayama (2021) - race analysis of men's 110m hurdles in the 2021 season</i>			
date	29-Apr-21	time	2.65	3.75	4.81	5.85	6.89	7.93	8.99	10.06	11.14	12.24		13.68	1 / 6			
reaction time		interval	7 steps	1.10	1.06	1.04	1.04	1.04	1.06	1.07	1.08	1.10	1.44		3.20	3.14	3.25	
wind	1.7 m/s	velocity	5.18	8.31	8.62	8.79	8.79	8.79	8.62	8.54	8.46	8.31	9.74	8.04	8.57	8.73	8.44	
FINAL - 2020 Michitaka Kinami Memorial (Osaka, JPN)															<i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>			
date	24-Oct-20	time	2.67	3.77	4.80	5.87	6.91	7.95	9.04	10.07	11.15	12.24		13.67	5 / 3			
reaction time		interval	7 steps	1.10	1.03	1.07	1.04	1.04	1.09	1.03	1.08	1.09	1.43		3.20	3.17	3.20	
wind	0.6 m/s	velocity	5.14	8.31	8.87	8.54	8.79	8.79	8.39	8.87	8.46	8.39	9.80	8.05	8.57	8.65	8.57	
FINAL - 2020 Japanese National Championships (Niigata, JPN)															<i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>			
date	03-Oct-20	time	2.67	3.75	4.80	5.83	6.88	7.93	8.97	10.05	11.12	12.23		13.72	3 / 8			
reaction time	0.158	interval	7 steps	1.08	1.05	1.03	1.05	1.05	1.04	1.08	1.07	1.11	1.49		3.16	3.14	3.26	
wind	-0.1 m/s	velocity	5.14	8.46	8.70	8.87	8.70	8.70	8.79	8.46	8.54	8.23	9.41	8.02	8.68	8.73	8.41	
Heat 1 - 2020 Japanese National Championships (Niigata, JPN)															<i>Shibayama (2020) - race analysis of men's 110m hurdles in the 2020 season</i>			
date	02-Oct-20	time	2.69	3.76	4.80	5.83	6.85	7.90	8.93	10.00	11.06	12.15		13.60	7 / 5			
reaction time	0.160	interval	7 steps	1.07	1.04	1.03	1.02	1.05	1.03	1.07	1.06	1.09	1.45	PB	3.14	3.10	3.22	
wind	0.8 m/s	velocity	5.10	8.54	8.79	8.87	8.96	8.70	8.87	8.54	8.62	8.39	9.67	8.09	8.73	8.85	8.52	
Yokoyama, Masaya (JPN)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2023 Japanese National High School Championships (Sapporo, JPN)															<i>Takashima (2023) - national high school sports festival - biomechanics data</i>			
date	06-Aug-23	time	2.77	3.91	5.02	6.13	7.23	8.33	9.45	10.57	11.70	12.89		14.33	3 / 5			
reaction time	0.201	interval		1.14	1.11	1.11	1.10	1.10	1.12	1.12	1.13	1.19	1.44		3.36	3.32	3.44	
wind	0.8 m/s	velocity	4.95	8.02	8.23	8.23	8.31	8.31	8.16	8.16	8.09	7.68	9.74	7.68	8.16	8.26	7.97	
Yoneyama, Aiki (JPN) (2004)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2022 Japanese National High School Championships (Naruto, JPN)															<i>Kishima (2022) - national high school championships biomechanics data collection</i>			
date	07-Aug-22	time	2.69	3.84	4.99	6.12	7.26	8.38	9.65	10.92	12.22	13.47		15.00	7 / 8			
reaction time	0.124	interval		1.15	1.15	1.13	1.14	1.12	1.27	1.27	1.30	1.25	1.53		3.43	3.53	3.82	
wind	-3.8 m/s	velocity	5.10	7.95	7.95	8.09	8.02	8.16	7.20	7.20	7.03	7.31	9.16	7.33	7.99	7.77	7.18	
Yoshima, Kaito (JPN) (1998)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
B FINAL - 2022 Mikio Oda Memorial (Hiroshima, JPN)															<i>Shibayama (2023) - race analysis of the men's 110m hurdles in the 2022 season</i>			
date	29-Apr-22	time	2.70	3.81	4.90	5.99	7.06	8.13	9.24	10.35	11.48	12.64		14.16	1 / 6			
reaction time	0.175	interval	7 steps	1.11	1.09	1.09	1.07	1.07	1.11	1.11	1.13	1.16	1.52		3.29	3.25	3.40	
wind	-0.7 m/s	velocity	5.08	8.23	8.39	8.39	8.54	8.54	8.23	8.23	8.09	7.88	9.22	7.77	8.33	8.44	8.06	
Yoshinaga, Kazuyuki (JPN) (1984)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2009 Japanese National Championships (Hiroshima, JPN)															<i>Ryutaro (2010) - an attempt or a creation of a race pattern stadard model for the 110m hurdles</i>			
date	27-Jun-09	time	2.63	3.71	4.78	5.85	6.91	8.01	9.10	10.19	11.27	12.38		13.86	1 / 5			
reaction time		interval		1.08	1.07	1.07	1.06	1.10	1.09	1.09	1.08	1.11	1.48	PB	3.22	3.25	3.28	
wind	1.6 m/s	velocity	5.22	8.46	8.54	8.54	8.62	8.31	8.39	8.39	8.46	8.23	9.47	7.94	8.52	8.44	8.36	
Young, Ahmad (USA) (2000)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Semi-Final 2 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)															<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>			

date	27-Jun-24	time	2.60	3.65	4.73	5.77	6.80	7.83	8.86	9.93	10.98	12.08		13.58	9 / 6			
reaction time		interval	7 steps	1.05	1.08	1.04	1.03	1.03	1.03	1.07	1.05	1.10	1.50			3.17	3.09	3.22
wind	-0.2 m/s	velocity	5.28	8.70	8.46	8.79	8.87	8.87	8.87	8.54	8.70	8.31	9.35	8.10		8.65	8.87	8.52
Heat 3 - 2024 USA Olympic Trials (Eugene, OR) (TV Analysis)														<i>Henson (2024) - Athlete First: 2024 year end hurdle report</i>				
date	24-Jun-24	time	2.60	3.65	4.70	5.75	6.77	7.80	8.83	9.87	10.93	12.06		13.46	9 / 6			
reaction time		interval	7 steps	1.05	1.05	1.05	1.02	1.03	1.03	1.04	1.06	1.13	1.40	=PB		3.15	3.08	3.23
wind	1.8 m/s	velocity	5.28	8.70	8.70	8.70	8.96	8.87	8.87	8.79	8.62	8.09	10.01	8.17		8.70	8.90	8.49
Yuuto, Yuiguchi (JPN)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2016 Miyazaki Prefecture High School Championships (Miyazaki, JPN) (2016.10.26) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en																		
date	16-Sep-16	time	2.81	3.97	5.16	6.35	7.54	8.72	10.00	11.23	12.46	13.70		15.25	4 / 1			
reaction time		interval		1.16	1.19	1.19	1.19	1.18	1.28	1.23	1.23	1.24	1.55			3.54	3.65	3.70
wind	0.4 m/s	velocity	4.88	7.88	7.68	7.68	7.68	7.75	7.14	7.43	7.43	7.37	9.05	7.21		7.75	7.51	7.41
Yu Haonan (CHN) (2000)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
U20 Heat 3 - 2019 Chinese National Youth Games (Taiyuan, CHN) (99cm) CAA Hurdle Development (2019)																		
date	14-Aug-19	time	2.64	3.75	4.83	5.94	7.02	8.12	9.21	10.31	11.41	12.53		14.04	4 / 3			
reaction time	0.154	interval		1.11	1.08	1.11	1.08	1.10	1.09	1.10	1.10	1.12	1.51			3.30	3.27	3.32
wind	0.6 m/s	velocity	5.20	8.23	8.46	8.23	8.46	8.31	8.39	8.31	8.31	8.16	9.28	7.83		8.31	8.39	8.26
Yu Zhicheng (CHN) (1963)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 1990 Asian Games (Beijing, CHN) Feng (1993) - an analysis of the racing technique in the entire course of the men's 110m hurdles																		
date	28-Sep-90	time	2.70	3.79	4.86	5.94	6.99	8.06	9.14	10.22	11.32	12.40		13.82	3 / 1			
reaction time		interval		1.09	1.07	1.08	1.05	1.07	1.08	1.08	1.10	1.08	1.42	=AR		3.24	3.20	3.26
wind	2.0 m/s	velocity	5.08	8.39	8.54	8.46	8.70	8.54	8.46	8.46	8.31	8.46	9.87	7.96		8.46	8.57	8.41
Semi-Final 2 - 1988 Olympic Games (Seoul, KOR)														<i>Brüggemann (1990) - scientific research project at the games of the XXXIV Olympiad, Seoul 1988</i>				
date	26-Sep-88	time	2.62	3.74	4.82	5.88	6.94	8.03	9.11	10.23	11.35	12.47		13.94	7 / 6			
reaction time	0.143	interval		1.12	1.08	1.06	1.06	1.09	1.08	1.12	1.12	1.12	1.47			3.26	3.23	3.36
wind	-0.7 m/s	velocity	5.24	8.16	8.46	8.62	8.62	8.39	8.46	8.16	8.16	8.16	9.54	7.89		8.41	8.49	8.16
FINAL - 1987 Chinese National Games (Guangzhou, CHN)														<i>Wang (2009) - research of training characteristic during different stages in the development of 110m hurdles</i>				
date	28-Nov-87	time	2.62	3.73	4.85	5.93	6.95	7.98	9.02	10.04	11.12	12.24		13.72	1 / 2			
reaction time		interval		1.11	1.12	1.08	1.02	1.03	1.04	1.02	1.08	1.12	1.48			3.31	3.09	3.22
wind	1.6 m/s	velocity	5.24	8.23	8.16	8.46	8.96	8.87	8.79	8.96	8.46	8.16	9.47	8.02		8.28	8.87	8.52
Yue Xuesong (CHN) (1997)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Decathlon - Heat 1 - 2021 Chinese National Championships (Chongqing, CHN) CAA Hurdle Development (2021)																		
date	27-Jun-21	time	2.80	3.95	5.10	6.25	7.42	8.59	9.74	10.91	12.08	13.28		14.82	4 / 3			
reaction time	0.193	interval		1.15	1.15	1.15	1.17	1.17	1.15	1.17	1.17	1.20	1.54			3.45	3.49	3.54
wind	0.5 m/s	velocity	4.90	7.95	7.95	7.95	7.81	7.81	7.95	7.81	7.81	7.62	9.10	7.42		7.95	7.86	7.75
Decathlon - Heat 3 - 2019 Chinese National Championships (Shenyang, CHN)														<i>CAA Hurdle Development (2019)</i>				
date	11-Jul-19	time	2.77	3.92	5.05	6.20	7.36	8.52	9.69	10.86	12.03	13.23		14.76	5 / 1			
reaction time	0.203	interval		1.15	1.13	1.15	1.16	1.16	1.17	1.17	1.17	1.20	1.53	PB		3.43	3.49	3.54
wind	0.0 m/s	velocity	4.95	7.95	8.09	7.95	7.88	7.88	7.81	7.81	7.81	7.62	9.16	7.45		7.99	7.86	7.75
Záhora, Vojtech (CZE) (1998)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Heat 1 - 2014 Czech Republic National U18 Championships (Trinec, CZE) (91cm) Feher (2014) - Final report from the U18 & U20 Czech Republic national championships																		
date	28-Jun-14	time	2.92	4.15	5.36	6.62	7.82	9.04	10.30	11.53	12.79	14.10		15.84	5 / 6			
reaction time	0.180	interval		1.23	1.21	1.26	1.20	1.22	1.26	1.23	1.26	1.31	1.74			3.70	3.68	3.80
wind	-0.3 m/s	velocity	4.70	7.43	7.55	7.25	7.62	7.49	7.25	7.43	7.25	6.98	8.06	6.94		7.41	7.45	7.22
Zallow, Chad (USA) (1997)			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2021 American Track League 1 (Fayetteville, AR) (TV Analysis) Henson (2021) - men's 60m hurdles world record season - Grant Holloway																		
date	24-Jan-21	time	2.55	3.60	4.64	5.70	6.72							7.71	6 / 4			
reaction time	0.189	interval		1.05	1.04	1.06	1.02						0.99			3.15		
		velocity	5.38	8.70	8.79	8.62	8.96						9.82	7.78		8.70		
FINAL - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)														<i>CAA Hurdle Development (2020)</i>				
date	15-Feb-20	time	2.53	3.59	4.65	5.70	6.75							7.65	2 / 4			
reaction time	0.151	interval		1.06	1.06	1.05	1.05						0.90			3.17		
		velocity	5.42	8.62	8.62	8.70	8.70						10.80	7.84		8.65		
Semi-Final 2 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)														<i>CAA Hurdle Development (2020)</i>				
date	15-Feb-20	time	2.55	3.60	4.67	5.72	6.80							7.72	4 / 3			
reaction time	0.156	interval		1.05	1.07	1.05	1.08						0.92			3.17		
		velocity	5.38	8.70	8.54	8.70	8.46						10.57	7.77		8.65		
Heat 1 - 2020 USATF National Indoor Championships (Albuquerque, NM) (Altitude)														<i>CAA Hurdle Development (2020)</i>				
date	14-Feb-20	time	2.57	3.62	4.67	5.72	6.81							7.67	8 / 1			
reaction time	0.168	interval		1.05	1.05	1.05	1.09						0.86			3.15		

wind	-1.2 m/s	velocity	5.36	8.62	8.79	8.87	8.87	8.70	8.54	8.54	8.39	8.31	9.22	8.08	273 of 283	M110H athlete	8.76	8.70	8.41
FINAL - 2021 Yangtze River Delta Athletics Meeting (Shaoxing, CHN)															<i>CAA Hurdle Development (2021)</i>				
date	08-Apr-21	time	2.56	3.64	4.66	5.68	6.68	7.72	8.76	9.80	10.88	11.96		13.43	6 / 1				
reaction time		interval		1.08	1.02	1.02	1.00	1.04	1.04	1.04	1.08	1.08	1.47	PB		3.12	3.08	3.20	
wind	-0.1 m/s	velocity	5.36	8.46	8.96	8.96	9.14	8.79	8.79	8.79	8.46	8.46	9.54	8.19		8.79	8.90	8.57	
FINAL - 2021 National Indoor Grand Prix (Jinan, CHN)															<i>CAA Hurdle Development (2021)</i>				
date	18-Mar-21	time	2.54	3.59	4.63	5.65	6.67							7.57	4 / 1				
reaction time	0.161	interval		1.05	1.04	1.02	1.02						0.90			3.11			
		velocity	5.40	8.70	8.79	8.96	8.96						10.80	7.93		8.82			
A FINAL - 2021 National Indoor Grand Prix (Chengdu, CHN)															<i>CAA Hurdle Development (2021)</i>				
date	13-Mar-21	time	2.54	3.58	4.62	5.62	6.64							7.55	3 / 1				
reaction time	0.163	interval		1.04	1.04	1.00	1.02						0.91	PB		3.08			
		velocity	5.40	8.79	8.79	9.14	8.96						10.68	7.95		8.90			
FINAL - 2020 Chinese National Championships (Shaoxing, CHN)															<i>CAA Hurdle Development (2020)</i>				
date	16-Sep-20	time	2.58	3.62	4.66	5.69	6.72	7.76	8.82	9.90	10.98	12.09		13.54	6 / 2				
reaction time	0.156	interval		1.04	1.04	1.03	1.03	1.04	1.06	1.08	1.08	1.11	1.45			3.11	3.13	3.27	
wind	0.4 m/s	velocity	5.32	8.79	8.79	8.87	8.87	8.79	8.62	8.46	8.46	8.23	9.67	8.12		8.82	8.76	8.39	
Heat 1 - 2020 Chinese National Championships (Shaoxing, CHN)															<i>CAA Hurdle Development (2020)</i>				
date	16-Sep-20	time	2.61	3.69	4.72	5.75	6.81	7.87	8.94	10.02	11.12	12.22		13.69	6 / 2				
reaction time	0.159	interval		1.08	1.03	1.03	1.06	1.06	1.07	1.08	1.10	1.10	1.47			3.14	3.19	3.28	
wind	0.3 m/s	velocity	5.26	8.46	8.87	8.87	8.62	8.62	8.54	8.46	8.31	8.31	9.54	8.04		8.73	8.60	8.36	
FINAL - 2019 Chinese National Grand Prix Final (Daqing, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	24-Aug-19	time	2.62	3.67	4.72	5.75	6.79	7.84	8.89	9.98	11.07	12.17		13.65	5 / 1				
reaction time	0.177	interval		1.05	1.05	1.03	1.04	1.05	1.05	1.09	1.09	1.10	1.48			3.13	3.14	3.28	
wind	-0.1 m/s	velocity	5.24	8.70	8.70	8.87	8.79	8.70	8.70	8.39	8.39	8.31	9.47	8.06		8.76	8.73	8.36	
Heat 1 - 2019 Chinese National Grand Prix Final (Daqing, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	23-Aug-19	time	2.65	3.71	4.77	5.85	6.94	8.02	9.11	10.24	11.38	12.53		14.11	4 / 1				
reaction time	0.176	interval		1.06	1.06	1.08	1.09	1.08	1.09	1.13	1.14	1.15	1.58			3.20	3.26	3.42	
wind	-0.2 m/s	velocity	5.18	8.62	8.62	8.46	8.39	8.46	8.39	8.09	8.02	7.95	8.87	7.80		8.57	8.41	8.02	
FINAL - 2019 Chinese World Championship Trials (Shenyang, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	02-Aug-19	time	2.56	3.60	4.64	5.67	6.74	7.76	8.82	9.88	10.96	12.08		13.54	3 / 2				
reaction time	0.150	interval		1.04	1.04	1.03	1.07	1.02	1.06	1.06	1.08	1.12	1.46			3.11	3.15	3.26	
wind	0.0 m/s	velocity	5.36	8.79	8.79	8.87	8.54	8.96	8.62	8.62	8.46	8.16	9.60	8.12		8.82	8.70	8.41	
Heat 2 - 2019 Chinese World Championship Trials (Shenyang, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	02-Aug-19	time	2.62	3.70	4.78	5.86	6.94	8.02	9.10	10.20	11.31	12.47		13.99	7 / 1				
reaction time	0.153	interval		1.08	1.08	1.08	1.08	1.08	1.08	1.10	1.11	1.16	1.52			3.24	3.24	3.37	
wind	-0.2 m/s	velocity	5.24	8.46	8.46	8.46	8.46	8.46	8.46	8.31	8.23	7.88	9.22	7.86		8.46	8.46	8.14	
FINAL - 2019 Chinese National Championships (Shenyang, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	08-Jul-19	time	2.58	3.65	4.70	5.75	6.77	7.86	8.92	9.99	11.09	12.18		13.59	8 / 1				
reaction time	0.174	interval		1.07	1.05	1.05	1.02	1.09	1.06	1.07	1.10	1.09	1.41			3.17	3.17	3.26	
wind	0.1 m/s	velocity	5.32	8.54	8.70	8.70	8.96	8.39	8.62	8.54	8.31	8.39	9.94	8.09		8.65	8.65	8.41	
Heat 3 - 2019 Chinese National Championships (Shenyang, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	08-Jul-19	time	2.69	3.79	4.85	5.94	7.02	8.11	9.18	10.27	11.39	12.51		13.98	6 / 2				
reaction time	0.204	interval		1.10	1.06	1.09	1.08	1.09	1.07	1.09	1.12	1.12	1.47			3.25	3.24	3.33	
wind	-0.5 m/s	velocity	5.10	8.31	8.62	8.39	8.46	8.39	8.54	8.39	8.16	8.16	9.54	7.87		8.44	8.46	8.23	
FINAL - 2019 Asian Grand Prix 2 (Chongqing, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	07-Jun-19	time	2.58	3.62	4.66	5.67	6.70	7.72	8.76	9.80	10.92	12.03		13.45	3 / 2				
reaction time	0.168	interval		1.04	1.04	1.01	1.03	1.02	1.04	1.04	1.12	1.11	1.42	PB		3.09	3.09	3.27	
wind	1.2 m/s	velocity	5.32	8.79	8.79	9.05	8.87	8.96	8.79	8.79	8.16	8.23	9.87	8.18		8.87	8.87	8.39	
FINAL - 2019 Asian Grand Prix 1 (Chongqing, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	04-Jun-19	time	2.58	3.65	4.70	5.75	6.83	7.90	8.95	10.05	11.16	12.26		13.72	6 / 2				
reaction time	0.159	interval		1.07	1.05	1.05	1.08	1.07	1.05	1.10	1.11	1.10	1.46			3.17	3.20	3.31	
wind	-0.3 m/s	velocity	5.32	8.54	8.70	8.70	8.46	8.54	8.70	8.31	8.23	8.31	9.60	8.02		8.65	8.57	8.28	
FINAL - 2019 Nanjing World Challenge (Nanjing, CHN)															<i>CAA Hurdle Development (2019)</i>				
date	21-May-19	time	2.59	3.64	4.70	5.73	6.76	7.82	8.87	9.95	11.04	12.16		13.62	10 / 8				
reaction time	0.146	interval		1.05	1.06	1.03	1.03	1.06	1.05	1.08	1.09	1.12	1.46	PB		3.14	3.14	3.29	
wind	0.1 m/s	velocity	5.30	8.70	8.62	8.87	8.87	8.62	8.70	8.46	8.39	8.16	9.60	8.08		8.73	8.73	8.33	
FINAL - 2019 Shanghai Diamond League (Shanghai, CHN)															<i>CAA Hurdle Development (2019)</i>				

														274 of 283	M110H athlete			
date	18-May-19	time	2.58	3.68	4.72	5.78	6.82	7.88	8.96	10.02	11.12	12.24	13.71	1 / 9				
reaction time	0.154	interval		1.10	1.04	1.06	1.04	1.06	1.08	1.06	1.10	1.12	1.47		3.20	3.18	3.28	
wind	0.7 m/s	velocity	5.32	8.31	8.79	8.62	8.79	8.62	8.46	8.62	8.31	8.16	9.54	8.02	8.57	8.62	8.36	
Heat 2 - 4th Leg - 2019 IAAF World Relays - Shuttle Hurdle Relay (Yokohama, JPN)														<i>CAA Hurdle Development (2019)</i>				
date	11-May-19	time	2.50	3.58	4.68	5.78	6.88	7.97	9.04	10.17	11.27	12.41	13.90	4 / 3				
reaction time		interval		1.08	1.10	1.10	1.10	1.09	1.07	1.13	1.10	1.14	1.49		3.28	3.26	3.37	
wind	na	velocity	5.49	8.46	8.31	8.31	8.31	8.39	8.54	8.09	8.31	8.02	9.41	7.91	57.54	8.36	8.41	8.14
FINAL - 2019 Asian Athletics Championships (Doha, QAT)														<i>CAA Hurdle Development (2019)</i>				
date	24-Apr-19	time	2.59	3.63	4.67	5.72	6.75	7.81	8.85	9.92	11.03	12.03	13.85	2 / 7				
reaction time	0.152	interval		1.04	1.04	1.05	1.03	1.06	1.04	1.07	1.11	1.00	1.82		3.13	3.13	3.18	
wind	1.7 m/s	velocity	5.30	8.79	8.79	8.70	8.87	8.62	8.79	8.54	8.23	9.14	7.70	7.94	8.76	8.76	8.62	
Heat 1 - 2019 Asian Athletics Championships (Doha, QAT)														<i>CAA Hurdle Development (2019)</i>				
date	23-Apr-19	time	2.55	3.60	4.67	5.70	6.76	7.82	8.89	9.98	11.07	12.21	13.69	7 / 3				
reaction time	0.153	interval		1.05	1.07	1.03	1.06	1.06	1.07	1.09	1.09	1.14	1.48		3.15	3.19	3.32	
wind	2.1 m/s	velocity	5.38	8.70	8.54	8.87	8.62	8.62	8.54	8.39	8.39	8.02	9.47	8.04	8.70	8.60	8.26	
FINAL - 2019 Chinese National Grand Prix 2 (Huangshi, CHN)														<i>CAA Hurdle Development (2019)</i>				
date	13-Apr-19	time	2.62	3.70	4.74	5.78	6.82	7.86	8.94	10.02	11.12	12.22	13.67	4 / 1				
reaction time	0.186	interval		1.08	1.04	1.04	1.04	1.04	1.08	1.08	1.10	1.10	1.45		3.16	3.16	3.28	
wind	-0.3 m/s	velocity	5.24	8.46	8.79	8.79	8.79	8.79	8.46	8.46	8.31	8.31	9.67	8.05	8.68	8.68	8.36	
Heat 2 - 2019 Chinese National Grand Prix 2 (Huangshi, CHN)														<i>CAA Hurdle Development (2019)</i>				
date	13-Apr-19	time	2.62	3.67	4.73	5.78	6.82	7.88	8.96	10.06	11.20	12.39	13.98	5 / 1				
reaction time	0.176	interval		1.05	1.06	1.05	1.04	1.06	1.08	1.10	1.14	1.19	1.59		3.16	3.18	3.43	
wind	0.1 m/s	velocity	5.24	8.70	8.62	8.70	8.79	8.62	8.46	8.31	8.02	7.68	8.82	7.87	8.68	8.62	7.99	
FINAL - 2019 Chinese National Grand Prix 1 (Zhaoqing, CHN)														<i>CAA Hurdle Development (2019)</i>				
date	09-Apr-19	time	2.58	3.65	4.70	5.73	6.77	7.80	8.96	10.22	11.35	12.51	14.00	9 / 2				
reaction time	0.180	interval		1.07	1.05	1.03	1.04	1.03	1.16	1.26	1.13	1.16	1.49		3.15	3.23	3.55	
wind	0.2 m/s	velocity	5.32	8.54	8.70	8.87	8.79	8.87	7.88	7.25	8.09	7.88	9.41	7.86	8.70	8.49	7.72	
Heat 1 - 2019 Chinese National Grand Prix 1 (Zhaoqing, CHN)														<i>CAA Hurdle Development (2019)</i>				
date	08-Apr-19	time	2.69	3.81	4.87	5.96	7.08	8.20	9.33	10.44	11.58	12.73	14.31	2 / 1				
reaction time	0.290	interval		1.12	1.06	1.09	1.12	1.12	1.13	1.11	1.14	1.15	1.58		3.27	3.37	3.40	
wind	-1.5 m/s	velocity	5.10	8.16	8.62	8.39	8.16	8.16	8.09	8.23	8.02	7.95	8.87	7.69	8.39	8.14	8.06	
A-FINAL - 2019 Chinese Indoor National Grand Prix Final (Hangzhou, CHN)														<i>CAA Hurdle Development (2019)</i>				
date	20-Mar-19	time	2.55	3.62	4.68	5.69	6.74						7.62	3 / 1				
reaction time		interval		1.07	1.06	1.01	1.05					0.88	PB		3.14			
wind		velocity	5.38	8.54	8.62	9.05	8.70					11.05	7.87		8.73			
A-FINAL - 2019 Chinese Indoor National Grand Prix 2 (Nanjing, CHN)														<i>CAA Hurdle Development (2019)</i>				
date	24-Feb-19	time	2.60	3.69	4.73	5.77	6.81						7.70	3 / 1				
reaction time		interval		1.09	1.04	1.04	1.04					0.89			3.17			
wind		velocity	5.28	8.39	8.79	8.79	8.79					10.92	7.79		8.65			
B-FINAL - 2019 Chinese Indoor National Grand Prix 1 (Nanjing, CHN)														<i>CAA Hurdle Development (2019)</i>				
date	20-Feb-19	time	2.60	3.68	4.74	5.79	6.84						7.75	4 / 1				
reaction time		interval		1.08	1.06	1.05	1.05					0.91			3.19			
wind		velocity	5.28	8.46	8.62	8.70	8.70					10.68	7.74		8.60			
FINAL - 2018 Chinese National Championships (Taiyuan, CHN)														<i>Henson (2018) - coaching observations</i>				
date	16-Sep-18	time	2.72	3.78	4.81	5.84	6.87	7.92	8.99	10.07	11.14	12.30	13.77	4 / 2				
reaction time		interval		1.06	1.03	1.03	1.03	1.05	1.07	1.08	1.07	1.16	1.47		3.12	3.15	3.31	
wind	-0.3 m/s	velocity	5.04	8.62	8.87	8.87	8.87	8.70	8.54	8.46	8.54	7.88	9.54	7.99	8.79	8.70	8.28	
Heat 2 - 2018 Chinese National Championships (Taiyuan, CHN)														<i>Henson (2018) - coaching observations</i>				
date	15-Sep-18	time	2.58	3.67	4.71	5.77	6.84	7.90	8.98	10.08	11.17	12.29	13.83	3 / 1				
reaction time		interval		1.09	1.04	1.06	1.07	1.06	1.08	1.10	1.09	1.12	1.54		3.19	3.21	3.31	
wind	0.7 m/s	velocity	5.32	8.39	8.79	8.62	8.54	8.62	8.46	8.31	8.39	8.16	9.10	7.95	8.60	8.54	8.28	
FINAL - 2018 Asian Games (Jakarta, INA)														<i>Shibayama (2018) - Race analysis of men's 110m hurdle run in 2018 season</i>				
date	28-Aug-18	time	2.63	3.66	4.70	5.76	6.79	7.85	8.90	9.98	11.06	12.19	13.65	1 / 6				
reaction time	0.221	interval		1.03	1.04	1.06	1.03	1.06	1.05	1.08	1.08	1.13	1.46	=PB		3.13	3.14	3.29
wind	0.0 m/s	velocity	5.22	8.87	8.79	8.62	8.87	8.62	8.70	8.46	8.46	8.09	9.60	8.06	8.76	8.73	8.33	
FINAL - 2018 National Grand Prix Final (Guiyang, CHN) (Altitude)														<i>Zhang (2019) - comparative analysis characteristics Chinese elite men's 110m hurdles in different age groups</i>				
date	17-Jun-18	time	2.60	3.64	4.69	5.72	6.75	7.78	8.85	9.91	11.00	12.11	13.65	/ 1				
reaction time		interval		1.04	1.05	1.03	1.03	1.03	1.07	1.06	1.09	1.11	1.54	PB		3.12	3.13	3.26
wind	-0.3 m/s	velocity	5.28	8.79	8.70	8.87	8.87	8.87	8.54	8.62	8.39	8.23	9.10	8.06	8.79	8.76	8.41	

FINAL - 2018 Shanghai Diamond League (Shanghai, CHN) (TV Analysis)*Henson (2020) - Athlete First: 2018 year end hurdle report*

date	12-May-18	time	2.56	3.60	4.64	5.68	6.72	7.78	8.84	9.92	11.00	12.16	13.76	1 / 8				
reaction time	0.148	interval		1.04	1.04	1.04	1.04	1.06	1.06	1.08	1.08	1.16	1.60	PB	3.12	3.16	3.32	
wind	0.2 m/s	velocity	5.36	8.79	8.79	8.79	8.79	8.62	8.62	8.46	8.46	7.88	8.76	7.99	8.79	8.68	8.26	

Żewrowski, Dawid (POL) (1997)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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FINAL - 2021 Copernicus Cup (Toruń, POL) (TV Analysis)*Henson (2021) - men's 60m hurdles world record season - Grant Holloway*

date	17-Feb-21	time	2.63	3.71	4.76	5.80	6.86					7.84	1 / 7			
reaction time	0.167	interval		1.08	1.05	1.04	1.06				0.98			3.17		
wind		velocity	5.22	8.46	8.70	8.79	8.62				9.92	7.65		8.65		

Zhang Honglin (CHN) (1994)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
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FINAL - 2021 Chinese National Championships (Chongqing, CHN)*CAA Hurdle Development (2021)*

date	25-Jun-21	time	2.60	3.67	4.73	5.76	6.82	7.87	8.93	9.99	11.12	12.21	13.70	5 / 2			
reaction time	0.158	interval		1.07	1.06	1.03	1.06	1.05	1.06	1.06	1.13	1.09	1.49		3.16	3.17	3.28
wind	1.6 m/s	velocity	5.28	8.54	8.62	8.87	8.62	8.70	8.62	8.62	8.09	8.39	9.41	8.03	8.68	8.65	8.36

Heat 3 - 2021 Chinese National Championships (Chongqing, CHN)*CAA Hurdle Development (2021)*

date	25-Jun-21	time	2.60	3.68	4.75	5.81	6.87	7.94	8.99	10.09	11.21	12.36	13.91	5 / 1			
reaction time	0.156	interval		1.08	1.07	1.06	1.06	1.07	1.05	1.10	1.12	1.15	1.55		3.21	3.18	3.37
wind	0.5 m/s	velocity	5.28	8.46	8.54	8.62	8.62	8.54	8.70	8.31	8.16	7.95	9.05	7.91	8.54	8.62	8.14

FINAL - 2020 Chinese Olympic Trials (Shaoxing, CHN)*CAA Hurdle Development (2021)*

date	12-Jun-21	time	2.65	3.75	4.79	5.82	6.87	7.94	9.01	10.07	11.18	12.29	13.75	5 / 2			
reaction time	0.161	interval		1.10	1.04	1.03	1.05	1.07	1.07	1.06	1.11	1.11	1.46		3.17	3.19	3.28
wind	0.9 m/s	velocity	5.18	8.31	8.79	8.87	8.70	8.54	8.54	8.62	8.23	8.23	9.60	8.00	8.65	8.60	8.36

Heat 1 - 2020 Chinese Olympic Trials (Shaoxing, CHN)*CAA Hurdle Development (2021)*

date	12-Jun-21	time	2.52	3.60	4.69	5.77	6.84	7.90	8.96	10.06	11.19	12.33	13.94	6 / 1			
reaction time	0.166	interval		1.08	1.09	1.08	1.07	1.06	1.06	1.10	1.13	1.14	1.61		3.25	3.19	3.37
wind	-0.4 m/s	velocity	5.44	8.46	8.39	8.46	8.54	8.62	8.62	8.31	8.09	8.02	8.71	7.89	8.44	8.60	8.14

FINAL - 2021 National Grand Prix (Chengdu, CHN)*CAA Hurdle Development (2021)*

date	02-Apr-21	time	2.66	3.76	4.80	5.87	6.91	7.94	9.02	10.08	11.20	12.30	13.76	4 / 1			
reaction time	0.179	interval		1.10	1.04	1.07	1.04	1.03	1.08	1.06	1.12	1.10	1.46		3.21	3.15	3.28
wind	-0.1 m/s	velocity	5.16	8.31	8.79	8.54	8.79	8.87	8.46	8.62	8.16	8.31	9.60	7.99	8.54	8.70	8.36

Heat 2 - 2021 National Grand Prix (Chengdu, CHN)*CAA Hurdle Development (2021)*

date	02-Apr-21	time	2.62	3.72	4.78	5.88	6.94	8.02	9.10	10.18	11.28	12.38	13.90	6 / 1			
reaction time	0.172	interval		1.10	1.06	1.10	1.06	1.08	1.08	1.08	1.10	1.10	1.52		3.26	3.22	3.28
wind	0.3 m/s	velocity	5.24	8.31	8.62	8.31	8.62	8.46	8.46	8.46	8.31	8.31	9.22	7.91	8.41	8.52	8.36

FINAL - 2021 National Indoor Grand Prix (Jinan, CHN)*CAA Hurdle Development (2021)*

date	18-Mar-21	time	2.66	3.74	4.81	5.86	6.91						7.81	3 / 2			
reaction time	0.204	interval	7 steps	1.08	1.07	1.05	1.05					0.90			3.20		
wind		velocity	5.16	8.46	8.54	8.70	8.70					10.80	7.68		8.57		

FINAL - 2020 Chinese National Championships (Shaoxing, CHN)*CAA Hurdle Development (2020)*

date	16-Sep-20	time	2.63	3.74	4.80	5.86	6.90	7.94	9.01	10.08	11.16	12.26	13.66	4 / 4			
reaction time	0.167	interval		1.11	1.06	1.06	1.04	1.04	1.07	1.07	1.08	1.10	1.40		3.23	3.15	3.25
wind	0.4 m/s	velocity	5.22	8.23	8.62	8.62	8.79	8.79	8.54	8.54	8.46	8.31	10.01	8.05	8.49	8.70	8.44

Heat 1 - 2020 Chinese National Championships (Shaoxing, CHN)*CAA Hurdle Development (2020)*

date	16-Sep-20	time	2.63	3.73	4.78	5.84	6.90	7.96	9.04	10.12	11.22	12.35	13.79	8 / 3			
reaction time	0.167	interval		1.10	1.05	1.06	1.06	1.06	1.08	1.08	1.10	1.13	1.44		3.21	3.20	3.31
wind	0.3 m/s	velocity	5.22	8.31	8.70	8.62	8.62	8.62	8.46	8.46	8.31	8.09	9.74	7.98	8.54	8.57	8.28

A-FINAL - 2019 Chinese Indoor National Grand Prix 4 (Xi'an, CHN)*CAA Hurdle Development (2019)*

date	4-Mar-19	time	2.67	3.75	4.83	5.91	7.01						7.93	5 / 3			
reaction time		interval		1.08	1.08	1.08	1.10					0.92			3.24		
wind		velocity	5.14	8.46	8.46	8.46	8.31					10.57	7.57		8.46		

B-FINAL - 2019 Chinese Indoor National Grand Prix 3 (Xi'an, CHN)*CAA Hurdle Development (2019)*

date	28-Feb-19	time	2.69	3.81	4.89	5.96	7.06						7.94	3 / 1			
reaction time		interval		1.12	1.08	1.07	1.10					0.88			3.27		
wind		velocity	5.10	8.16	8.46	8.54	8.31					11.05	7.56		8.39		

FINAL - 2018 National Grand Prix Final (Guiyang, CHN) (Altitude)*Zhang (2019) - comparative analysis characteristics Chinese elite men's 110m hurdles in different age groups*

date	17-Jun-18	time	2.69	3.77	4.83	5.92	6.99	8.06	9.15	10.24	11.35	12.47	13.98	/ 4			
reaction time		interval		1.08	1.06	1.09	1.07	1.07	1.09	1.09	1.11	1.12	1.51		3.23	3.23	3.32
wind	-0.3 m/s	velocity	5.10	8.46	8.62	8.39	8.54	8.54	8.39	8.39	8.23	8.16	9.28	7.87	8.49	8.49	8.26

FINAL - 2017 Chinese National Games (Tianjin, CHN)*Henson (2017) - coaching observations*

date	03-Sep-17	time	2.67	3.75	4.82	5.87	6.94	7.99	9.09	10.16	11.26	12.36		13.78		4 / 3			
reaction time		interval		1.08	1.07	1.05	1.07	1.05	1.10	1.07	1.10	1.10	1.42				3.20	3.22	3.27
wind	0.3 m/s	velocity	5.14	8.46	8.54	8.70	8.54	8.70	8.31	8.54	8.31	8.31	9.87	7.98			8.57	8.52	8.39

FINAL - 2016 Shanghai Golden Grand Prix (Shanghai, CHN)*Henson (2021) - Athlete First: 2016 year end hurdle report*

date	14-May-16	time	2.54	3.60	4.64	5.68	6.74	7.82	8.90	10.02	11.10	12.22		13.79		1 / 7			
reaction time	0.142	interval		1.06	1.04	1.04	1.06	1.08	1.08	1.12	1.08	1.12	1.57				3.14	3.22	3.32
wind	1.2 m/s	velocity	5.40	8.62	8.79	8.79	8.62	8.46	8.46	8.16	8.46	8.16	8.93	7.98			8.73	8.52	8.26

FINAL - 2016 Seiko Golden Grand Prix (Kawasaki, JPN)*Kota (2016) - race analysis of japanese top-ranked men 110m and women 100m hurdlers*

date	08-May-16	time	2.69	3.72	4.76	5.78	6.82	7.84	8.90	9.94	11.02	12.12		13.59		8 / 2			
reaction time	0.162	interval		1.03	1.04	1.02	1.04	1.02	1.06	1.04	1.08	1.10	1.47				3.09	3.12	3.22
wind	-0.6 m/s	velocity	5.10	8.87	8.79	8.96	8.79	8.96	8.62	8.79	8.46	8.31	9.54	8.09			8.87	8.79	8.52

Zhang Jinzhao (CHN) (1999)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10			
Heat 2 - 2021 Chinese National Championships (Chongqing, CHN)	<i>CAA Hurdle Development (2021)</i>																		
date	25-Jun-21	time	2.70	3.82	4.88	5.95	7.04	8.12	9.23	10.34	11.46	12.59		14.09		4 / 3			
reaction time	0.189	interval		1.12	1.06	1.07	1.09	1.08	1.11	1.11	1.12	1.13	1.50				3.25	3.28	3.36
wind	-1.2 m/s	velocity	5.08	8.16	8.62	8.54	8.39	8.46	8.23	8.23	8.16	8.09	9.35	7.81			8.44	8.36	8.16

FINAL - 2020 Chinese Olympic Trials (Shaoxing, CHN)*CAA Hurdle Development (2021)*

date	12-Jun-21	time	2.77	3.87	4.95	6.01	7.07	8.14	9.19	10.28	11.38	12.47		13.94		4 / 3			
reaction time	0.190	interval		1.10	1.08	1.06	1.06	1.07	1.05	1.09	1.10	1.09	1.47	PB			3.24	3.18	3.28
wind	0.9 m/s	velocity	4.95	8.31	8.46	8.62	8.62	8.54	8.70	8.39	8.31	8.39	9.54	7.89			8.46	8.62	8.36

Heat 2 - 2020 Chinese Olympic Trials (Shaoxing, CHN)*CAA Hurdle Development (2021)*

date	12-Jun-21	time	2.64	3.76	4.84	5.92	7.00	8.09	9.17	10.28	11.39	12.51		14.10		3 / 2			
reaction time	0.172	interval		1.12	1.08	1.08	1.08	1.09	1.08	1.11	1.11	1.12	1.59				3.28	3.25	3.34
wind	-0.8 m/s	velocity	5.20	8.16	8.46	8.46	8.46	8.39	8.46	8.23	8.23	8.16	8.82	7.80			8.36	8.44	8.21

FINAL - 2021 East China District Meeting (Zhaoqing, CHN)*CAA Hurdle Development (2021)*

date	24-Apr-21	time	2.74	3.84	4.94	5.99	7.06	8.14	9.22	10.29	11.40	12.52		14.00		5 / 3			
reaction time	0.208	interval		1.10	1.10	1.05	1.07	1.08	1.08	1.07	1.11	1.12	1.48	PB			3.25	3.23	3.30
wind	-0.3 m/s	velocity	5.01	8.31	8.31	8.70	8.54	8.46	8.46	8.54	8.23	8.16	9.47	7.86			8.44	8.49	8.31

Heat 1 - 2021 East China District Meeting (Zhaoqing, CHN)*CAA Hurdle Development (2021)*

date	24-Apr-21	time	2.74	3.84	4.91	5.99	7.07	8.14	9.24	10.34	11.45	12.59		14.09		3 / 2			
reaction time	0.192	interval		1.10	1.07	1.08	1.08	1.07	1.10	1.10	1.11	1.14	1.50				3.25	3.25	3.35
wind	-1.1 m/s	velocity	5.01	8.31	8.54	8.46	8.46	8.54	8.31	8.31	8.23	8.02	9.35	7.81			8.44	8.44	8.19

FINAL - 2021 Yangtze River Delta Athletics Meeting (Shaoxing, CHN)*CAA Hurdle Development (2021)*

date	08-Apr-21	time	2.76	3.86	4.96	6.04	7.12	8.22	9.32	10.42	11.52	12.64		14.12		9 / 3			
reaction time		interval		1.10	1.10	1.08	1.08	1.10	1.10	1.10	1.10	1.12	1.48	PB			3.28	3.28	3.32
wind	-0.1 m/s	velocity	4.97	8.31	8.31	8.46	8.46	8.31	8.31	8.31	8.31	8.16	9.47	7.79			8.36	8.36	8.26

Heat 3 - 2019 Chinese National Championships (Shenyang, CHN)*CAA Hurdle Development (2019)*

date	08-Jul-19	time	2.82	3.95	5.06	6.17	7.29	8.41	9.54	10.69	11.85	13.03		14.55		4 / 6			
reaction time	0.233	interval		1.13	1.11	1.11	1.12	1.12	1.13	1.15	1.16	1.18	1.52	PB			3.35	3.37	3.49
wind	-0.5 m/s	velocity	4.87	8.09	8.23	8.23	8.16	8.16	8.09	7.95	7.88	7.75	9.22	7.56			8.19	8.14	7.86

Zhang Shuai (CHN) (1996)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10			
Heat 3 - 2019 Chinese National Championships (Shenyang, CHN)	<i>CAA Hurdle Development (2019)</i>																		
date	08-Jul-19	time	2.69	3.84	5.01	6.14	7.26	8.37	9.53	10.69	11.86	13.05		14.67		8 / 7			
reaction time	0.260	interval		1.15	1.17	1.13	1.12	1.11	1.16	1.16	1.17	1.19	1.62				3.45	3.39	3.52
wind	-0.5 m/s	velocity	5.10	7.95	7.81	8.09	8.16	8.23	7.88	7.88	7.81	7.68	8.65	7.50			7.95	8.09	7.79

FINAL - 2019 Chinese National Grand Prix 4 (Luoyang, CHN)*CAA Hurdle Development (2019)*

date	30-May-19	time	2.68	3.78	4.88	5.97	7.07	8.19	9.30	10.41	11.54	12.72		14.27		4 / 8			
reaction time	0.174	interval		1.10	1.10	1.09	1.10	1.12	1.11	1.11	1.13	1.18	1.55				3.29	3.33	3.42
wind	0.0 m/s	velocity	5.12	8.31	8.31	8.39	8.31	8.16	8.23	8.23	8.09	7.75	9.05	7.71			8.33	8.23	8.02

B-FINAL - 2019 Chinese Indoor National Grand Prix 4 (Xi'an, CHN)*CAA Hurdle Development (2019)*

date	4-Mar-19	time	2.70	3.79	4.96	6.08	7.21							8.26		4 / 4			
reaction time		interval		1.09	1.17	1.12	1.13						1.05				3.38		
		velocity	5.08	8.39	7.81	8.16	8.09						9.26	7.26			8.11		

Zhang Shuaiyin (CHN) (1998)

	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10			
Decathlon - Heat 3 - 2021 Chinese National Championships (Chongqing, CHN)	<i>CAA Hurdle Development (2021)</i>																		
date	27-Jun-21	time	2.80	3.97	5.14	6.31	7.47	8.64	9.81	10.99	12.19	13.45		15.09		6 / 3			
reaction time	0.163	interval		1.17	1.17	1.17	1.16	1.17	1.17	1.18	1.20	1.26	1.64				3.51	3.50	3.64
wind	-0.2 m/s	velocity	4.90	7.81	7.81	7.81	7.88	7.81	7.81	7.75	7.62	7.25	8.55	7.29			7.81	7.83	7.53

Zhang Tao (CHN) (1997)

			H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
Heat 4 - 2021 Chinese National Championships (Chongqing, CHN)																		
<i>CAA Hurdle Development (2021)</i>																		
date	25-Jun-21	time	2.70	3.80	4.92	6.04	7.14	8.24	9.38	10.51	11.66	12.85		14.42	5 / 4			
reaction time	0.189	interval		1.10	1.12	1.12	1.10	1.10	1.14	1.13	1.15	1.19	1.57			3.34	3.34	3.47
wind	-0.2 m/s	velocity	5.08	8.31	8.16	8.16	8.31	8.31	8.02	8.09	7.95	7.68	8.93	7.63		8.21	8.21	7.90
Heat 2 - 2021 East China District Meeting (Zhaoqing, CHN)																		
<i>CAA Hurdle Development (2021)</i>																		
date	24-Apr-21	time	2.72	3.91	5.04	6.21	7.38	8.54	9.73	10.93	12.16	13.37		15.13	7 / 7			
reaction time	0.186	interval		1.19	1.13	1.17	1.17	1.16	1.19	1.20	1.23	1.21	1.76			3.49	3.52	3.64
wind	-1.2 m/s	velocity	5.04	7.68	8.09	7.81	7.81	7.88	7.68	7.62	7.43	7.55	7.97	7.27		7.86	7.79	7.53
FINAL - 2019 Chinese National Grand Prix Final (Daqing, CHN)																		
<i>CAA Hurdle Development (2019)</i>																		
date	24-Aug-19	time	2.72	3.85	4.93	6.03	7.11	8.21	9.31	10.42	11.55	12.67		14.18	4 / 5			
reaction time	0.181	interval		1.13	1.08	1.10	1.08	1.10	1.10	1.11	1.13	1.12	1.51			3.31	3.28	3.36
wind	-0.1 m/s	velocity	5.04	8.09	8.46	8.31	8.46	8.31	8.31	8.23	8.09	8.16	9.28	7.76		8.28	8.36	8.16
Heat 2 - 2019 Chinese National Grand Prix Final (Daqing, CHN)																		
<i>CAA Hurdle Development (2019)</i>																		
date	23-Aug-19	time	2.74	3.85	4.95	6.05	7.14	8.22	9.33	10.46	11.58	12.75		14.30	4 / 1			
reaction time	0.180	interval		1.11	1.10	1.10	1.09	1.08	1.11	1.13	1.12	1.17	1.55			3.31	3.28	3.42
wind	-0.2 m/s	velocity	5.01	8.23	8.31	8.31	8.39	8.46	8.23	8.09	8.16	7.81	9.05	7.69		8.28	8.36	8.02
FINAL - 2019 Chinese World Championship Trials (Shenyang, CHN)																		
<i>CAA Hurdle Development (2019)</i>																		
date	02-Aug-19	time	2.69	3.78	4.87	5.94	7.01	8.07	9.14	10.24	11.34	12.48		13.98	6 / 5			
reaction time	0.159	interval		1.09	1.09	1.07	1.07	1.06	1.07	1.10	1.10	1.14	1.50			3.25	3.20	3.34
wind	0.0 m/s	velocity	5.10	8.39	8.39	8.54	8.54	8.62	8.54	8.31	8.31	8.02	9.35	7.87		8.44	8.57	8.21
Heat 2 - 2019 Chinese World Championship Trials (Shenyang, CHN)																		
<i>CAA Hurdle Development (2019)</i>																		
date	02-Aug-19	time	2.70	3.82	4.90	5.96	7.07	8.16	9.24	10.36	11.48	12.65		14.20	4 / 2			
reaction time	0.174	interval		1.12	1.08	1.06	1.11	1.09	1.08	1.12	1.12	1.17	1.55			3.26	3.28	3.41
wind	-0.2 m/s	velocity	5.08	8.16	8.46	8.62	8.23	8.39	8.46	8.16	8.16	7.81	9.05	7.75		8.41	8.36	8.04
Heat 3 - 2019 Chinese National Championships (Shenyang, CHN)																		
<i>CAA Hurdle Development (2019)</i>																		
date	08-Jul-19	time	2.65	3.75	4.82	5.91	6.96	7.99	9.07	10.16	11.26	12.41		13.89	2 / 1			
reaction time	0.158	interval		1.10	1.07	1.09	1.05	1.03	1.08	1.09	1.10	1.15	1.48			3.26	3.16	3.34
wind	-0.5 m/s	velocity	5.18	8.31	8.54	8.39	8.70	8.87	8.46	8.39	8.31	7.95	9.47	7.92		8.41	8.68	8.21
FINAL - 2019 Chinese National Grand Prix 3 (Jinhau, CHN)																		
<i>CAA Hurdle Development (2019)</i>																		
date	23-May-19	time	2.70	3.82	4.92	6.00	7.08	8.16	9.22	10.32	11.42	12.52		13.99	7 / 6			
reaction time	0.174	interval		1.12	1.10	1.08	1.08	1.08	1.06	1.10	1.10	1.10	1.47			3.30	3.22	3.30
wind	2.5 m/s	velocity	5.08	8.16	8.31	8.46	8.46	8.46	8.62	8.31	8.31	8.31	9.54	7.86		8.31	8.52	8.31
FINAL - 2019 Chinese National Grand Prix 2 (Huangshi, CHN)																		
<i>CAA Hurdle Development (2019)</i>																		
date	13-Apr-19	time	2.76	3.86	4.96	6.06	7.14	8.23	9.32	10.42	11.52	12.66		14.11	9 / 4			
reaction time	0.216	interval		1.10	1.10	1.10	1.08	1.09	1.09	1.10	1.10	1.14	1.45			3.30	3.26	3.34
wind	-0.3 m/s	velocity	4.97	8.31	8.31	8.31	8.46	8.39	8.39	8.31	8.31	8.02	9.67	7.80		8.31	8.41	8.21
Heat 3 - 2019 Chinese National Grand Prix 2 (Huangshi, CHN)																		
<i>CAA Hurdle Development (2019)</i>																		
date	13-Apr-19	time	2.72	3.82	4.90	5.98	7.06	8.16	9.26	10.40	11.52	12.68		14.16	8 / 3			
reaction time	0.198	interval		1.10	1.08	1.08	1.08	1.10	1.10	1.14	1.12	1.16	1.48			3.26	3.28	3.42
wind	0.0 m/s	velocity	5.04	8.31	8.46	8.46	8.46	8.31	8.31	8.02	8.16	7.88	9.47	7.77		8.41	8.36	8.02
FINAL - 2019 Chinese National Grand Prix 1 (Zhaoqing, CHN)																		
<i>CAA Hurdle Development (2019)</i>																		
date	09-Apr-19	time	2.70	3.81	4.90	5.99	7.07	8.16	9.26	10.34	11.44	12.55		14.03	5 / 3			
reaction time	0.195	interval		1.11	1.09	1.09	1.08	1.09	1.10	1.08	1.10	1.11	1.48			3.29	3.27	3.29
wind	0.2 m/s	velocity	5.08	8.23	8.39	8.39	8.46	8.39	8.31	8.46	8.31	8.23	9.47	7.84		8.33	8.39	8.33
Heat 2 - 2019 Chinese National Grand Prix 1 (Zhaoqing, CHN)																		
<i>CAA Hurdle Development (2019)</i>																		
date	08-Apr-19	time	2.72	3.82	4.90	5.98	7.06	8.14	9.26	10.34	11.44	12.58		14.05	7 / 1			
reaction time	0.200	interval		1.10	1.08	1.08	1.08	1.08	1.12	1.08	1.10	1.14	1.47			3.26	3.28	3.32
wind	-0.6 m/s	velocity	5.04	8.31	8.46	8.46	8.46	8.46	8.16	8.46	8.31	8.02	9.54	7.83		8.41	8.36	8.26
A-FINAL - 2019 Chinese Indoor National Grand Prix 1 (Nanjing, CHN)																		
<i>CAA Hurdle Development (2019)</i>																		
date	20-Feb-19	time	2.71	3.82	4.92	6.00	7.14							8.12	3 / 4			
reaction time		interval		1.11	1.10	1.08	1.14						0.98			3.29		
		velocity	5.06	8.23	8.31	8.46	8.02						9.92	7.39		8.33		
FINAL - 2018 Chinese National Championships (Taiyuan, CHN)																		
<i>Henson (2018) - coaching observations</i>																		
date	16-Sep-18	time	2.80	3.89	4.96	6.02	7.12	8.19	9.29	10.39	11.50	12.53		16.34	3 / 8			
reaction time		interval		1.09	1.07	1.06	1.10	1.07	1.10	1.10	1.11	1.03	3.81			3.22	3.27	3.24
wind	-0.3 m/s	velocity	4.90	8.39	8.54	8.62	8.31	8.54	8.31	8.31	8.23	8.87	3.68	6.73		8.52	8.39	8.46
Heat 1 - 2018 Chinese National Championships (Taiyuan, CHN)																		
<i>Henson (2018) - coaching observations</i>																		
date	15-Sep-18	time	2.77	3.85	4.90	5.99	7.50	8.11	9.18	10.29	11.36	12.51		14.00	8 / 2			

reaction time	interval	1.08	1.05	1.09	1.51	0.61	1.07	1.11	1.07	1.15	1.49		3.22	3.19	3.33		
wind	-0.2 m/s	velocity	4.95	8.46	8.70	8.39	6.05	14.98	8.54	8.23	8.54	7.95	9.41	7.86	8.52	8.60	8.23

FINAL - 2018 National Grand Prix Final (Guiyang, CHN) (Altitude) *Zhang (2019) - comparative analysis characteristics Chinese elite men's 110m hurdles in different age groups*

date	17-Jun-18	time	2.71	3.78	4.86	5.91	6.99	8.05	9.14	10.21	11.32	12.41	13.92	1 / 2				
reaction time	interval	1.07	1.08	1.05	1.08	1.06	1.09	1.07	1.11	1.09	1.51				3.20	3.23	3.27	
wind	-0.3 m/s	velocity	5.06	8.54	8.46	8.70	8.46	8.62	8.39	8.54	8.23	8.39	9.28	7.90		8.57	8.49	8.39

Zhang Xiangyu (CHN) (1991)**FINAL - 2018 National Grand Prix Final (Guiyang, CHN) (Altitude)** *Zhang (2019) - comparative analysis characteristics Chinese elite men's 110m hurdles in different age groups*

date	17-Jun-18	time	2.71	3.80	4.89	5.97	7.08	8.16	9.27	10.37	11.50	12.62	14.15	1 / 7				
reaction time	interval	1.09	1.09	1.08	1.11	1.08	1.11	1.10	1.13	1.12	1.53				3.26	3.30	3.35	
wind	-0.3 m/s	velocity	5.06	8.39	8.39	8.46	8.23	8.46	8.23	8.31	8.09	8.16	9.16	7.77		8.41	8.31	8.19

Zhang Zhen (CHN) (1996)**Decathlon - Heat 2 - 2019 Chinese National Championships (Shenyang, CHN)** *CAA Hurdle Development (2019)*

date	11-Jul-19	time	2.83	4.00	5.13	6.29	7.43	8.59	9.77	10.96	12.18	13.42	15.10	3 / 4				
reaction time	0.169	interval	1.17	1.13	1.16	1.14	1.16	1.18	1.19	1.22	1.24	1.68			3.46	3.48	3.65	
wind	-0.1 m/s	velocity	4.85	7.81	8.09	7.88	8.02	7.88	7.75	7.68	7.49	7.37	8.35	7.28		7.92	7.88	7.51

Zhao Guorui (CHN) (1996)**Decathlon - Heat 1 - 2019 Chinese National Grand Prix Final (Daqing, CHN)** *CAA Hurdle Development (2019)*

date	23-Aug-19	time	2.84	4.07	5.29	6.52	7.81	9.06	10.31	11.63	12.90	14.25	16.02	8 / 5				
reaction time	0.207	interval	1.23	1.22	1.23	1.29	1.25	1.25	1.32	1.27	1.35	1.77			3.68	3.79	3.94	
wind	?? m/s	velocity	4.83	7.43	7.49	7.43	7.09	7.31	7.31	6.92	7.20	6.77	7.92	6.87		7.45	7.23	6.96

Decathlon - Heat 2 - 2019 Chinese National Championships (Shenyang, CHN) *CAA Hurdle Development (2019)*

date	11-Jul-19	time	2.78	4.02	5.24	6.44	7.64	8.86	10.09	11.33	12.59	13.86	15.63	6 / 5				
reaction time	0.198	interval	1.24	1.22	1.20	1.20	1.22	1.23	1.24	1.26	1.27	1.77	PB		3.66	3.65	3.77	
wind	-0.1 m/s	velocity	4.94	7.37	7.49	7.62	7.62	7.49	7.43	7.37	7.25	7.20	7.92	7.04		7.49	7.51	7.27

Zhao Jiefu (CHN) (2001)**Heat 2 - 2021 Chinese National Championships (Chongqing, CHN)** *CAA Hurdle Development (2021)*

date	25-Jun-21	time	2.79	3.94	5.05	6.18	7.31	8.43	9.58	10.71	11.91	13.11	14.77	9 / 7				
reaction time	0.214	interval	1.15	1.11	1.13	1.13	1.12	1.15	1.13	1.20	1.20	1.66			3.39	3.40	3.53	
wind	-1.2 m/s	velocity	4.92	7.95	8.23	8.09	8.09	8.16	7.95	8.09	7.62	7.62	8.45	7.45		8.09	8.06	7.77

Heat 2 - 2021 East China District Meeting (Zhaoqing, CHN) *CAA Hurdle Development (2021)*

date	24-Apr-21	time	2.80	3.96	5.08	6.23	7.35	8.46	9.60	10.74	11.88	13.08	14.69	2 / 5				
reaction time	0.213	interval	1.16	1.12	1.15	1.12	1.11	1.14	1.14	1.14	1.20	1.61			3.43	3.37	3.48	
wind	-1.2 m/s	velocity	4.90	7.88	8.16	7.95	8.16	8.23	8.02	8.02	8.02	7.62	8.71	7.49		7.99	8.14	7.88

Heat 2 - 2019 Chinese National Championships (Shenyang, CHN) *CAA Hurdle Development (2019)*

date	08-Jul-19	time	2.83	3.99	5.12	6.26	7.37	8.51	9.66	10.79	11.97	13.16	14.78	2 / 7				
reaction time	0.218	interval	1.16	1.13	1.14	1.11	1.14	1.15	1.13	1.18	1.19	1.62			3.43	3.40	3.50	
wind	0.4 m/s	velocity	4.85	7.88	8.09	8.02	8.23	8.02	7.95	8.09	7.75	7.68	8.65	7.44		7.99	8.06	7.83

Zhao Pengchuan (CHN) (1993)**Heat 1 - 2019 Chinese World Championship Trials (Shenyang, CHN)** *CAA Hurdle Development (2019)*

date	02-Aug-19	time	2.69	3.82	4.93	6.01	7.12	8.21	9.32	10.43	11.56	12.69	14.25	4 / 4				
reaction time	0.168	interval	1.13	1.11	1.08	1.11	1.09	1.11	1.11	1.13	1.13	1.56			3.32	3.31	3.37	
wind	-0.3 m/s	velocity	5.10	8.09	8.23	8.46	8.23	8.39	8.23	8.23	8.09	8.09	8.99	7.72		8.26	8.28	8.14

FINAL - 2019 Chinese National Championships (Shenyang, CHN) *CAA Hurdle Development (2019)*

date	08-Jul-19	time	2.67	3.77	4.84	5.90	6.96	8.02	9.11	10.22	11.35	12.46	14.04	4 / 7				
reaction time	0.164	interval	1.10	1.07	1.06	1.06	1.06	1.09	1.11	1.13	1.11	1.58			3.23	3.21	3.35	
wind	0.1 m/s	velocity	5.14	8.31	8.54	8.62	8.62	8.62	8.39	8.23	8.09	8.23	8.87	7.83		8.49	8.54	8.19

Heat 2 - 2019 Chinese National Championships (Shenyang, CHN) *CAA Hurdle Development (2019)*

date	08-Jul-19	time	2.65	3.77	4.82	5.89	6.95	8.02	9.10	10.18	11.26	12.37	13.85	3 / 1				
reaction time	0.168	interval	1.12	1.05	1.07	1.06	1.07	1.08	1.08	1.08	1.11	1.48			3.24	3.21	3.27	
wind	0.4 m/s	velocity	5.18	8.16	8.70	8.54	8.62	8.54	8.46	8.46	8.46	8.23	9.47	7.94		8.46	8.54	8.39

FINAL - 2019 Chinese National Grand Prix 4 (Luoyang, CHN) *CAA Hurdle Development (2019)*

date	30-May-19	time	2.67	3.77	4.84	5.93	6.99	8.07	9.16	10.26	11.35	12.46	13.94	6 / 1				
reaction time	0.165	interval	1.10	1.07	1.09	1.06	1.08	1.09	1.10	1.09	1.11	1.48			3.26	3.23	3.30	
wind	0.0 m/s	velocity	5.14	8.31	8.54	8.39	8.62	8.46	8.39	8.31	8.39	8.23	9.47	7.89		8.41	8.49	8.31

FINAL - 2019 Chinese National Grand Prix 2 (Huangshi, CHN) *CAA Hurdle Development (2019)*

date	13-Apr-19	time	2.68	3.81	4.90	5.96	7.06	8.18	9.28	10.42	11.54	12.68	14.24	7 / 7				
reaction time	0.176	interval	1.13	1.09	1.06	1.10	1.12	1.10	1.14	1.12	1.14	1.56			3.28	3.32	3.40	
wind	-0.3 m/s	velocity	5.12	8.09	8.39	8.62	8.31	8.16	8.31	8.02	8.16	8.02	8.99	7.72		8.36	8.26	8.06

FINAL - 2024 Kamila Skolimowska Memorial (Silesia, POL)

date	25-Aug-24	time	2.39	3.46	4.49	5.49	6.49	7.52	8.57	9.65	10.73	11.83	13.40	1 / 6				
reaction time	0.138	interval	7 steps	1.07	1.03	1.00	1.00	1.03	1.05	1.08	1.08	1.10	1.57		3.10	3.08	3.26	
wind	1.1 m/s	velocity	5.74	8.54	8.87	9.14	9.14	8.87	8.70	8.46	8.46	8.31	8.93	8.21	8.85	8.90	8.41	

Omega Timing (2024) - diamond league race analysis

FINAL - 2024 Athletissima (Lausanne, SUI)

date	22-Aug-24	time	2.44	3.52	4.55	5.59	6.60	7.61	8.63	9.68	10.73	11.80	13.37	8 / 7				
reaction time	0.142	interval	7 steps	1.08	1.03	1.04	1.01	1.01	1.02	1.05	1.05	1.07	1.57		3.15	3.04	3.17	
wind	-0.1 m/s	velocity	5.62	8.46	8.87	8.79	9.05	9.05	8.96	8.70	8.70	8.54	8.93	8.23	8.70	9.02	8.65	

Omega Timing (2024) - diamond league race analysis

Semi-Final 2 - 2024 Olympic Games (Paris, FRA)

date	07-Aug-24	time	2.40	3.48	4.52	5.54	6.55	7.55	8.56	9.60	10.67	11.76	13.34	8 / 3				
reaction time	0.160	interval	7 steps	1.08	1.04	1.02	1.01	1.00	1.01	1.04	1.07	1.09	1.58		3.14	3.02	3.20	
wind	-0.1 m/s	velocity	5.72	8.46	8.79	8.96	9.05	9.14	9.05	8.79	8.54	8.39	8.87	8.25	8.73	9.08	8.57	

Paris 2024 Olympic Games - Results Book (2024)

Heat 5 - 2024 Olympic Games (Paris, FRA)

date	04-Aug-24	time	2.46	3.54	4.59	5.60	6.62	7.62	8.63	9.66	10.72	11.83	13.43	9 / 3				
reaction time	0.152	interval	7 steps	1.08	1.05	1.01	1.02	1.00	1.01	1.03	1.06	1.11	1.60		3.14	3.03	3.20	
wind	0.7 m/s	velocity	5.58	8.46	8.70	9.05	8.96	9.14	9.05	8.87	8.62	8.23	8.76	8.19	8.73	9.05	8.57	

Paris 2024 Olympic Games - Results Book (2024)

FINAL - 2024 Herculis Meeting International d'Athlétisme (Monaco, MON)

date	12-Jul-24	time	2.42	3.49	4.52	5.55	6.57	7.59	8.62	9.64	10.68	11.72	13.25	5 / 5				
reaction time	0.137	interval	7 steps	1.07	1.03	1.03	1.02	1.02	1.03	1.02	1.04	1.04	1.53		3.13	3.07	3.10	
wind	-0.7 m/s	velocity	5.67	8.54	8.87	8.87	8.96	8.96	8.87	8.96	8.79	8.79	9.16	8.30	8.76	8.93	8.85	

Omega Timing (2024) - diamond league race analysis

FINAL - 2024 Meeting de Paris (Paris, FRA)

date	07-Jul-24	time	2.40	3.44	4.46	5.45	6.45	7.45	8.47	9.50	10.53	11.58	13.15	8 / 1				
reaction time	0.142	interval	7 steps	1.04	1.02	0.99	1.00	1.00	1.02	1.03	1.03	1.05	1.57	=PB	3.05	3.02	3.11	
wind	-0.6 m/s	velocity	5.72	8.79	8.96	9.23	9.14	9.14	8.96	8.87	8.87	8.70	8.93	8.37	8.99	9.08	8.82	

Omega Timing (2024) - diamond league race analysis

Heat 2 - 2024 Meeting de Paris (Paris, FRA)

date	07-Jul-24	time	2.37	3.46	4.49	5.51	6.55	7.57	8.60	9.65	10.71	11.75	13.33	6 / 4				
reaction time	0.135	interval	7 steps	1.09	1.03	1.02	1.04	1.02	1.03	1.05	1.06	1.04	1.58		3.14	3.09	3.15	
wind	0.4 m/s	velocity	5.79	8.39	8.87	8.96	8.79	8.96	8.87	8.70	8.62	8.79	8.87	8.25	8.73	8.87	8.70	

Omega Timing (2024) - diamond league race analysis

FINAL - 2023 World Athletics Championships (Budapest, HUN)

date	21-Aug-23	time	2.60	3.64	4.66	5.68	6.69	7.72	8.75	9.75	10.78	11.86	13.26	7 / 6				
reaction time	0.166	interval	7 steps	1.04	1.02	1.02	1.01	1.03	1.03	1.00	1.03	1.08	1.40		3.08	3.07	3.11	
wind	0.0 m/s	velocity	5.28	8.79	8.96	8.96	9.05	8.87	8.87	9.14	8.87	8.46	10.01	8.30	8.90	8.93	8.82	

Shibayama (2024) - race analysis of men's 110m hurdles in the 2023 season

Semi-Final 2 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)

date	21-Aug-23	time	2.50	3.53	4.56	5.56	6.58	7.58	8.62	9.64	10.66	11.73	13.15	7 / 2				
reaction time	0.129	interval	7 steps	1.03	1.03	1.00	1.02	1.00	1.04	1.02	1.02	1.07	1.42	PB	3.06	3.06	3.11	
wind	-0.2 m/s	velocity	5.49	8.87	8.87	9.14	8.96	9.14	8.79	8.96	8.96	8.54	9.87	8.37	8.96	8.96	8.82	

Henson (2023) - Athlete First: 2023 year end hurdle report

Heat 1 - 2023 World Athletics Championships (Budapest, HUN) (TV Analysis)

date	20-Aug-23	time	2.56	3.63	4.70	5.72	6.73	7.75	8.78	9.80	10.88	11.93	13.35	7 / 3				
reaction time	0.157	interval	7 steps	1.07	1.07	1.02	1.01	1.02	1.03	1.02	1.08	1.05	1.42		3.16	3.06	3.15	
wind	-0.3 m/s	velocity	5.36	8.54	8.54	8.96	9.05	8.96	8.87	8.96	8.46	8.70	9.87	8.24	8.68	8.96	8.70	

Henson (2023) - Athlete First: 2023 year end hurdle report

FINAL - 2023 French National Championships (Albi, FRA) (TV Analysis)

date	29-Jul-23	time	2.50	3.54	4.54	5.52	6.50	7.50	8.52	9.52	10.54	11.58	13.01	6 / 1				
reaction time	0.187	interval	7 steps	1.04	1.00	0.98	0.98	1.00	1.02	1.00	1.02	1.04	1.43		3.02	3.00	3.06	
wind	2.3 m/s	velocity	5.49	8.79	9.14	9.33	9.33	9.14	8.96	9.14	8.96	8.79	9.80	8.46	9.08	9.14	8.96	

Henson (2023) - Athlete First: 2023 year end hurdle report

Heat 2 - 2023 French National Championships (Albi, FRA) (TV Analysis)

date	29-Jul-23	time	2.52	3.56	4.58	5.56	6.52	7.52	8.52	9.52	10.54	11.58	13.01	6 / 1				
reaction time	0.173	interval	7 steps	1.04	1.02	0.98	0.96	1.00	1.00	1.00	1.02	1.04	1.43		3.04	2.96	3.06	
wind	5.3 m/s	velocity	5.44	8.79	8.96	9.33	9.52	9.14	9.14	9.14	8.96	8.79	9.80	8.46	9.02	9.26	8.96	

Henson (2023) - Athlete First: 2023 year end hurdle report

FINAL - 2022 European Athletics Championships (Munich, GER) (TV Analysis)

date	17-Aug-22	time	2.52	3.58	4.62	5.64	6.66	7.68	8.72	9.78	10.86	11.92	16.51	7 / 8				
reaction time	0.153	interval	7 steps	1.06	1.04	1.02	1.02	1.02	1.04	1.06	1.08	1.06	4.59		3.12	3.08	3.20	
wind	-0.2 m/s	velocity	5.44	8.62	8.79	8.96	8.96	8.96	8.79	8.62	8.46	8.62	3.05	6.66	8.79	8.90	8.57	

Henson (2022) - Athlete First: 2022 year end hurdle report

FINAL - 2022 Herculis Meeting International d'Athlétisme (Monaco, MON) (TV Analysis)

date	10-Aug-22	time	2.50	3.53	4.56	5.56	6.56	7.56	8.60	9.63	10.66	11.73	13.21	2 / 5				
reaction time	0.138	interval	7 steps	1.03	1.03	1.00	1.00	1.00	1.04	1.03	1.03	1.07	1.48		3.06	3.04	3.13	
wind	0.6 m/s	velocity	5.49	8.87	8.87	9.14	9.14	9.14	8.79	8.87	8.87	8.54	9.47	8.33	8.96	9.02	8.76	

Henson (2022) - Athlete First: 2022 year end hurdle report

Semi-Final 1 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)

date	17-Jul-22	time	2.50	3.63	4.70	5.76	6.80	7.83	8.83	9.88	10.96	12.00	13.47	8 / 5				
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Henson (2022) - Athlete First: 2022 year end hurdle report

reaction time	0.154	interval	7 steps	1.13	1.07	1.06	1.04	1.03	1.00	1.05	1.08	1.04	1.47			3.26	3.07	3.17											
wind	-0.6 m/s	velocity	5.49	8.09	8.54	8.62	8.79	8.87	9.14	8.70	8.46	8.79	9.54	8.17		8.41	8.93	8.65											
Heat 3 - 2022 World Athletics Championships (Eugene, OR) (TV Analysis)														<i>Henson (2022) - Athlete First: 2022 year end hurdle report</i>															
date	16-Jul-22	time	2.46	3.53	4.60	5.60	6.63	7.66	8.70	9.80	10.86	12.00		13.48	6 / 3														
reaction time	0.132	interval	7 steps	1.07	1.07	1.00	1.03	1.03	1.04	1.10	1.06	1.14	1.48			3.14	3.10	3.30											
wind	-0.3 m/s	velocity	5.58	8.54	8.54	9.14	8.87	8.87	8.79	8.31	8.62	8.02	9.47	8.16		8.73	8.85	8.31											
FINAL - 2021 World Athletics U20 Championships (Nairobi, KEN) (99.1cm) (Altitude) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 Sasha Zhoya 110m Hurdles World U20 Record</i>															
date	21-Aug-21	time	2.32	3.36	4.32	5.28	6.24	7.20	8.20	9.20	10.16	11.16		12.72	4 / 1														
reaction time	0.138	interval	7 steps	1.04	0.96	0.96	0.96	0.96	1.00	1.00	0.96	1.00	1.56	WU20R		2.96	2.92	2.96											
wind	1.0 m/s	velocity	5.91	8.79	9.52	9.52	9.52	9.52	9.14	9.14	9.52	9.14	8.99	8.65		9.26	9.39	9.26											
Semi-Final 2 - 2021 World Athletics U20 Championships (Nairobi, KEN) (99.1cm) (Altitude) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 Sasha Zhoya 110m Hurdles World U20 Record</i>															
date	20-Aug-21	time	2.36	3.36	4.36	5.34	6.32	7.28	8.26	9.26	10.28	11.32		12.93	6 / 1														
reaction time	0.160	interval	7 steps	1.00	1.00	0.98	0.98	0.96	0.98	1.00	1.02	1.04	1.61	WU20R		2.98	2.92	3.06											
wind	-0.4 m/s	velocity	5.81	9.14	9.14	9.33	9.33	9.52	9.33	9.14	8.96	8.79	8.71	8.51		9.20	9.39	8.96											
Heat 3 - 2021 World Athletics U20 Championships (Nairobi, KEN) (99.1cm) (Altitude) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 Sasha Zhoya 110m Hurdles World U20 Record</i>															
date	20-Aug-21	time	2.43	3.50	4.50	5.50	6.50	7.50	8.50	9.52	10.54	11.58		13.12	4 / 1														
reaction time	0.175	interval	7 steps	1.07	1.00	1.00	1.00	1.00	1.00	1.02	1.02	1.04	1.54			3.07	3.00	3.08											
wind	0.3 m/s	velocity	5.65	8.54	9.14	9.14	9.14	9.14	9.14	8.96	8.96	8.79	9.10	8.38		8.93	9.14	8.90											
FINAL - 2021 European U20 Championships (Tallinn, EST) (99.1cm) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 Sasha Zhoya 110m Hurdles World U20 Record</i>															
date	17-Jul-21	time	2.48	3.48	4.48	5.48	6.48	7.48	8.48	9.48	10.52	11.52		13.05	4 / 1														
reaction time	0.196	interval	7 steps	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.53	CR		3.00	3.00	3.04											
wind	0.2 m/s	velocity	5.53	9.14	9.14	9.14	9.14	9.14	9.14	9.14	8.79	9.14	9.16	8.43		9.14	9.14	9.02											
Semi-Final 3 - 2021 European U20 Championships (Tallinn, EST) (99.1cm) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 Sasha Zhoya 110m Hurdles World U20 Record</i>															
date	16-Jul-21	time	2.48	3.48	4.48	5.46	6.42	7.40	8.38	9.38	10.40	11.44		12.98	5 / 1														
reaction time	0.219	interval	7 steps	1.00	1.00	0.98	0.96	0.98	0.98	1.00	1.02	1.04	1.54			2.98	2.92	3.06											
wind	2.4 m/s	velocity	5.53	9.14	9.14	9.33	9.52	9.33	9.33	9.14	8.96	8.79	9.10	8.47		9.20	9.39	8.96											
FINAL - 2021 French National U20 Championships (Bondoufle, FRA) (99.1cm) (TV Analysis)														<i>Henson (2021) - Athlete First: 2021 Sasha Zhoya 110m Hurdles World U20 Record</i>															
date	10-Jul-21	time	2.53	3.56	4.56	5.58	6.56	7.58	8.60	9.60	10.62	11.66		13.06	6 / 1														
reaction time	0.150	interval	7 steps	1.03	1.00	1.02	0.98	1.02	1.02	1.00	1.02	1.04	1.40			3.05	3.02	3.06											
wind	2.2 m/s	velocity	5.42	8.87	9.14	8.96	9.33	8.96	8.96	9.14	8.96	8.79	10.01	8.42		8.99	9.08	8.96											
Zhu Shenglong (CHN) (2000)																													
														H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
FINAL - 2024 Yangtze River Delta Athletics Diamond Gala (Suzhou, CHN) (TV Analysis)														<i>Omega Timing (2024) - diamond league race analysis</i>															
date	27-Apr-24	time	2.63	3.69	4.75	5.75	6.79	7.81	8.84	9.88	10.96	12.02		13.45	8 / 7														
reaction time	0.150	interval	7 steps	1.06	1.06	1.00	1.04	1.02	1.03	1.04	1.08	1.06	1.43			3.12	3.09	3.18											
wind	0.8 m/s	velocity	5.22	8.62	8.62	9.14	8.79	8.96	8.87	8.79	8.46	8.62	9.80	8.18		8.79	8.87	8.62											
FINAL - 2024 World Athletics Indoor Championships (Glasgow, GBR) (TV Analysis)														<i>Henson (2024) Athlete First: Grant Holloway 2024 Men's 60m Hurdles World Indoor Record</i>															
date	02-Mar-24	time	2.58	3.66	4.74	5.79	6.77							7.76	5 / 2														
reaction time	0.149	interval	7 steps	1.08	1.08	1.05	0.98							7.76		3.21													
		velocity	5.32	8.46	8.46	8.70	9.33							1.81	7.73	8.54													
FINAL - 2021 Chinese National Championships (Chongqing, CHN)														<i>CAA Hurdle Development (2021)</i>															
date	25-Jun-21	time	2.66	3.73	4.78	5.84	6.91	7.99	9.05	10.15	11.27	12.39		13.87	8 / 4														
reaction time	0.176	interval		1.07	1.05	1.06	1.07	1.08	1.06	1.10	1.12	1.12	1.48			3.18	3.21	3.34											
wind	1.6 m/s	velocity	5.16	8.54	8.70	8.62	8.54	8.46	8.62	8.31	8.16	8.16	9.47	7.93		8.62	8.54	8.21											
Heat 2 - 2021 Chinese National Championships (Chongqing, CHN)														<i>CAA Hurdle Development (2021)</i>															
date	25-Jun-21	time	2.65	3.77	4.82	5.89	6.97	8.04	9.13	10.23	11.34	12.48		13.99	6 / 1														
reaction time	0.163	interval		1.12	1.05	1.07	1.08	1.07	1.09	1.10	1.11	1.14	1.51			3.24	3.24	3.35											
wind	-1.2 m/s	velocity	5.18	8.16	8.70	8.54	8.46	8.54	8.39	8.31	8.23	8.02	9.28	7.86		8.46	8.46	8.19											
FINAL - 2021 Philippe Cup Athletics Invitational (Wuhan, CHN)														<i>CAA Hurdle Development (2021)</i>															
date	19-May-21	time	2.63	3.70	4.75	5.79	6.84	7.92	8.97	10.09	11.18	12.28		13.78	6 / 2														
reaction time	0.169	interval		1.07	1.05	1.04	1.05	1.08	1.05	1.12	1.09	1.10	1.50	PB		3.16	3.18	3.31											
wind	1.9 m/s	velocity	5.22	8.54	8.70	8.79	8.70	8.46	8.70	8.16	8.39	8.31	9.35	7.98		8.68	8.62	8.28											
FINAL - 2021 East China District Meeting (Zhaoqing, CHN)														<i>CAA Hurdle Development (2021)</i>															
date	24-Apr-21	time	2.64	3.70	4.76	5.82	6.88	7.96	9.03	10.12	11.24	12.38		13.91	3 / 2														
reaction time	0.165	interval		1.06	1.06	1.06	1.06	1.08	1.07	1.09	1.12	1.14	1.53			3.18	3.21	3.35											
wind	-0.3 m/s	velocity	5.20	8.62	8.62	8.62	8.62	8.46	8.54	8.39	8.16	8.02	9.16	7.91		8.62	8.54	8.19											
Heat 2 - 2021 East China District Meeting (Zhaoqing, CHN)														<i>CAA Hurdle Development (2021)</i>															
date	24-Apr-21	time	2.64	3.73	4.78	5.87	6.97	8.05	9.23	10.38	11.57	12.74		14.29	3 / 3														
reaction time	0.164	interval		1.09	1.05	1.09	1.10	1.08	1.18	1.15	1.19	1.17	1.55			3.23	3.36	3.51											
wind	-1.2 m/s	velocity	5.20	8.39	8.70	8.39	8.31	8.46	7.75	7.95	7.68	7.81	9.05	7.70		8.49	8.16	7.81											

Heat 1 - 2020 Chinese National Championships (Shaoxing, CHN)

date	16-Sep-20	time	2.73	3.84	4.94	6.02	7.11	8.22	9.34	10.46	11.62	12.80	14.36
reaction time	0.157	interval		1.11	1.10	1.08	1.09	1.11	1.12	1.12	1.16	1.18	1.56
wind	0.3 m/s	velocity	5.03	8.23	8.31	8.46	8.39	8.23	8.16	8.16	7.88	7.75	8.99

CAA Hurdle Development (2020)

1 / 8			
	3.29	3.32	3.46
	8.33	8.26	7.92

FINAL - 2020 Don Kirby Elite Invitational (Albuquerque, NM) (Altitude)

date	14-Feb-20	time	2.69	3.77	4.86	5.89	6.96						7.88
reaction time		interval		1.08	1.09	1.03	1.07						0.92
		velocity	5.10	8.46	8.39	8.87	8.54						10.57

CAA Hurdle Development (2020)

5 / 2			
	3.20		
			8.57

Semi-Final 2 - 2020 Don Kirby Elite Invitational (Albuquerque, NM) (Altitude)

date	14-Feb-20	time	2.70	3.80	4.87	5.90	6.97						7.89
reaction time		interval		1.10	1.07	1.03	1.07						0.92
		velocity	5.08	8.31	8.54	8.87	8.54						10.57

CAA Hurdle Development (2020)

2 / 1			
	3.20		
			8.57

Heat 3 - 2020 Don Kirby Elite Invitational (Albuquerque, NM) (Altitude)

date	14-Feb-20	time	2.59	3.64	4.74	5.79	6.84						7.92
reaction time		interval		1.05	1.10	1.05	1.05						1.08
		velocity	5.30	8.70	8.31	8.70	8.70						9.00

CAA Hurdle Development (2020)

2 / 1			
	3.20		
			8.57

FINAL - 2020 Mountain T's Invitational (Flagstaff AZ) (Altitude)

date	01-Feb-20	time	2.64	3.72	4.76	5.79	6.82						7.74
reaction time		interval		1.08	1.04	1.03	1.03						0.92
		velocity	5.20	8.46	8.79	8.87	8.87						10.57

CAA Hurdle Development (2020)

6 / 1			
	3.15		
			8.70

Heat 1 - 2020 Mountain T's Invitational (Flagstaff AZ) (Altitude)

date	01-Feb-20	time	2.67	3.75	4.82	5.86	6.90						7.83
reaction time		interval		1.08	1.07	1.04	1.04						0.93
		velocity	5.14	8.46	8.54	8.79	8.79						10.45

CAA Hurdle Development (2020)

5 / 2			
	3.19		
			8.60

FINAL - 2020 Leonard Hilton Memorial Invitational (Houston, TX)

date	17-Jan-20	time	2.60	3.67	4.76	5.81	6.87						7.91
reaction time		interval		1.07	1.09	1.05	1.06						1.04
		velocity	5.28	8.54	8.39	8.70	8.62						9.35

CAA Hurdle Development (2020)

3 / 3			
	3.21		
			8.54

Heat 3 - 2020 Leonard Hilton Memorial Invitational (Houston, TX)

date	17-Jan-20	time	2.62	3.71	4.79	5.84	6.92						8.00
reaction time		interval		1.09	1.08	1.05	1.08						1.08
		velocity	5.24	8.39	8.46	8.70	8.46						9.00

CAA Hurdle Development (2020)

5 / 1			
	3.22		
			8.52

Heat 1 - 2019 Chinese National Grand Prix Final (Daqing, CHN)

date	23-Aug-19	time	2.80	3.92	4.99	6.09	7.19	8.30	9.46	10.59	11.85	13.11	14.85
reaction time	0.184	interval		1.12	1.07	1.10	1.10	1.11	1.16	1.13	1.26	1.26	1.74
wind	-0.2 m/s	velocity	4.90	8.16	8.54	8.31	8.31	8.23	7.88	8.09	7.25	7.25	8.06

CAA Hurdle Development (2019)

6 / 7			
	3.29	3.37	3.65
	8.33	8.14	7.51

U20 Heat 1 - 2019 Chinese National Youth Games (Taiyuan, CHN) (99cm)

date	14-Aug-19	time	2.54	3.63	4.71	5.74	6.77	7.82	8.87	9.94	11.04	12.14	13.82
reaction time	0.145	interval		1.09	1.08	1.03	1.03	1.05	1.05	1.07	1.10	1.10	1.68
wind	0.5 m/s	velocity	5.40	8.39	8.46	8.87	8.87	8.70	8.70	8.54	8.31	8.31	8.35

CAA Hurdle Development (2019)

5 / 1			
	3.20	3.13	3.27
	8.57	8.76	8.39

Heat 1 - 2019 Chinese World Championship Trials (Shenyang, CHN)

date	02-Aug-19	time	2.74	3.88	5.02	6.14	7.28	8.42	9.55	10.73	11.89	13.11	14.82
reaction time	0.154	interval		1.14	1.14	1.12	1.14	1.14	1.13	1.18	1.16	1.22	1.71
wind	-0.3 m/s	velocity	5.01	8.02	8.02	8.16	8.02	8.02	8.09	7.75	7.88	7.49	8.20

CAA Hurdle Development (2019)

5 / 5			
	3.40	3.41	3.56
	8.06	8.04	7.70

FINAL - 2019 Chinese National Championships (Shenyang, CHN)

date	08-Jul-19	time	2.72	3.80	4.87	5.92	6.99	8.04	9.09	10.18	11.29	12.40	13.90
reaction time	0.170	interval		1.08	1.07	1.05	1.07	1.05	1.05	1.09	1.11	1.11	1.50
wind	0.1 m/s	velocity	5.04	8.46	8.54	8.70	8.54	8.70	8.70	8.39	8.23	8.23	9.35

CAA Hurdle Development (2019)

2 / 4			
	3.20	3.17	3.31
	8.57	8.65	8.28

Heat 3 - 2019 Chinese National Championships (Shenyang, CHN)

date	08-Jul-19	time	2.71	3.80	4.89	5.95	7.02	8.09	9.20	10.31	11.43	12.57	14.08
reaction time	0.169	interval		1.09	1.09	1.06	1.07	1.07	1.11	1.11	1.12	1.14	1.51
wind	-0.5 m/s	velocity	5.06	8.39	8.39	8.62	8.54	8.54	8.23	8.23	8.16	8.02	9.28

CAA Hurdle Development (2019)

5 / 3			
	3.24	3.25	3.37
	8.46	8.44	8.14

FINAL - 2019 Chinese National Grand Prix 4 (Luoyang, CHN)

date	30-May-19	time	2.71	3.80	4.89	5.96	7.03	8.09	9.16	10.26	11.37	12.51	14.01
reaction time	0.171	interval		1.09	1.09	1.07	1.07	1.06	1.07	1.10	1.11	1.14	1.50
wind	0.0 m/s	velocity	5.06	8.39	8.39	8.54	8.54	8.62	8.54	8.31	8.23	8.02	9.35

CAA Hurdle Development (2019)

8 / 3			
	3.25	3.20	3.35
	8.44	8.57	8.19

B-FINAL - 2019 Chinese Indoor National Grand Prix Final (Hangzhou, CHN)

date	20-Mar-19	time	2.71	3.79	4.87	5.97	7.04						7.97
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CAA Hurdle Development (2019)

2 / 2			
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reaction time	interval	1.08	1.08	1.10	1.07							0.93		3.26
	velocity	5.06	8.46	8.46	8.31	8.54						10.45	7.53	8.41

A-FINAL - 2019 Chinese Indoor National Grand Prix 4 (Xi'an, CHN)

date	4-Mar-19	time	2.68	3.76	4.83	5.90	6.99							7.96	CAA Hurdle Development (2019)
reaction time		interval	1.08	1.07	1.07	1.09						0.97	PB	3.22	2 / 4
		velocity	5.12	8.46	8.54	8.54	8.39					10.02	7.54	8.52	

B-FINAL - 2019 Chinese Indoor National Grand Prix 3 (Xi'an, CHN)

date	28-Feb-19	time	2.72	3.80	4.88	5.94	7.04							7.98	CAA Hurdle Development (2019)
reaction time		interval	1.08	1.08	1.06	1.10						0.94	PB	3.22	4 / 2
		velocity	5.04	8.46	8.46	8.62	8.31					10.34	7.52	8.52	

FINAL - 2018 Chinese National Championships (Taiyuan, CHN)

date	16-Sep-18	time	2.72	3.82	4.89	5.96	7.04	8.12	9.22	10.33	11.46	12.58	14.09	2 / 4	Henson (2018) - coaching observations		
reaction time		interval	1.10	1.07	1.07	1.08	1.08	1.10	1.11	1.13	1.12	1.51	PB		3.24	3.26	3.36
wind	-0.3 m/s	velocity	5.04	8.31	8.54	8.54	8.46	8.46	8.31	8.23	8.09	8.16	9.28	7.81	8.46	8.41	8.16

Heat 2 - 2018 Chinese National Championships (Taiyuan, CHN)

date	15-Sep-18	time	2.74	3.85	4.94	6.00	7.09	8.19	9.26	10.38	11.49	12.61	14.13	2 / 4	Henson (2018) - coaching observations		
reaction time		interval	1.11	1.09	1.06	1.09	1.10	1.07	1.12	1.11	1.12	1.52	PB		3.26	3.26	3.35
wind	0.7 m/s	velocity	5.01	8.23	8.39	8.62	8.39	8.31	8.54	8.16	8.23	8.16	9.22	7.78	8.41	8.41	8.19

FINAL - 2018 Chinese National U20 Championships (Nanchang, CHN) (99.1cm) Zhang (2019) - comparative analysis characteristics Chinese elite 110m hurdles in different age

date	13-May-18	time	2.69	3.79	4.85	5.90	6.94	8.00	9.06	10.15	11.24	12.36	13.83	/ 3			
reaction time		interval	1.10	1.06	1.05	1.04	1.06	1.06	1.09	1.09	1.12	1.47			3.21	3.16	3.30
wind	1.0 m/s	velocity	5.10	8.31	8.62	8.70	8.79	8.62	8.62	8.39	8.39	8.16	9.54	7.95	8.54	8.68	8.31

Ziemek, Zachery (USA) (1993)

		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	Run-In	Official Time	Lane / Place	H1-H4	H4-H7	H7-H10
		Paris 2024 Olympic Games - Results Book (2024)															
date	03-Aug-24	time	2.56	3.79	4.96	6.13	7.32	8.51	9.72	10.90	12.13	13.35	15.11	7 / 6			
reaction time	0.145	interval	7 steps	1.23	1.17	1.17	1.19	1.19	1.21	1.18	1.23	1.22	1.76		3.57	3.59	3.63
wind	0.2 m/s	velocity	5.36	7.43	7.81	7.81	7.68	7.68	7.55	7.75	7.43	7.49	7.97	7.28	7.68	7.64	7.55

