Men's 400m Split Times - by athletics meeting

LAST UPDATE: 17-May-25

2025 Jetour Doha Meeting (Doha, QAT)

West Asian GP

date 16-May-25

Omega Timing (2025) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Merzah, Noureddine Adel (	time	6.34	11.61	16.98	22.50	28.12	33.91	39.83	46.25	46.25	4 / 1							
reaction time 0.176	interval		5.27	5.37	5.52	5.62	5.79	5.92	6.42	PB	# of strides	11.61	10.89	11.41	12.34	22.50	23.75	1.25
	velocity	7.89	9.49	9.31	9.06	8.90	8.64	8.45	7.79	8.65		8.61	9.18	8.76	8.10	8.89	8.42	
Yaseen, Taha Hussein (IRQ	time	6.17	11.44	16.78	22.48	28.35	34.39	40.41	46.97	46.97	7 / 2							
reaction time 0.222	interval		5.27	5.34	5.70	5.87	6.04	6.02	6.56		# of strides	11.44	11.04	11.91	12.58	22.48	24.49	2.01
	velocity	8.10	9.49	9.36	8.77	8.52	8.28	8.31	7.62	8.52		8.74	9.06	8.40	7.95	8.90	8.17	
Al-Jabri, Hamza Abdullah (	time	6.15	11.33	16.89	22.53	28.23	34.26	40.61	47.59	47.59	3 / 3							
reaction time 0.193	interval		5.18	5.56	5.64	5.70	6.03	6.35	6.98		# of strides	11.33	11.20	11.73	13.33	22.53	25.06	2.53
	velocity	8.13	9.65	8.99	8.87	8.77	8.29	7.87	7.16	8.41		8.83	8.93	8.53	7.50	8.88	7.98	
Mahamoud, Mahamat Mou	time	6.27	11.53	16.99	22.67	28.40	34.38	40.74	48.00	48.00	5 / 4							
reaction time 0.182	interval		5.26	5.46	5.68	5.73	5.98	6.36	7.26		# of strides	11.53	11.14	11.71	13.62	22.67	25.33	2.66
	velocity	7.97	9.51	9.16	8.80	8.73	8.36	7.86	6.89	8.33		8.67	8.98	8.54	7.34	8.82	7.90	
Al-Mabsali, Mohammed Sa	time	6.57	11.89	17.38	23.12	28.95	35.12	41.68	49.09	49.09	6 / 5							
reaction time 0.247	interval		5.32	5.49	5.74	5.83	6.17	6.56	7.41	PB	# of strides	11.89	11.23	12.00	13.97	23.12	25.97	2.85
	velocity	7.61	9.40	9.11	8.71	8.58	8.10	7.62	6.75	8.15		8.41	8.90	8.33	7.16	8.65	7.70	

Invitational FINAl

date 16-May-25

Omega Timing (2025) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Malual, Ismail Daoud (QAT	time	6.55	11.65	17.12	22.79	28.35	33.90	39.53	45.62	45.62	6 / 1							
reaction time 0.189	interval		5.10	5.47	5.67	5.56	5.55	5.63	6.09		# of strides	11.65	11.14	11.11	11.72	22.79	22.83	0.04
	velocity	7.63	9.80	9.14	8.82	8.99	9.01	8.88	8.21	8.77		8.58	8.98	9.00	8.53	8.78	8.76	
van Wyk, Tumo Statago (B	time	5.94	10.81	16.18	21.91	27.73	33.70	39.89	46.80	46.80	7 / 2							
reaction time 0.157	interval		4.87	5.37	5.73	5.82	5.97	6.19	6.91		# of strides	10.81	11.10	11.79	13.10	21.91	24.89	2.98
	velocity	8.42	10.27	9.31	8.73	8.59	8.38	8.08	7.24	8.55		9.25	9.01	8.48	7.63	9.13	8.04	
Tamer, Sami Khaled (QAT)	time	6.48	11.77	17.41	23.14	28.82	34.60	40.46	46.87	46.87	5 / 3							
reaction time 0.217	interval		5.29	5.64	5.73	5.68	5.78	5.86	6.41	PB	# of strides	11.77	11.37	11.46	12.27	23.14	23.73	0.59
	velocity	7.72	9.45	8.87	8.73	8.80	8.65	8.53	7.80	8.53		8.50	8.80	8.73	8.15	8.64	8.43	
Khalil, Hassan (QAT)	time	6.27	11.53	17.31	23.34	29.25	35.21	41.19	47.88	47.88	1 / 4							
reaction time 0.177	interval		5.26	5.78	6.03	5.91	5.96	5.98	6.69	PB	# of strides	11.53	11.81	11.87	12.67	23.34	24.54	1.20
	velocity	7.97	9.51	8.65	8.29	8.46	8.39	8.36	7.47	8.35		8.67	8.47	8.42	7.89	8.57	8.15	
Mahamat, Khala Ngare (QA	time	6.55	11.92	17.73	23.84	29.82	35.72	41.56	47.93	47.93	4 / 5							
reaction time 0.188	interval		5.37	5.81	6.11	5.98	5.90	5.84	6.37		# of strides	11.92	11.92	11.88	12.21	23.84	24.09	0.25
	velocity	7.63	9.31	8.61	8.18	8.36	8.47	8.56	7.85	8.35		8.39	8.39	8.42	8.19	8.39	8.30	
Daggu, Abdelmageed (QA	time	6.34	11.63	17.40	23.46	29.49	35.40	41.37	47.97	47.97	2 / 6							
reaction time 0.201	interval		5.29	5.77	6.06	6.03	5.91	5.97	6.60		# of strides	11.63	11.83	11.94	12.57	23.46	24.51	1.05
	velocity	7.89	9.45	8.67	8.25	8.29	8.46	8.38	7.58	8.34		8.60	8.45	8.38	7.96	8.53	8.16	
Adoum, Khalid Wadi (QAT	time	6.24	11.60	17.50	23.50	29.39	35.44	41.53	48.06	48.06	3 / 7							
reaction time 0.175	interval		5.36	5.90	6.00	5.89	6.05	6.09	6.53		# of strides	11.60	11.90	11.94	12.62	23.50	24.56	1.06
	velocity	8.01	9.33	8.47	8.33	8.49	8.26	8.21	7.66	8.32		8.62	8.40	8.38	7.92	8.51	8.14	

2025 Grand Slam Track Miami (Miramar, FL)

Long Hurdles

date 04-May-25

Grand Slam Track (2025) - results and splits by race

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
dos Santos, Alison (BRA)	time		11.04		21.28		32.37		44.53	44.53	5 / 1							
reaction time 0.190	interval				10.24		11.09		12.16	PB	# of strides	11.04	10.24	11.09	12.16	21.28	23.25	1.97
	velocity		9.06		9.77		9.02		8.22	8.98	159.0	9.06	9.77	9.02	8.22	9.40	8.60	
Robinson, Chris (USA) (20	time		11.17		21.49		32.63		44.86	44.86	7 / 2							
reaction time 0.230	interval				10.32		11.14		12.23		# of strides	11.17	10.32	11.14	12.23	21.49	23.37	1.88
	velocity		8.95		9.69		8.98		8.18	8.92		8.95	9.69	8.98	8.18	9.31	8.56	
Dean, Caleb (USA) (2001)	time		11.02		21.37		32.65		45.18	45.18	6 / 3							
reaction time 0.160	interval				10.35		11.28		12.53	PB	# of strides	11.02	10.35	11.28	12.53	21.37	23.81	2.44
	velocity		9.07		9.66		8.87		7.98	8.85		9.07	9.66	8.87	7.98	9.36	8.40	
Bassitt, Trevor (USA) (1998	time		11.43		22.18		33.33		45.31	45.31	2 / 4							
reaction time 0.210	interval				10.75		11.15		11.98		# of strides	11.43	10.75	11.15	11.98	22.18	23.13	0.95
	velocity		8.75		9.30		8.97		8.35	8.83		8.75	9.30	8.97	8.35	9.02	8.65	
James-King, Malik (JAM) (1	time		11.56		22.23		33.63		45.81	45.81	4 / 5							
reaction time 0.180	interval				10.67		11.40		12.18		# of strides	11.56	10.67	11.40	12.18	22.23	23.58	1.35
	velocity		8.65		9.37		8.77		8.21	8.73		8.65	9.37	8.77	8.21	9.00	8.48	
Rosser, Khallifah (USA) (1	time		11.45		22.39		34.07		46.99	46.99	3 / 6							
reaction time 0.210	interval				10.94		11.68		12.92		# of strides	11.45	10.94	11.68	12.92	22.39	24.60	2.21
	velocity		8.73		9.14		8.56		7.74	8.51		8.73	9.14	8.56	7.74	8.93	8.13	

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Vaillant, Ludvy (FRA) (1995	time		11.49		22.34		34.03		47.22	47.22	8 / 7							
reaction time 0.190	interval				10.85		11.69		13.19		# of strides	11.49	10.85	11.69	13.19	22.34	24.88	2.54
	velocity		8.70		9.22		8.55		7.58	8.47		8.70	9.22	8.55	7.58	8.95	8.04	

Long Sprints

date 03-May-25

Grand Slam Track (2025) - results and splits by race

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Patterson, Jacory (USA) (2(	time		11.19		21.55		32.38		43.98	43.98	8 / 1							
reaction time 0.200	interval				10.36		10.83		11.60	PB	# of strides	11.19	10.36	10.83	11.60	21.55	22.43	0.88
	velocity		8.94		9.65		9.23		8.62	9.10		8.94	9.65	9.23	8.62	9.28	8.92	
Richards, Jereem (TTO) (19	time		10.94		21.17		32.31		44.32	44.32	7 / 2							
reaction time 0.190	interval				10.23		11.14		12.01		# of strides	10.94	10.23	11.14	12.01	21.17	23.15	1.98
	velocity		9.14		9.78		8.98		8.33	9.03		9.14	9.78	8.98	8.33	9.45	8.64	
Hudson-Smith, Matthew (C	time		11.24		21.61		32.43		44.37	44.37	6 / 3							
reaction time 0.170	interval				10.37		10.82		11.94		# of strides	11.24	10.37	10.82	11.94	21.61	22.76	1.15
	velocity		8.90		9.64		9.24		8.38	9.02	160.5	8.90	9.64	9.24	8.38	9.25	8.79	
Samukonga, Muzala (ZAM)	time		13.18		21.54		32.74		44.56	44.56	5 / 4							
reaction time 0.210	interval				8.36		11.20		11.82		# of strides	13.18	8.36	11.20	11.82	21.54	23.02	1.48
	velocity		7.59		11.96		8.93		8.46	8.98		7.59	11.96	8.93	8.46	9.29	8.69	
Ogando, Alexander (DOM)	time		10.96		21.09		32.43		44.78	44.78	2 / 5							
reaction time 0.210	interval				10.13		11.34		12.35		# of strides	10.96	10.13	11.34	12.35	21.09	23.69	2.60
	velocity		9.12		9.87		8.82		8.10	8.93		9.12	9.87	8.82	8.10	9.48	8.44	
Zeze, Ryan (FRA) (1998)	time		11.13		21.35		32.43		45.21	45.21	1 / 6							
reaction time 0.290	interval				10.22		11.08		12.78	PB	# of strides	11.13	10.22	11.08	12.78	21.35	23.86	2.51
	velocity		8.98		9.78		9.03		7.82	8.85		8.98	9.78	9.03	7.82	9.37	8.38	
Deadmon, Bryce (USA) (19	time		11.49		22.23		33.74		45.52	45.52	3 / 7							
reaction time 0.200	interval				10.74		11.51		11.78		# of strides	11.49	10.74	11.51	11.78	22.23	23.29	1.06
	velocity		8.70		9.31		8.69		8.49	8.79		8.70	9.31	8.69	8.49	9.00	8.59	
Gardiner, Steven (BAH) (19	time		11.77		22.76					dnf	4 / 8							
reaction time 0.220	interval				10.99						# of strides	11.77	10.99			22.76		
	velocity		8.50		9.10							8.50	9.10			8.79		

2025 Yangtze River Delta Athletics Diamond Gala (Keqiao, CHN)

FINAL

date 03-May-25

Omega Timing (2025) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Bailey, Chris (USA) (2000)	time	6.29	11.39	16.61	21.92	27.16	32.60	38.22	44.17	44.17	7 / 1							
reaction time 0.158	interval		5.10	5.22	5.31	5.24	5.44	5.62	5.95	PB	# of strides	11.39	10.53	10.68	11.57	21.92	22.25	0.33
	velocity	7.95	9.80	9.58	9.42	9.54	9.19	8.90	8.40	9.06	178.5	8.78	9.50	9.36	8.64	9.12	8.99	
Ndori, Bayapo (BOT) (1999	time	6.08	11.00	16.15	21.40	26.81	32.43	38.19	44.32	44.32	5 / 2							
reaction time 0.163	interval		4.92	5.15	5.25	5.41	5.62	5.76	6.13		# of strides	11.00	10.40	11.03	11.89	21.40	22.92	1.52
	velocity	8.22	10.16	9.71	9.52	9.24	8.90	8.68	8.16	9.03	174.0	9.09	9.62	9.07	8.41	9.35	8.73	
Kebinatshipi, Collen (BOT)	time	6.11	11.12	16.34	21.73	27.19	32.84	38.62	44.63	44.63	3 / 3							
reaction time 0.171	interval		5.01	5.22	5.39	5.46	5.65	5.78	6.01		# of strides	11.12	10.61	11.11	11.79	21.73	22.90	1.17
	velocity	8.18	9.98	9.58	9.28	9.16	8.85	8.65	8.32	8.96	182.0	8.99	9.43	9.00	8.48	9.20	8.73	
Norwood, Vernon (USA) (1	time		11.39	16.66	22.07	27.53	33.11	38.77	44.93	44.93	8 / 4							
reaction time 0.171	interval			5.27	5.41	5.46	5.58	5.66	6.16		# of strides	11.39	10.68	11.04	11.82	22.07	22.86	0.79
	velocity		8.78	9.49	9.24	9.16	8.96	8.83	8.12	8.90	172.7	8.78	9.36	9.06	8.46	9.06	8.75	
James, Kirani (GRN) (1992)	time	6.12	11.00	16.17	21.44	26.87	32.64	38.67	44.94	44.94	4 / 5							
reaction time 0.164	interval		4.88	5.17	5.27	5.43	5.77	6.03	6.27		# of strides	11.00	10.44	11.20	12.30	21.44	23.50	2.06
	velocity	8.17	10.25	9.67	9.49	9.21	8.67	8.29	7.97	8.90	159.0	9.09	9.58	8.93	8.13	9.33	8.51	
Doom, Alexander (BEL) (1!	time	6.32	11.32	16.43	21.67	27.22	33.04	39.09	45.35	45.35	2 / 6							
reaction time 0.159	interval		5.00	5.11	5.24	5.55	5.82	6.05	6.26		# of strides	11.32	10.35	11.37	12.31	21.67	23.68	2.01
	velocity	7.91	10.00	9.78	9.54	9.01	8.59	8.26	7.99	8.82		8.83	9.66	8.80	8.12	9.23	8.45	
Pillay, Lythe (RSA) (2003)	time	6.21	11.23	16.42	21.87	27.46	33.23	39.14	45.39	45.39	9 / 7							
reaction time 0.151	interval		5.02	5.19	5.45	5.59	5.77	5.91	6.25		# of strides	11.23	10.64	11.36	12.16	21.87	23.52	1.65
	velocity	8.05	9.96	9.63	9.17	8.94	8.67	8.46	8.00	8.81	171.0	8.90	9.40	8.80	8.22	9.14	8.50	
Hall, Quincy (USA) (1998)	time	5.82	11.50	16.64	21.97	27.51	33.33	39.36	45.99	45.99	6 / 8							
reaction time 0.197	interval		5.68	5.14	5.33	5.54	5.82	6.03	6.63		# of strides	11.50	10.47	11.36	12.66	21.97	24.02	2.05
	velocity	8.59	8.80	9.73	9.38	9.03	8.59	8.29	7.54	8.70	160.0	8.70	9.55	8.80	7.90	9.10	8.33	

Sport School FIN

date 03-May-25

Omega Timing (2025) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Feng Yibo (CHN)	time	6.73	12.28	17.94	23.90	30.10	36.69	43.44	50.53	50.53	3 / 1							
reaction time 0.194	interval		5.55	5.66	5.96	6.20	6.59	6.75	7.09		# of strides	12.28	11.62	12.79	13.84	23.90	26.63	2.73
	velocity	7.43	9.01	8.83	8.39	8.06	7.59	7.41	7.05	7.92		8.14	8.61	7.82	7.23	8.37	7.51	
Wang Xingwei (CHN)	time	6.75	12.52	18.46	24.62	31.03	37.72	44.78	52.31	52.31	5 / 2							
reaction time 0.190	interval		5.77	5.94	6.16	6.41	6.69	7.06	7.53		# of strides	12.52	12.10	13.10	14.59	24.62	27.69	3.07
	velocity	7.41	8.67	8.42	8.12	7.80	7.47	7.08	6.64	7.65		7.99	8.26	7.63	6.85	8.12	7.22	

Li Siyuan (CHN)	time	6.72	12.29	18.27	24.59	31.26	38.14	45.15	52.44	52.44	2 / 3							
reaction time 0.231	interval		5.57	5.98	6.32	6.67	6.88	7.01	7.29		# of strides	12.29	12.30	13.55	14.30	24.59	27.85	3.26
	velocity	7.44	8.98	8.36	7.91	7.50	7.27	7.13	6.86	7.63		8.14	8.13	7.38	6.99	8.13	7.18	
Ma Peng (CHN)	time	7.10	12.98	19.09	25.47	32.04	38.71	45.52	52.53	52.53	1 / 4							
reaction time 0.246	interval		5.88	6.11	6.38	6.57	6.67	6.81	7.01		# of strides	12.98	12.49	13.24	13.82	25.47	27.06	1.59
	velocity	7.04	8.50	8.18	7.84	7.61	7.50	7.34	7.13	7.61		7.70	8.01	7.55	7.24	7.85	7.39	
Lee Zheyu (CHN)	time	7.03	12.91	18.91	25.18	31.70	38.32	45.24	52.62	52.62	4 / 5							
reaction time 0.219	interval		5.88	6.00	6.27	6.52	6.62	6.92	7.38		# of strides	12.91	12.27	13.14	14.30	25.18	27.44	2.26
	velocity	7.11	8.50	8.33	7.97	7.67	7.55	7.23	6.78	7.60		7.75	8.15	7.61	6.99	7.94	7.29	
Cheng Yudong (CHN)	time	7.12	13.12	19.39	26.02	32.91	39.96	47.17	54.62	54.62	6 / 6							
reaction time 0.217	interval		6.00	6.27	6.63	6.89	7.05	7.21	7.45		# of strides	13.12	12.90	13.94	14.66	26.02	28.60	2.58
	velocity	7.02	8.33	7.97	7.54	7.26	7.09	6.93	6.71	7.32		7.62	7.75	7.17	6.82	7.69	6.99	
Zeng Shuheng (CHN)	time	6.91	12.61	18.96	25.99	33.77	42.32	51.58	61.47	61.47	7 / 7							
reaction time 0.185	interval		5.70	6.35	7.03	7.78	8.55	9.26	9.89		# of strides	12.61	13.38	16.33	19.15	25.99	35.48	9.49
	velocity	7.24	8.77	7.87	7.11	6.43	5.85	5.40	5.06	6.51		7.93	7.47	6.12	5.22	7.70	5.64	
Xu Junhao (CHN)	time	6.99	13.07	19.72	26.89	34.68	43.10	52.52	63.76	63.76	8 / 8							
reaction time 0.168	interval		6.08	6.65	7.17	7.79	8.42	9.42	11.24		# of strides	13.07	13.82	16.21	20.66	26.89	36.87	9.98
	velocity	7.15	8.22	7.52	6.97	6.42	5.94	5.31	4.45	6.27		7.65	7.24	6.17	4.84	7.44	5.42	

2025 Grand Slam Track Kingston (Kingston, JAM)

Long Hurdles

date 06-Apr-25

Grand Slam Track (2025) - results and splits by race

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
dos Santos, Alison (BRA) (	time		11.29		21.70		32.67		45.52	45.52	6 / 1							
reaction time 0.260	interval				10.41		10.97		12.85		# of strides	11.29	10.41	10.97	12.85	21.70	23.82	2.12
	velocity		8.86		9.61		9.12		7.78	8.79	159.0	8.86	9.61	9.12	7.78	9.22	8.40	
Robinson, Chris (USA) (20	time		11.05		21.25		32.24		45.54	45.54	4 / 2							
reaction time 0.160	interval				10.20		10.99		13.30	PB	# of strides	11.05	10.20	10.99	13.30	21.25	24.29	3.04
	velocity		9.05		9.80		9.10		7.52	8.78	173.0	9.05	9.80	9.10	7.52	9.41	8.23	
Dean, Caleb (USA) (2001)	time		10.99		21.30		32.53		45.68	45.68	7 / 3							
reaction time 0.150	interval				10.31		11.23		13.15	PB	# of strides	10.99	10.31	11.23	13.15	21.30	24.38	3.08
	velocity		9.10		9.70		8.90		7.60	8.76	169.5	9.10	9.70	8.90	7.60	9.39	8.20	
Clarke, Roshawn (JAM) (20	time		11.54		21.56		32.68		45.73	45.73	5 / 4							
reaction time 0.210	interval				10.02		11.12		13.05		# of strides	11.54	10.02	11.12	13.05	21.56	24.17	2.61
	velocity		8.67		9.98		8.99		7.66	8.75	175.5	8.67	9.98	8.99	7.66	9.28	8.27	
James-King, Malik (JAM) (	time		13.55		22.31		33.66		46.57	46.57	3 / 5							
reaction time 0.180	interval				8.76		11.35		12.91		# of strides	13.55	8.76	11.35	12.91	22.31	24.26	1.95
	velocity		7.38		11.42		8.81		7.75	8.59	186.0	7.38	11.42	8.81	7.75	8.96	8.24	
Wilson, Assinie (JAM) (200	time		11.31		22.14		33.58		46.70	46.70	2 / 6							
reaction time 0.390	interval				10.83		11.44		13.12		# of strides	11.31	10.83	11.44	13.12	22.14	24.56	2.42
	velocity		8.84		9.23		8.74		7.62	8.57		8.84	9.23	8.74	7.62	9.03	8.14	
Allen, CJ (USA) (1995)	time		11.40		21.82		33.23		46.95	46.95	8 / 7							
reaction time 0.210	interval				10.42		11.41		13.72		# of strides	11.40	10.42	11.41	13.72	21.82	25.13	3.31
	velocity		8.77		9.60		8.76		7.29	8.52	168.5	8.77	9.60	8.76	7.29	9.17	7.96	

2024 Chinese National Championships (Quzhou, CHN)

FINAL

date 16-Sep-24

Shandong Athletics Sport Science (2024)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Liang Baotang (CHN) (200	time		12.00		22.71		34.05	39.86	46.05	46.05	6 / 1							
reaction time 0.185	interval				10.71		11.34	5.81	6.19		# of strides	12.00	10.71	11.34	12.00	22.71	23.34	0.63
	velocity		8.33		9.34		8.82	8.61	8.08	8.69	193.0	8.33	9.34	8.82	8.33	8.81	8.57	
Ding Wenhao (CHN) (2003)	time		11.45		22.21		33.87	39.86	46.09	46.09	4 / 2							
reaction time 0.209	interval				10.76		11.66	5.99	6.23	PB	# of strides	11.45	10.76	11.66	12.22	22.21	23.88	1.67
	velocity		8.73		9.29		8.58	8.35	8.03	8.68	174.0	8.73	9.29	8.58	8.18	9.00	8.38	
Fu Haoran (CHN) (2005)	time		11.53		22.34		33.92	39.99	46.33	46.33	7 / 3							
reaction time 0.193	interval				10.81		11.58	6.07	6.34		# of strides	11.53	10.81	11.58	12.41	22.34	23.99	1.65
	velocity		8.67		9.25		8.64	8.24	7.89	8.63	180.5	8.67	9.25	8.64	8.06	8.95	8.34	
Wen Junji (CHN) (2001)	time		11.54		22.42		34.07	40.21	46.70	46.70	3 / 4							
reaction time 0.168	interval				10.88		11.65	6.14	6.49		# of strides	11.54	10.88	11.65	12.63	22.42	24.28	1.86
	velocity		8.67		9.19		8.58	8.14	7.70	8.57	182.7	8.67	9.19	8.58	7.92	8.92	8.24	
Ju Tianqi (CHN) (2002)	time		11.66		22.39		33.95	39.99	46.77	46.77	5 / 5							
reaction time 0.224	interval				10.73		11.56	6.04	6.78		# of strides	11.66	10.73	11.56	12.82	22.39	24.38	1.99
	velocity		8.58		9.32		8.65	8.28	7.37	8.55	171.2	8.58	9.32	8.65	7.80	8.93	8.20	
Hu Hongbo (CHN) (2001)	time		11.52		22.29		34.17	40.44	47.07	47.07	1 / 6							
reaction time 0.161	interval				10.77		11.88	6.27	6.63		# of strides	11.52	10.77	11.88	12.90	22.29	24.78	2.49
	velocity		8.68		9.29		8.42	7.97	7.54	8.50	183.0	8.68	9.29	8.42	7.75	8.97	8.07	
Xie Yuqiang (CHN) (1997)	time		11.19		22.07		34.12	40.49	47.32	47.32	8 / 7							

reaction time 0.175	interval			10.88		12.05	6.37	6.83		# of strides	11.19	10.88	12.05	13.20	22.07	25.25	3.18
	velocity		8.94		9.19		8.30	7.85	7.32	8.45	177.2	8.94	9.19	8.30	7.58	9.06	7.92	
Zheng Chiyu (CHN) (2003)	time		12.21		23.59		35.80	42.01	48.60	48.60	2 / 8						
reaction time 0.200	interval			11.38		12.21	6.21	6.59		# of strides	12.21	11.38	12.21	12.80	23.59	25.01	1.42
	velocity		8.19		8.79		8.19	8.05	7.59	8.23	175.0	8.19	8.79	8.19	7.81	8.48	8.00	

2024 Memorial van damme (Brussels, BEL)

FINAL

date 13-Sep-24

Omega Timing (2024) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Dobson, Charles (GBR) (1	time	6.08	11.11	16.31	21.64	27.17	32.85	38.60	44.49	44.49	7 / 1							
reaction time 0.130	interval		5.03	5.20	5.33	5.53	5.68	5.75	5.89		# of strides	11.11	10.53	11.21	11.64	21.64	22.85	1.21
	velocity	8.22	9.94	9.62	9.38	9.04	8.80	8.70	8.49	8.99	164.0	9.00	9.50	8.92	8.59	9.24	8.75	
James, Kirani (GRN) (1992)	time	6.13	10.93	15.99	21.27	26.74	32.45	38.38	44.63	44.63	4 / 2							
reaction time 0.140	interval		4.80	5.06	5.28	5.47	5.71	5.93	6.25		# of strides	10.93	10.34	11.18	12.18	21.27	23.36	2.09
	velocity	8.16	10.42	9.88	9.47	9.14	8.76	8.43	8.00	8.96	161.0	9.15	9.67	8.94	8.21	9.40	8.56	
Samukonga, Muzala (ZAM)	time	6.16	10.92	15.92	21.25	26.85	32.62	38.54	44.69	44.69	6 / 3							
reaction time 0.172	interval		4.76	5.00	5.33	5.60	5.77	5.92	6.15		# of strides	10.92	10.33	11.37	12.07	21.25	23.44	2.19
	velocity	8.12	10.50	10.00	9.38	8.93	8.67	8.45	8.13	8.95	177.7	9.16	9.68	8.80	8.29	9.41	8.53	
Norwood, Vernon (USA) (1	time	6.13	11.00	15.97	21.16	26.65	32.39	38.35	44.78	44.78	3 / 4							
reaction time 0.142	interval		4.87	4.97	5.19	5.49	5.74	5.96	6.43		# of strides	11.00	10.16	11.23	12.39	21.16	23.62	2.46
	velocity	8.16	10.27	10.06	9.63	9.11	8.71	8.39	7.78	8.93	175.7	9.09	9.84	8.90	8.07	9.45	8.47	
Ndori, Bayapo (BOT) (1999	time	6.13	10.97	16.05	21.35	26.86	32.67	38.84	45.59	45.59	8 / 5							
reaction time 0.176	interval		4.84	5.08	5.30	5.51	5.81	6.17	6.75		# of strides	10.97	10.38	11.32	12.92	21.35	24.24	2.89
	velocity	8.16	10.33	9.84	9.43	9.07	8.61	8.10	7.41	8.77	178.0	9.12	9.63	8.83	7.74	9.37	8.25	
Sacoor, Jonathan (BEL) (1	time	6.16	11.08	16.18	21.37	26.88	32.72	38.98	45.93	45.93	1 / 6							
reaction time 0.202	interval		4.92	5.10	5.19	5.51	5.84	6.26	6.95		# of strides	11.08	10.29	11.35	13.21	21.37	24.56	3.19
	velocity	8.12	10.16	9.80	9.63	9.07	8.56	7.99	7.19	8.71	172.0	9.03	9.72	8.81	7.57	9.36	8.14	
Kebinatshipi, Collen (BOT)	time	6.03	10.83	15.83	21.09	26.76	32.80	39.28	46.43	46.43	2 / 7							
reaction time 0.140	interval		4.80	5.00	5.26	5.67	6.04	6.48	7.15		# of strides	10.83	10.26	11.71	13.63	21.09	25.34	4.25
	velocity	8.29	10.42	10.00	9.51	8.82	8.28	7.72	6.99	8.62	192.0	9.23	9.75	8.54	7.34	9.48	7.89	
Hudson-Smith, Matthew (C	time	6.22	11.18	17.43	27.19					2:37.21	5 / 8							
reaction time 0.164	interval		4.96	6.25	9.76						# of strides	11.18	16.01			27.19		
	velocity	8.04	10.08	8.00	5.12							8.94	6.25			7.36		

Invitational

date 13-Sep-24

Omega Timing (2024) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Segers, Daniel (BEL) (2001)	time	6.31	11.41	16.55	21.86	27.36	33.05	38.98	45.38	45.38	8 / 1							
reaction time 0.168	interval		5.10	5.14	5.31	5.50	5.69	5.93	6.40	PB	# of strides	11.41	10.45	11.19	12.33	21.86	23.52	1.66
	velocity	7.92	9.80	9.73	9.42	9.09	8.79	8.43	7.81	8.81		8.76	9.57	8.94	8.11	9.15	8.50	
Borlée, Dylan (BEL) (1992)	time	6.27	11.41	16.64	22.00	27.50	33.26	39.20	45.59	45.59	4 / 2							
reaction time 0.160	interval		5.14	5.23	5.36	5.50	5.76	5.94	6.39		# of strides	11.41	10.59	11.26	12.33	22.00	23.59	1.59
	velocity	7.97	9.73	9.56	9.33	9.09	8.68	8.42	7.82	8.77		8.76	9.44	8.88	8.11	9.09	8.48	
Mabille, Florent (BEL) (199	time	6.26	11.22	16.32	21.69	27.25	33.06	39.14	45.80	45.80	7 / 3							
reaction time 0.142	interval		4.96	5.10	5.37	5.56	5.81	6.08	6.66		# of strides	11.22	10.47	11.37	12.74	21.69	24.11	2.42
	velocity	7.99	10.08	9.80	9.31	8.99	8.61	8.22	7.51	8.73		8.91	9.55	8.80	7.85	9.22	8.30	
Okoro, Efekemo (GBR) (19	time	6.28	11.34	16.49	21.84	27.40	33.24	39.41	46.19	46.19	5 / 4							
reaction time 0.164	interval		5.06	5.15	5.35	5.56	5.84	6.17	6.78		# of strides	11.34	10.50	11.40	12.95	21.84	24.35	2.51
	velocity	7.96	9.88	9.71	9.35	8.99	8.56	8.10	7.37	8.66		8.82	9.52	8.77	7.72	9.16	8.21	
McDonlad, Rusheen (JAM)	time	6.49	11.57	16.75	22.13	27.79	33.62	39.81	46.71	46.71	3 / 5							
reaction time 0.167	interval		5.08	5.18	5.38	5.66	5.83	6.19	6.90		# of strides	11.57	10.56	11.49	13.09	22.13	24.58	2.45
	velocity	7.70	9.84	9.65	9.29	8.83	8.58	8.08	7.25	8.56		8.64	9.47	8.70	7.64	9.04	8.14	
Borlée, Kévin (BEL) (1988)	time	6.40	11.67	16.98	22.41	28.09	33.98	40.19	47.18	47.18	6 / 6							
reaction time 0.138	interval		5.27	5.31	5.43	5.68	5.89	6.21	6.99		# of strides	11.67	10.74	11.57	13.20	22.41	24.77	2.36
	velocity	7.81	9.49	9.42	9.21	8.80	8.49	8.05	7.15	8.48		8.57	9.31	8.64	7.58	8.92	8.07	

2024 Weltklasse (Zürich, SUI)

FINAL

date 05-Sep-24

Omega Timing (2024) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Spitz, Lionel (SUI) (2001)	time	6.33	11.56	16.87	22.20	27.64	33.25	39.07	45.30	45.30	4 / 1							
reaction time 0.130	interval		5.23	5.31	5.33	5.44	5.61	5.82	6.23		# of strides	11.56	10.64	11.05	12.05	22.20	23.10	0.90
	velocity	7.90	9.56	9.42	9.38	9.19	8.91	8.59	8.03	8.83		8.65	9.40	9.05	8.30	9.01	8.66	
Haydock-Wilson, Alex (GBI	time	6.28	11.29	16.48	21.81	27.39	33.11	39.05	45.41	45.41	3 / 2							
reaction time 0.140	interval		5.01	5.19	5.33	5.58	5.72	5.94	6.36		# of strides	11.29	10.52	11.30	12.30	21.81	23.60	1.79
	velocity	7.96	9.98	9.63	9.38	8.96	8.74	8.42	7.86	8.81		8.86	9.51	8.85	8.13	9.17	8.47	
Klein Ikkink, Isaya (NED) (2	time	6.23	11.36	16.62	22.08	27.69	33.41	39.28	45.42	45.42	7 / 3							
reaction time 0.172	interval		5.13	5.26	5.46	5.61	5.72	5.87	6.14		# of strides	11.36	10.72	11.33	12.01	22.08	23.34	1.26
	velocity	8.03	9.75	9.51	9.16	8.91	8.74	8.52	8.14	8.81		8.80	9.33	8.83	8.33	9.06	8.57	

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Petrucciani, Ricky (SUI) (20	time	6.13	11.28	16.57	21.95	27.51	33.22	39.14	45.46	45.46	6 / 4							
reaction time 0.142	interval		5.15	5.29	5.38	5.56	5.71	5.92	6.32		# of strides	11.28	10.67	11.27	12.24	21.95	23.51	1.56
	velocity	8.16	9.71	9.45	9.29	8.99	8.76	8.45	7.91	8.80		8.87	9.37	8.87	8.17	9.11	8.51	
Ingvaldsen, Håvard Bentda	time	6.33	11.41	16.61	21.94	27.48	33.19	39.15	45.57	45.57	5 / 5							
reaction time 0.176	interval		5.08	5.20	5.33	5.54	5.71	5.96	6.42		# of strides	11.41	10.53	11.25	12.38	21.94	23.63	1.69
	velocity	7.90	9.84	9.62	9.38	9.03	8.76	8.39	7.79	8.78		8.76	9.50	8.89	8.08	9.12	8.46	
Aceti, Vladimir (ITA) (1998)	time	6.32	11.36	16.53	21.85	27.40	33.21	39.43	46.12	46.12	1 / 6							
reaction time 0.202	interval		5.04	5.17	5.32	5.55	5.81	6.22	6.69		# of strides	11.36	10.49	11.36	12.91	21.85	24.27	2.42
	velocity	7.91	9.92	9.67	9.40	9.01	8.61	8.04	7.47	8.67		8.80	9.53	8.80	7.75	9.15	8.24	
Devantay, Charles (SUI) (19	time	6.27	11.45	16.80	22.29	28.01	33.90	40.07	46.67	46.67	2 / 7							
reaction time 0.140	interval		5.18	5.35	5.49	5.72	5.89	6.17	6.60		# of strides	11.45	10.84	11.61	12.77	22.29	24.38	2.09
	velocity	7.97	9.65	9.35	9.11	8.74	8.49	8.10	7.58	8.57		8.73	9.23	8.61	7.83	8.97	8.20	
Gendre, Vincent (SUI) (200	time	6.37	11.51	16.84	22.41	28.25	34.30	40.63	47.37	47.37	8 / 8							
reaction time 0.164	interval		5.14	5.33	5.57	5.84	6.05	6.33	6.74		# of strides	11.51	10.90	11.89	13.07	22.41	24.96	2.55
	velocity	7.85	9.73	9.38	8.98	8.56	8.26	7.90	7.42	8.44		8.69	9.17	8.41	7.65	8.92	8.01	

2024 Golden Gala Pietro Mennea (Roma, ITA)

FINAL date 30-Aug-24

Omega Timing (2024) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Samukonga, Muzala (ZAM)	time	6.10	10.83	15.90	21.22	26.74	32.39	38.12	43.99	43.99	4 / 1							
reaction time 0.183	interval		4.73	5.07	5.32	5.52	5.65	5.73	5.87		# of strides	10.83	10.39	11.17	11.60	21.22	22.77	1.55
	velocity	8.20	10.57	9.86	9.40	9.06	8.85	8.73	8.52	9.09	173.0	9.23	9.62	8.95	8.62	9.43	8.78	
James, Kirani (GRN) (1992)	time	6.11	11.09	16.30	21.61	27.01	32.53	38.24	44.30	44.30	5 / 2							
reaction time 0.161	interval		4.98	5.21	5.31	5.40	5.52	5.71	6.06		# of strides	11.09	10.52	10.92	11.77	21.61	22.69	1.08
	velocity	8.18	10.04	9.60	9.42	9.26	9.06	8.76	8.25	9.03	161.5	9.02	9.51	9.16	8.50	9.25	8.81	
Richards, Jereem (TTO) (19	time	6.11	11.01	16.13	21.49	27.03	32.72	38.46	44.55	44.55	6 / 3							
reaction time 0.145	interval		4.90	5.12	5.36	5.54	5.69	5.74	6.09		# of strides	11.01	10.48	11.23	11.83	21.49	23.06	1.57
	velocity	8.18	10.20	9.77	9.33	9.03	8.79	8.71	8.21	8.98	171.0	9.08	9.54	8.90	8.45	9.31	8.67	
Ndori, Bayapo (BOT) (1999	time	6.08	11.05	16.18	21.48	26.94	32.58	38.36	44.56	44.56	7 / 4							
reaction time 0.153	interval		4.97	5.13	5.30	5.46	5.64	5.78	6.20		# of strides	11.05	10.43	11.10	11.98	21.48	23.08	1.60
	velocity	8.22	10.06	9.75	9.43	9.16	8.87	8.65	8.06	8.98	175.0	9.05	9.59	9.01	8.35	9.31	8.67	
Norwood, Vernon (USA) (1	time	6.25	11.36	16.58	21.95	27.47	33.02	38.60	44.71	44.71	8 / 5							
reaction time 0.175	interval		5.11	5.22	5.37	5.52	5.55	5.58	6.11		# of strides	11.36	10.59	11.07	11.69	21.95	22.76	0.81
	velocity	8.00	9.78	9.58	9.31	9.06	9.01	8.96	8.18	8.95	171.2	8.80	9.44	9.03	8.55	9.11	8.79	
Dobson, Charles (GBR) (1	time	6.13	11.22	16.45	21.80	27.29	32.94	38.77	44.75	44.75	2 / 6							
reaction time 0.145	interval		5.09	5.23	5.35	5.49	5.65	5.83	5.98		# of strides	11.22	10.58	11.14	11.81	21.80	22.95	1.15
	velocity	8.16	9.82	9.56	9.35	9.11	8.85	8.58	8.36	8.94	164.2	8.91	9.45	8.98	8.47	9.17	8.71	
Deadmon, Bryce (USA) (19	time	6.09	11.13	16.22	21.43	26.96	32.63	38.46	44.77	44.77	1 / 7							
reaction time 0.160	interval		5.04	5.09	5.21	5.53	5.67	5.83	6.31		# of strides	11.13	10.30	11.20	12.14	21.43	23.34	1.91
	velocity	8.21	9.92	9.82	9.60	9.04	8.82	8.58	7.92	8.93	167.0	8.98	9.71	8.93	8.24	9.33	8.57	
Kebinatshipi, Collen (BOT)	time	6.08	11.02	16.19	21.64	27.29	33.02	38.85	45.14	45.14	3 / 8							
reaction time 0.167	interval		4.94	5.17	5.45	5.65	5.73	5.83	6.29		# of strides	11.02	10.62	11.38	12.12	21.64	23.50	1.86
	velocity	8.22	10.12	9.67	9.17	8.85	8.73	8.58	7.95	8.86	185.0	9.07	9.42	8.79	8.25	9.24	8.51	
Sito, Luca (ITA) (2003)	time	6.19	11.17	16.23	21.49	27.15	32.99	38.87	42.25	45.25	9 / 9							
reaction time 0.185	interval		4.98	5.06	5.26	5.66	5.84	5.88	3.38		# of strides	11.17	10.32	11.50	9.26	21.49	20.76	-0.73
	velocity	8.08	10.04	9.88	9.51	8.83	8.56	8.50	14.79	8.84	173.0	8.95	9.69	8.70	10.80	9.31	9.63	

2024 Athletissima (Lausanne, SUI)

FINAL date 22-Aug-24

Omega Timing (2024) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hudson-Smith, Matthew (C	time	6.11	11.01	16.01	21.18	26.49	32.02	37.83	43.96	43.96	5 / 1							
reaction time 0.143	interval		4.90	5.00	5.17	5.31	5.53	5.81	6.13		# of strides	11.01	10.17	10.84	11.94	21.18	22.78	1.60
	velocity	8.18	10.20	10.00	9.67	9.42	9.04	8.61	8.16	9.10	160.0	9.08	9.83	9.23	8.38	9.44	8.78	
Samukonga, Muzala (ZAM)	time	6.17	11.00	16.03	21.33	26.77	32.41	38.08	44.06	44.06	6 / 2							
reaction time 0.207	interval		4.83	5.03	5.30	5.44	5.64	5.67	5.98		# of strides	11.00	10.33	11.08	11.65	21.33	22.73	1.40
	velocity	8.10	10.35	9.94	9.43	9.19	8.87	8.82	8.36	9.08	175.0	9.09	9.68	9.03	8.58	9.38	8.80	
Kebinatshipi, Collen (BOT)	time	6.04	10.85	15.86	21.10	26.56	32.22	38.01	44.22	44.22	3 / 3							
reaction time 0.151	interval		4.81	5.01	5.24	5.46	5.66	5.79	6.21	PB	# of strides	10.85	10.25	11.12	12.00	21.10	23.12	2.02
	velocity	8.28	10.40	9.98	9.54	9.16	8.83	8.64	8.05	9.05		9.22	9.76	8.99	8.33	9.48	8.65	
Deadmon, Bryce (USA) (19	time	6.12	11.10	16.10	21.36	26.85	32.44	38.15	44.37	44.37	8 / 4							
reaction time 0.181	interval		4.98	5.00	5.26	5.49	5.59	5.71	6.22		# of strides	11.10	10.26	11.08	11.93	21.36	23.01	1.65
	velocity	8.17	10.04	10.00	9.51	9.11	8.94	8.76	8.04	9.02		9.01	9.75	9.03	8.38	9.36	8.69	
Dobson, Charles (GBR) (1	time	6.04	10.98	16.03	21.31	26.76	32.46	38.31	44.53	44.53	4 / 5							
reaction time 0.147	interval		4.94	5.05	5.28	5.45	5.70	5.85	6.22		# of strides	10.98	10.33	11.15	12.07	21.31	23.22	1.91
	velocity	8.28	10.12	9.90	9.47	9.17	8.77	8.55	8.04	8.98		9.11	9.68	8.97	8.29	9.39	8.61	
Norwood, Vernon (USA) (1	time	6.10	10.94	15.98	21.20	26.57	32.18	38.03	44.55	44.55	7 / 6							

reaction time 0.173	interval		4.84	5.04	5.22	5.37	5.61	5.85	6.52		# of strides	10.94	10.26	10.98	12.37	21.20	23.35	2.15
	velocity	8.20	10.33	9.92	9.58	9.31	8.91	8.55	7.67	8.98		9.14	9.75	9.11	8.08	9.43	8.57	
Spitz, Lionel (SUI) (2001)	time	6.15	11.07	16.11	21.40	27.00	32.88	39.05	45.82	45.82	2 / 7							
reaction time 0.119	interval		4.92	5.04	5.29	5.60	5.88	6.17	6.77		# of strides	11.07	10.33	11.48	12.94	21.40	24.42	3.02
	velocity	8.13	10.16	9.92	9.45	8.93	8.50	8.10	7.39	8.73		9.03	9.68	8.71	7.73	9.35	8.19	
Omalla, Eugene (NED) (200	time	6.17	11.22	16.43	21.83	27.58	33.47	39.52	46.06	46.06	1 / 8							
reaction time 0.179	interval		5.05	5.21	5.40	5.75	5.89	6.05	6.54		# of strides	11.22	10.61	11.64	12.59	21.83	24.23	2.40
	velocity	8.10	9.90	9.60	9.26	8.70	8.49	8.26	7.65	8.68		8.91	9.43	8.59	7.94	9.16	8.25	

B Race

date 22-Aug-24

Omega Timing (2024) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Petrucciani, Ricky (SUI) (20	time	6.21	11.46	16.79	22.30	27.83	33.55	39.49	45.83	45.83	5 / 1							
reaction time 0.167	interval		5.25	5.33	5.51	5.53	5.72	5.94	6.34		# of strides	11.46	10.84	11.25	12.28	22.30	23.53	1.23
	velocity	8.05	9.52	9.38	9.07	9.04	8.74	8.42	7.89	8.73		8.73	9.23	8.89	8.14	8.97	8.50	
Devantay, Charles (SUI) (19	time	6.20	11.33	16.63	22.13	27.74	33.56	39.56	46.06	46.06	4 / 2							
reaction time 0.134	interval		5.13	5.30	5.50	5.61	5.82	6.00	6.50		# of strides	11.33	10.80	11.43	12.50	22.13	23.93	1.80
	velocity	8.06	9.75	9.43	9.09	8.91	8.59	8.33	7.69	8.68		8.83	9.26	8.75	8.00	9.04	8.36	
Gyger, Nathan (SUI) (1992)	time	6.35	11.46	16.60	22.02	27.73	33.83	40.24	47.34	47.34	7 / 3							
reaction time 0.170	interval		5.11	5.14	5.42	5.71	6.10	6.41	7.10		# of strides	11.46	10.56	11.81	13.51	22.02	25.32	3.30
	velocity	7.87	9.78	9.73	9.23	8.76	8.20	7.80	7.04	8.45		8.73	9.47	8.47	7.40	9.08	7.90	
Sorg, Michael (SUI) (2004)	time	6.36	11.47	16.72	22.23	28.09	34.35	40.98	48.14	48.14	8 / 4							
reaction time 0.215	interval		5.11	5.25	5.51	5.86	6.26	6.63	7.16		# of strides	11.47	10.76	12.12	13.79	22.23	25.91	3.68
	velocity	7.86	9.78	9.52	9.07	8.53	7.99	7.54	6.98	8.31		8.72	9.29	8.25	7.25	9.00	7.72	
Yirga, Nahom (SUI) (2001)	time	6.34	11.59	17.00	22.64	28.58	34.79	41.29	48.24	48.24	2 / 5							
reaction time 0.148	interval		5.25	5.41	5.64	5.94	6.21	6.50	6.95		# of strides	11.59	11.05	12.15	13.45	22.64	25.60	2.96
	velocity	7.89	9.52	9.24	8.87	8.42	8.05	7.69	7.19	8.29		8.63	9.05	8.23	7.43	8.83	7.81	
Jutzet, Juri (SUI) (2005)	time	6.62	12.16	17.77	23.58	29.65	35.96	42.39	49.17	49.17	3 / 6							
reaction time 0.180	interval		5.54	5.61	5.81	6.07	6.31	6.43	6.78		# of strides	12.16	11.42	12.38	13.21	23.58	25.59	2.01
	velocity	7.55	9.03	8.91	8.61	8.24	7.92	7.78	7.37	8.14		8.22	8.76	8.08	7.57	8.48	7.82	
Coquoz, Samuel (SUI) (199	time	6.36	11.69	17.21	22.95	29.02	35.44	42.19	49.42	49.42	1 / 7							
reaction time 0.182	interval		5.33	5.52	5.74	6.07	6.42	6.75	7.23		# of strides	11.69	11.26	12.49	13.98	22.95	26.47	3.52
	velocity	7.86	9.38	9.06	8.71	8.24	7.79	7.41	6.92	8.09		8.55	8.88	8.01	7.15	8.71	7.56	
Bregenzer, Pierre-Yves (SU	time	6.39	11.71	17.23	23.04	29.07	35.51	42.35	49.60	49.60	6 / 8							
reaction time 0.172	interval		5.32	5.52	5.81	6.03	6.44	6.84	7.25		# of strides	11.71	11.33	12.47	14.09	23.04	26.56	3.52
	velocity	7.82	9.40	9.06	8.61	8.29	7.76	7.31	6.90	8.06		8.54	8.83	8.02	7.10	8.68	7.53	

2024 Olympic Games (Paris, FRA)

FINAL

date 07-Aug-24

Paris 2024 Olympic Games - Results Book (2024)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hall, Quincy (USA) (1998)	time	6.16	11.01	15.89	21.00	26.34	31.81	37.46	43.40	43.40	8 / 1							
reaction time 0.168	interval		4.85	4.88	5.11	5.34	5.47	5.65	5.94	PB	# of strides	11.01	9.99	10.81	11.59	21.00	22.40	1.40
	velocity	8.12	10.31	10.25	9.78	9.36	9.14	8.85	8.42	9.22	157.7	9.08	10.01	9.25	8.63	9.52	8.93	
Hudson-Smith, Matthew ((	time	6.01	10.81	15.65	20.62	25.86	31.35	37.19	43.44	43.44	6 / 2							
reaction time 0.149	interval		4.80	4.84	4.97	5.24	5.49	5.84	6.25	AR	# of strides	10.81	9.81	10.73	12.09	20.62	22.82	2.20
	velocity	8.32	10.42	10.33	10.06	9.54	9.11	8.56	8.00	9.21	161.0	9.25	10.19	9.32	8.27	9.70	8.76	
Samukonga, Muzala (ZAM)	time	6.11	10.87	15.78	20.95	26.35	31.91	37.68	43.74	43.74	7 / 3							
reaction time 0.185	interval		4.76	4.91	5.17	5.40	5.56	5.77	6.06	NR PB	# of strides	10.87	10.08	10.96	11.83	20.95	22.79	1.84
	velocity	8.18	10.50	10.18	9.67	9.26	8.99	8.67	8.25	9.14	176.0	9.20	9.92	9.12	8.45	9.55	8.78	
Richards, Jereem (TTO) (19	time	6.02	10.69	15.43	20.46	25.82	31.42	37.32	43.78	43.78	9 / 4							
reaction time 0.144	interval		4.67	4.74	5.03	5.36	5.60	5.90	6.46	NR PB	# of strides	10.69	9.77	10.96	12.36	20.46	23.32	2.86
	velocity	8.31	10.71	10.55	9.94	9.33	8.93	8.47	7.74	9.14	172.5	9.35	10.24	9.12	8.09	9.78	8.58	
James, Kirani (GRN) (1992)	time	5.96	10.75	15.61	20.63	25.90	31.50	37.46	43.87	43.87	5 / 5							
reaction time 0.147	interval		4.79	4.86	5.02	5.27	5.60	5.96	6.41		# of strides	10.75	9.88	10.87	12.37	20.63	23.24	2.61
	velocity	8.39	10.44	10.29	9.96	9.49	8.93	8.39	7.80	9.12	162.5	9.30	10.12	9.20	8.08	9.69	8.61	
Bailey, Chris (USA) (2000)	time	6.34	11.38	16.57	21.89	27.34	32.89	38.61	44.58	44.58	2 / 6							
reaction time 0.178	interval		5.04	5.19	5.32	5.45	5.55	5.72	5.97		# of strides	11.38	10.51	11.00	11.69	21.89	22.69	0.80
	velocity	7.89	9.92	9.63	9.40	9.17	9.01	8.74	8.38	8.97	179.0	8.79	9.51	9.09	8.55	9.14	8.81	
Ogazi, Samuel (NGR) (2006	time	6.33	11.19	16.20	21.46	27.08	32.92	38.74	44.73	44.73	3 / 7							
reaction time 0.225	interval		4.86	5.01	5.26	5.62	5.84	5.82	5.99		# of strides	11.19	10.27	11.46	11.81	21.46	23.27	1.81
	velocity	7.90	10.29	9.98	9.51	8.90	8.56	8.59	8.35	8.94	161.0	8.94	9.74	8.73	8.47	9.32	8.59	
Norman, Michael (USA) (19	time	5.96	10.85	15.85	21.11	26.73	32.59	38.87	45.62	45.62	4 / 8							
reaction time 0.150	interval		4.89	5.00	5.26	5.62	5.86	6.28	6.75		# of strides	10.85	10.26	11.48	13.03	21.11	24.51	3.40
	velocity	8.39	10.22	10.00	9.51	8.90	8.53	7.96	7.41	8.77	172.0	9.22	9.75	8.71	7.67	9.47	8.16	

Semi-Final 3

date 06-Aug-24

Paris 2024 Olympic Games - Results Book (2024)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hudson-Smith, Matthew ((	time	5.97	10.71	15.53	20.56	25.85	31.44	37.41	44.07	44.07	7 / 1							

reaction time 0.148	interval		4.74	4.82	5.03	5.29	5.59	5.97	6.66		# of strides	10.71	9.85	10.88	12.63	20.56	23.51	2.95
	velocity	8.38	10.55	10.37	9.94	9.45	8.94	8.38	7.51	9.08	161.0	9.34	10.15	9.19	7.92	9.73	8.51	
Norman, Michael (USA) (19	time	6.07	11.01	15.96	21.14	26.54	32.16	38.01	44.26	44.26	6 / 2							
reaction time 0.146	interval		4.94	4.95	5.18	5.40	5.62	5.85	6.25		# of strides	11.01	10.13	11.02	12.10	21.14	23.12	1.98
	velocity	8.24	10.12	10.10	9.65	9.26	8.90	8.55	8.00	9.04	171.0	9.08	9.87	9.07	8.26	9.46	8.65	
Ogazi, Samuel (NGR) (2006	time	6.20	10.99	15.90	21.09	26.62	32.29	38.16	44.41	44.41	5 / 3							
reaction time 0.195	interval		4.79	4.91	5.19	5.53	5.67	5.87	6.25	PB	# of strides	10.99	10.10	11.20	12.12	21.09	23.32	2.23
	velocity	8.06	10.44	10.18	9.63	9.04	8.82	8.52	8.00	9.01	160.0	9.10	9.90	8.93	8.25	9.48	8.58	
Powell, Jevaughn (JAM) (2	time	6.07	10.86	15.78	20.94	26.41	32.16	38.31	44.91	44.91	9 / 4							
reaction time 0.155	interval		4.79	4.92	5.16	5.47	5.75	6.15	6.60		# of strides	10.86	10.08	11.22	12.75	20.94	23.97	3.03
	velocity	8.24	10.44	10.16	9.69	9.14	8.70	8.13	7.58	8.91	175.5	9.21	9.92	8.91	7.84	9.55	8.34	
Holder, Reece (AUS) (2002)	time	6.07	10.85	15.77	20.97	26.46	32.20	38.30	44.94	44.94	4 / 5							
reaction time 0.144	interval		4.78	4.92	5.20	5.49	5.74	6.10	6.64		# of strides	10.85	10.12	11.23	12.74	20.97	23.97	3.00
	velocity	8.24	10.46	10.16	9.62	9.11	8.71	8.20	7.53	8.90	170.5	9.22	9.88	8.90	7.85	9.54	8.34	
Nene, Zakithi (RSA) (1998)	time	6.08	10.97	16.02	21.27	26.83	32.59	38.52	45.06	45.06	3 / 6							
reaction time 0.146	interval		4.89	5.05	5.25	5.56	5.76	5.93	6.54		# of strides	10.97	10.30	11.32	12.47	21.27	23.79	2.52
	velocity	8.22	10.22	9.90	9.52	8.99	8.68	8.43	7.65	8.88	176.0	9.12	9.71	8.83	8.02	9.40	8.41	
Scotch, Leungo (BOT) (19	time	6.14	11.06	16.10	21.31	26.88	32.72	38.73	45.16	45.16	2 / 7							
reaction time 0.177	interval		4.92	5.04	5.21	5.57	5.84	6.01	6.43		# of strides	11.06	10.25	11.41	12.44	21.31	23.85	2.54
	velocity	8.14	10.16	9.92	9.60	8.98	8.56	8.32	7.78	8.86	177.0	9.04	9.76	8.76	8.04	9.39	8.39	
Morales-Williams, Christop	time	6.04	10.93	15.92	21.21	26.91	32.85	38.91	45.25	45.25	8 / 8							
reaction time 0.164	interval		4.89	4.99	5.29	5.70	5.94	6.06	6.34		# of strides	10.93	10.28	11.64	12.40	21.21	24.04	2.83
	velocity	8.28	10.22	10.02	9.45	8.77	8.42	8.25	7.89	8.84	164.0	9.15	9.73	8.59	8.06	9.43	8.32	

Semi-Final 2

date 06-Aug-24

Paris 2024 Olympic Games - Results Book (2024)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
James, Kirani (GRN) (1992)	time	6.00	10.84	15.77	20.84	26.13	31.79	37.67	43.78	43.78	8 / 1							
reaction time 0.147	interval		4.84	4.93	5.07	5.29	5.66	5.88	6.11		# of strides	10.84	10.00	10.95	11.99	20.84	22.94	2.10
	velocity	8.33	10.33	10.14	9.86	9.45	8.83	8.50	8.18	9.14	161.7	9.23	10.00	9.13	8.34	9.60	8.72	
Samukonga, Muzala (ZAM)	time	6.06	10.77	15.72	20.88	26.26	31.91	37.76	43.81	43.81	5 / 2							
reaction time 0.162	interval		4.71	4.95	5.16	5.38	5.65	5.85	6.05	NR PB	# of strides	10.77	10.11	11.03	11.90	20.88	22.93	2.05
	velocity	8.25	10.62	10.10	9.69	9.29	8.85	8.55	8.26	9.13	177.0	9.29	9.89	9.07	8.40	9.58	8.72	
Bailey, Chris (USA) (2000)	time	6.19	11.09	16.06	21.21	26.50	32.07	37.98	44.31	44.31	6 / 3							
reaction time 0.162	interval		4.90	4.97	5.15	5.29	5.57	5.91	6.33	PB	# of strides	11.09	10.12	10.86	12.24	21.21	23.10	1.89
	velocity	8.08	10.20	10.06	9.71	9.45	8.98	8.46	7.90	9.03	183.0	9.02	9.88	9.21	8.17	9.43	8.66	
Ndori, Bayapo (BOT) (1999	time	6.09	10.99	16.02	21.19	26.55	32.20	38.13	44.43	44.43	7 / 4							
reaction time 0.159	interval		4.90	5.03	5.17	5.36	5.65	5.93	6.30		# of strides	10.99	10.20	11.01	12.23	21.19	23.24	2.05
	velocity	8.21	10.20	9.94	9.67	9.33	8.85	8.43	7.94	9.00	175.5	9.10	9.80	9.08	8.18	9.44	8.61	
Singhapurage, Aruna Dhar	time	6.30	11.33	16.39	21.65	27.18	32.90	38.75	44.75	44.75	4 / ~~5~~							
reaction time 0.178	interval		5.03	5.06	5.26	5.53	5.72	5.85	6.00	DQ	# of strides	11.33	10.32	11.25	11.85	21.65	23.10	1.45
	velocity	7.94	9.94	9.88	9.51	9.04	8.74	8.55	8.33	8.94		8.83	9.69	8.89	8.44	9.24	8.66	
Sito, Luca (ITA) (2003)	time	6.17	11.08	16.00	21.17	26.60	32.35	38.39	45.01	45.01	9 / ~~6~~ 5							
reaction time 0.148	interval		4.91	4.92	5.17	5.43	5.75	6.04	6.62		# of strides	11.08	10.09	11.18	12.66	21.17	23.84	2.67
	velocity	8.10	10.18	10.16	9.67	9.21	8.70	8.28	7.55	8.89		9.03	9.91	8.94	7.90	9.45	8.39	
Larregina, Elián (ARG) (200	time	6.16	11.12	16.16	21.36	26.80	32.60	38.67	45.02	45.02	2 / ~~7~~ 6							
reaction time 0.154	interval		4.96	5.04	5.20	5.44	5.80	6.07	6.35		# of strides	11.12	10.24	11.24	12.42	21.36	23.66	2.30
	velocity	8.12	10.08	9.92	9.62	9.19	8.62	8.24	7.87	8.88		8.99	9.77	8.90	8.05	9.36	8.45	
Pillay, Lythe (RSA) (2003)	time	6.23	11.23	16.31	21.57	27.03	32.78	38.77	45.24	45.24	3 / ~~8~~ 7							
reaction time 0.145	interval		5.00	5.08	5.26	5.46	5.75	5.99	6.47		# of strides	11.23	10.34	11.21	12.46	21.57	23.67	2.10
	velocity	8.03	10.00	9.84	9.51	9.16	8.70	8.35	7.73	8.84		8.90	9.67	8.92	8.03	9.27	8.45	

Semi-Final 1

date 06-Aug-24

Paris 2024 Olympic Games - Results Book (2024)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hall, Quincy (USA) (1998)	time	6.21	11.10	16.00	21.05	26.34	31.92	37.75	43.95	43.95	5 / 1							
reaction time 0.179	interval		4.89	4.90	5.05	5.29	5.58	5.83	6.20		# of strides	11.10	9.95	10.87	12.03	21.05	22.90	1.85
	velocity	8.05	10.22	10.20	9.90	9.45	8.96	8.58	8.06	9.10	159.5	9.01	10.05	9.20	8.31	9.50	8.73	
Richards, Jereem (TTO) (19	time	6.03	10.85	15.86	21.08	26.56	32.22	38.09	44.33	44.33	7 / 2							
reaction time 0.153	interval		4.82	5.01	5.22	5.48	5.66	5.87	6.24		# of strides	10.85	10.23	11.14	12.11	21.08	23.25	2.17
	velocity	8.29	10.37	9.98	9.58	9.12	8.83	8.52	8.01	9.02	172.7	9.22	9.78	8.98	8.26	9.49	8.60	
Kebinatshipi, Collen (BOT)	time	6.12	11.16	16.38	21.70	27.08	32.75	38.53	44.43	44.43	4 / 3							
reaction time 0.154	interval		5.04	5.22	5.32	5.38	5.67	5.78	5.90	PB	# of strides	11.16	10.54	11.05	11.68	21.70	22.73	1.03
	velocity	8.17	9.92	9.58	9.40	9.29	8.82	8.65	8.47	9.00	185.0	8.96	9.49	9.05	8.56	9.22	8.80	
Dobson, Charles (GBR) (1!	time	6.00	10.97	16.10	21.38	26.80	32.47	38.35	44.48	44.48	8 / 4							
reaction time 0.143	interval		4.97	5.13	5.28	5.42	5.67	5.88	6.13		# of strides	10.97	10.41	11.09	12.01	21.38	23.10	1.72
	velocity	8.33	10.06	9.75	9.47	9.23	8.82	8.50	8.16	8.99	165.0	9.12	9.61	9.02	8.33	9.35	8.66	

Yahia Ibrahim, Ammar Isma	time	6.31	11.29	16.31	21.46	26.74	32.33	38.24	44.64	44.64	3 / 5							
reaction time 0.163	interval		4.98	5.02	5.15	5.28	5.59	5.91	6.40	PB	# of strides	11.29	10.17	10.87	12.31	21.46	23.18	1.72
	velocity	7.92	10.04	9.96	9.71	9.47	8.94	8.46	7.81	8.96	176.0	8.86	9.83	9.20	8.12	9.32	8.63	
Diouf, Cheikh Tidiane (SEN	time	6.11	11.16	16.41	21.75	27.22	32.88	38.74	44.94	44.94	2 / 6							
reaction time 0.181	interval		5.05	5.25	5.34	5.47	5.66	5.86	6.20	NR PB	# of strides	11.16	10.59	11.13	12.06	21.75	23.19	1.44
	velocity	8.18	9.90	9.52	9.36	9.14	8.83	8.53	8.06	8.90	165.5	8.96	9.44	8.98	8.29	9.20	8.62	
Ingvaldsen, Håvard Bentda	time	6.33	11.31	16.44	21.78	27.33	33.17	39.22	45.60	45.60	9 / 7							
reaction time 0.209	interval		4.98	5.13	5.34	5.55	5.84	6.05	6.38		# of strides	11.31	10.47	11.39	12.43	21.78	23.82	2.04
	velocity	7.90	10.04	9.75	9.36	9.01	8.56	8.26	7.84	8.77		8.84	9.55	8.78	8.05	9.18	8.40	
Doom, Alexander (BEL) (1	time	6.26	11.12	16.01	21.09	26.48	32.88			1:55.10	6 / 8							
reaction time 0.150	interval		4.86	4.89	5.08	5.39	6.40				# of strides	11.12	9.97	11.79				
	velocity	7.99	10.29	10.22	9.84	9.28	7.81					8.99	10.03	8.48				

Repechage 4

date 05-Aug-24

Paris 2024 Olympic Games - Results Book (2024)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Yahia Ibrahim, Ammar Isma	time	6.45	11.57	16.75	22.00	27.37	32.89	38.66	44.77	44.77	3 / 1							
reaction time 0.158	interval		5.12	5.18	5.25	5.37	5.52	5.77	6.11		# of strides	11.57	10.43	10.89	11.88	22.00	22.77	0.77
	velocity	7.75	9.77	9.65	9.52	9.31	9.06	8.67	8.18	8.93	174.0	8.64	9.59	9.18	8.42	9.09	8.78	
Diouf, Cheikh Tidiane (SEN	time	6.24	11.22	16.41	21.77	27.34	33.04	38.90	45.03	45.03	8 / 2							
reaction time 0.220	interval		4.98	5.19	5.36	5.57	5.70	5.86	6.13	=PB	# of strides	11.22	10.55	11.27	11.99	21.77	23.26	1.49
	velocity	8.01	10.04	9.63	9.33	8.98	8.77	8.53	8.16	8.88	164.0	8.91	9.48	8.87	8.34	9.19	8.60	
Bredau, Jean Paul (GER) (1	time	6.25	11.29	16.45	21.84	27.48	33.28	39.21	45.40	45.40	6 / 3							
reaction time 0.163	interval		5.04	5.16	5.39	5.64	5.80	5.93	6.19		# of strides	11.29	10.55	11.44	12.12	21.84	23.56	1.72
	velocity	8.00	9.92	9.69	9.28	8.87	8.62	8.43	8.08	8.81	172.0	8.86	9.48	8.74	8.25	9.16	8.49	
Borlée, Dylan (BEL) (1992)	time	6.27	11.34	16.50	21.83	27.40	33.16	39.13	45.51	45.51	7 / 4							
reaction time 0.161	interval		5.07	5.16	5.33	5.57	5.76	5.97	6.38		# of strides	11.34	10.49	11.33	12.35	21.83	23.68	1.85
	velocity	7.97	9.86	9.69	9.38	8.98	8.68	8.38	7.84	8.79	173.0	8.82	9.53	8.83	8.10	9.16	8.45	
Coelho, João (POR) (1999)	time	6.38	11.45	16.71	22.11	27.65	33.40	39.30	45.64	45.64	4 / 5							
reaction time 0.175	interval		5.07	5.26	5.40	5.54	5.75	5.90	6.34		# of strides	11.45	10.66	11.29	12.24	22.11	23.53	1.42
	velocity	7.84	9.86	9.51	9.26	9.03	8.70	8.47	7.89	8.76	181.0	8.73	9.38	8.86	8.17	9.05	8.50	
Bailey, Sean (JAM) (1997)	time	6.26	11.36							dnf	5 / 6							
reaction time 0.184	interval		5.10								# of strides	11.36						
	velocity	7.99	9.80									8.80						

Repechage 3

date 05-Aug-24

Paris 2024 Olympic Games - Results Book (2024)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Nene, Zakithi (RSA) (1998)	time	6.14	11.15	16.38	21.72	27.23	32.83	38.60	44.81	44.81	4 / 1							
reaction time 0.140	interval		5.01	5.23	5.34	5.51	5.60	5.77	6.21		# of strides	11.15	10.57	11.11	11.98	21.72	23.09	1.37
	velocity	8.14	9.98	9.56	9.36	9.07	8.93	8.67	8.05	8.93	174.0	8.97	9.46	9.00	8.35	9.21	8.66	
Scotch, Leungo (BOT) (19	time	6.20	11.30	16.50	21.89	27.33	32.96	38.86	45.33	45.33	6 / 2							
reaction time 0.172	interval		5.10	5.20	5.39	5.44	5.63	5.90	6.47		# of strides	11.30	10.59	11.07	12.37	21.89	23.44	1.55
	velocity	8.06	9.80	9.62	9.28	9.19	8.88	8.47	7.73	8.82	179.0	8.85	9.44	9.03	8.08	9.14	8.53	
Molnár, Attila (HUN) (2002)	time	6.31	11.25	16.41	21.74	27.21	32.91	38.95	45.45	45.45	3 / 3							
reaction time 0.166	interval		4.94	5.16	5.33	5.47	5.70	6.04	6.50		# of strides	11.25	10.49	11.17	12.54	21.74	23.71	1.97
	velocity	7.92	10.12	9.69	9.38	9.14	8.77	8.28	7.69	8.80	175.0	8.89	9.53	8.95	7.97	9.20	8.44	
Spitz, Lionel (SUI) (2001)	time	6.27	11.37	16.56	21.94	27.52	33.20	39.10	45.51	45.51	5 / 4							
reaction time 0.148	interval		5.10	5.19	5.38	5.58	5.68	5.90	6.41		# of strides	11.37	10.57	11.26	12.31	21.94	23.57	1.63
	velocity	7.97	9.80	9.63	9.29	8.96	8.80	8.47	7.80	8.79	185.2	8.80	9.46	8.88	8.12	9.12	8.49	

Repechage 2

date 05-Aug-24

Paris 2024 Olympic Games - Results Book (2024)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Pillay, Lythe (RSA) (2003)	time	6.29	11.33	16.58	22.00	27.51	33.15	39.08	45.40	45.40	5 / 1							
reaction time 0.161	interval		5.04	5.25	5.42	5.51	5.64	5.93	6.32		# of strides	11.33	10.67	11.15	12.25	22.00	23.40	1.40
	velocity	7.95	9.92	9.52	9.23	9.07	8.87	8.43	7.91	8.81	173.7	8.83	9.37	8.97	8.16	9.09	8.55	
Krsek, Matěj (CZE) (2000)	time	6.27	11.34	16.60	21.98	27.49	33.22	39.19	45.53	45.53	7 / 2							
reaction time 0.145	interval		5.07	5.26	5.38	5.51	5.73	5.97	6.34	PB	# of strides	11.34	10.64	11.24	12.31	21.98	23.55	1.57
	velocity	7.97	9.86	9.51	9.29	9.07	8.73	8.38	7.89	8.79	179.7	8.82	9.40	8.90	8.12	9.10	8.49	
Pohorilko, Oleksandr (UKR	time	6.39	11.67	17.05	22.46	27.92	33.53	39.38	45.59	45.59	3 / 3							
reaction time 0.193	interval		5.28	5.38	5.41	5.46	5.61	5.85	6.21		# of strides	11.67	10.79	11.07	12.06	22.46	23.13	0.67
	velocity	7.82	9.47	9.29	9.24	9.16	8.91	8.55	8.05	8.77	175.0	8.57	9.27	9.03	8.29	8.90	8.65	
Joseph, Michael (LCA) (20	time	6.19	11.24	16.51	21.93	27.54	33.34	39.34	45.64	45.64	6 / 4							
reaction time 0.186	interval		5.05	5.27	5.42	5.61	5.80	6.00	6.30		# of strides	11.24	10.69	11.41	12.30	21.93	23.71	1.78
	velocity	8.08	9.90	9.49	9.23	8.91	8.62	8.33	7.94	8.76	175.2.	8.90	9.35	8.76	8.13	9.12	8.44	
Okezie, Chidi (NGR) (1993)	time	6.36	11.47	16.71	22.14	27.72	33.49	39.50	45.92	45.92	4 / 5							
reaction time 0.172	interval		5.11	5.24	5.43	5.58	5.77	6.01	6.42		# of strides	11.47	10.67	11.35	12.43	22.14	23.78	1.64
	velocity	7.86	9.78	9.54	9.21	8.96	8.67	8.32	7.79	8.71	167.5	8.72	9.37	8.81	8.05	9.03	8.41	

Repechage 1

date 05-Aug-24

Paris 2024 Olympic Games - Results Book (2024)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Larregina, Elián (ARG) (200	time	6.33	11.51	16.67	22.02	27.58	33.24	39.10	45.36	45.36	4 / 1							
reaction time 0.143	interval		5.18	5.16	5.35	5.56	5.66	5.86	6.26		# of strides	11.51	10.51	11.22	12.12	22.02	23.34	1.32
	velocity	7.90	9.65	9.69	9.35	8.99	8.83	8.53	7.99	8.82	168.0	8.69	9.51	8.91	8.25	9.08	8.57	
Biron, Gilles (FRA) (1995)	time	6.24	11.25	16.28	21.56	27.20	33.05	39.22	45.87	45.87	8 / 2							
reaction time 0.187	interval		5.01	5.03	5.28	5.64	5.85	6.17	6.65		# of strides	11.25	10.31	11.49	12.82	21.56	24.31	2.75
	velocity	8.01	9.98	9.94	9.47	8.87	8.55	8.10	7.52	8.72	178.7	8.89	9.70	8.70	7.80	9.28	8.23	
Carvalho, Lucas (BRA) (19	time	6.30	11.36	16.47	21.84	27.49	33.36	39.53	46.25	46.25	3 / 3							
reaction time 0.151	interval		5.06	5.11	5.37	5.65	5.87	6.17	6.72		# of strides	11.36	10.48	11.52	12.89	21.84	24.41	2.57
	velocity	7.94	9.88	9.78	9.31	8.85	8.52	8.10	7.44	8.65	181.0	8.80	9.54	8.68	7.76	9.16	8.19	

Heat 6

date 04-Aug-24

Paris 2024 Olympic Games - Results Book (2024)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Dobson, Charles (GBR) (19	time	6.14	11.15	16.25	21.57	27.08	32.77	38.69	44.96	44.96	5 / 1							
reaction time 0.156	interval		5.01	5.10	5.32	5.51	5.69	5.92	6.27		# of strides	11.15	10.42	11.20	12.19	21.57	23.39	1.82
	velocity	8.14	9.98	9.80	9.40	9.07	8.79	8.45	7.97	8.90	162.7	8.97	9.60	8.93	8.20	9.27	8.55	
Doom, Alexander (BEL) (19	time	6.42	11.36	16.32	21.52	27.02	32.81	38.76	45.01	45.01	7 / 2							
reaction time 0.188	interval		4.94	4.96	5.20	5.50	5.79	5.95	6.25		# of strides	11.36	10.16	11.29	12.20	21.52	23.49	1.97
	velocity	7.79	10.12	10.08	9.62	9.09	8.64	8.40	8.00	8.89	179.2	8.80	9.84	8.86	8.20	9.29	8.51	
Powell, Jevaughn (JAM) (2(	time	6.13	10.95	15.94	21.20	26.70	32.46	38.56	45.12	45.12	3 / 3							
reaction time 0.146	interval		4.82	4.99	5.26	5.50	5.76	6.10	6.56		# of strides	10.95	10.25	11.26	12.66	21.20	23.92	2.72
	velocity	8.16	10.37	10.02	9.51	9.09	8.68	8.20	7.62	8.87	177.2	9.13	9.76	8.88	7.90	9.43	8.36	
Coelho, João (POR) (1999)	time	6.46	11.54	16.69	22.04	27.50	33.12	38.98	45.35	45.35	9 / 4							
reaction time 0.216	interval		5.08	5.15	5.35	5.46	5.62	5.86	6.37		# of strides	11.54	10.50	11.08	12.23	22.04	23.31	1.27
	velocity	7.74	9.84	9.71	9.35	9.16	8.90	8.53	7.85	8.82	179.2	8.67	9.52	9.03	8.18	9.07	8.58	
Diouf, Cheikh Tidiane (SEN	time	6.19	11.14	16.22	21.44	26.97	32.80	38.98	45.59	45.59	2 / 5							
reaction time 0.217	interval		4.95	5.08	5.22	5.53	5.83	6.18	6.61		# of strides	11.14	10.30	11.36	12.79	21.44	24.15	2.71
	velocity	8.08	10.10	9.84	9.58	9.04	8.58	8.09	7.56	8.77	165.0	8.98	9.71	8.80	7.82	9.33	8.28	
Sato, Fuga (JPN) (1996)	time	6.18	11.16	16.28	21.65	27.22	33.03	39.23	46.13	46.13	8 / 6							
reaction time 0.163	interval		4.98	5.12	5.37	5.57	5.81	6.20	6.90		# of strides	11.16	10.49	11.38	13.10	21.65	24.48	2.83
	velocity	8.09	10.04	9.77	9.31	8.98	8.61	8.06	7.25	8.67	176.0	8.96	9.53	8.79	7.63	9.24	8.17	
Biron, Gilles (FRA) (1995)	time	6.31	11.35	16.43	21.67	27.22	33.12	39.40	46.19	46.19	4 / 7							
reaction time 0.194	interval		5.04	5.08	5.24	5.55	5.90	6.28	6.79		# of strides	11.35	10.32	11.45	13.07	21.67	24.52	2.85
	velocity	7.92	9.92	9.84	9.54	9.01	8.47	7.96	7.36	8.66	180.0	8.81	9.69	8.73	7.65	9.23	8.16	
Ekwam, Zablon Ekhal (KEN	time	6.09	10.95	15.94	21.50					dnf	6 / --							
reaction time 0.142	interval		4.86	4.99	5.56						# of strides	10.95	10.55					
	velocity	8.21	10.29	10.02	8.99							9.13	9.48					

Heat 5

date 04-Aug-24

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		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
James, Kirani (GRN) (1992)	time	6.07	10.94	16.01	21.27	26.77	32.59	38.52	44.78	44.78	6 / 1							
reaction time 0.159	interval		4.87	5.07	5.26	5.50	5.82	5.93	6.26		# of strides	10.94	10.33	11.32	12.19	21.27	23.51	2.24
	velocity	8.24	10.27	9.86	9.51	9.09	8.59	8.43	7.99	8.93	158.2	9.14	9.68	8.83	8.20	9.40	8.51	
Morales-Williams, Christop	time	6.13	11.13	16.23	21.57	27.14	32.94	38.78	44.96	44.96	8 / 2							
reaction time 0.177	interval		5.00	5.10	5.34	5.57	5.80	5.84	6.18		# of strides	11.13	10.44	11.37	12.02	21.57	23.39	1.82
	velocity	8.16	10.00	9.80	9.36	8.98	8.62	8.56	8.09	8.90	164.0	8.98	9.58	8.80	8.32	9.27	8.55	
Singhapurage, Aruna Dhar	time	6.41	11.38	16.34	21.58	27.12	32.83	38.75	44.99	44.99	9 / 3							
reaction time 0.192	interval		4.97	4.96	5.24	5.54	5.71	5.92	6.24		# of strides	11.38	10.20	11.25	12.16	21.58	23.41	1.83
	velocity	7.80	10.06	10.08	9.54	9.03	8.76	8.45	8.01	8.89	180.0	8.79	9.80	8.89	8.22	9.27	8.54	
Nene, Zakithi (RSA) (1998)	time	6.06	10.96	15.99	21.27	26.75	32.49	38.43	45.01	45.01	4 / 4							
reaction time 0.134	interval		4.90	5.03	5.28	5.48	5.74	5.94	6.58		# of strides	10.96	10.31	11.22	12.52	21.27	23.74	2.47
	velocity	8.25	10.20	9.94	9.47	9.12	8.71	8.42	7.60	8.89	176.0	9.12	9.70	8.91	7.99	9.40	8.42	
Scotch, Leungo (BOT) (19	time	6.06	11.02	16.14	21.47	26.99	32.79	38.72	45.28	45.28	7 / 5							
reaction time 0.167	interval		4.96	5.12	5.33	5.52	5.80	5.93	6.56		# of strides	11.02	10.45	11.32	12.49	21.47	23.81	2.34
	velocity	8.25	10.08	9.77	9.38	9.06	8.62	8.43	7.62	8.83	176.2	9.07	9.57	8.83	8.01	9.32	8.40	
Spitz, Lionel (SUI) (2001)	time	6.18	11.13	16.20	21.48	26.97	32.78	38.94	45.81	45.81	3 / 6							
reaction time 0.145	interval		4.95	5.07	5.28	5.49	5.81	6.16	6.87		# of strides	11.13	10.35	11.30	13.03	21.48	24.33	2.85
	velocity	8.09	10.10	9.86	9.47	9.11	8.61	8.12	7.28	8.73	186.5	8.98	9.66	8.85	7.67	9.31	8.22	
Carvalho, Lucas (BRA) (19	time	6.17	11.11	16.21	21.55	27.09	32.90	38.98	45.85	45.85	5 / 7							
reaction time 0.133	interval		4.94	5.10	5.34	5.54	5.81	6.08	6.87		# of strides	11.11	10.44	11.35	12.95	21.55	24.30	2.75
	velocity	8.10	10.12	9.80	9.36	9.03	8.61	8.22	7.28	8.72	180.7	9.00	9.58	8.81	7.72	9.28	8.23	
Re, Davide (ITA) (1993)	time	6.31	11.42	16.65	22.07	27.76	33.75	40.02	46.74	46.74	2 / 8							
reaction time 0.157	interval		5.11	5.23	5.42	5.69	5.99	6.27	6.72		# of strides	11.42	10.65	11.68	12.99	22.07	24.67	2.60
	velocity	7.92	9.78	9.56	9.23	8.79	8.35	7.97	7.44	8.56	181.2	8.76	9.39	8.56	7.70	9.06	8.11	

Heat 4

date 04-Aug-24

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	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hall, Quincy (USA) (1998)	time	6.30	11.20	16.14	21.29	26.66	32.26	38.07	44.28	44.28	7 / 1							
reaction time 0.209	interval		4.90	4.94	5.15	5.37	5.60	5.81	6.21		# of strides	11.20	10.09	10.97	12.02	21.29	22.99	1.70
	velocity	7.94	10.20	10.12	9.71	9.31	8.93	8.61	8.05	9.03	159.0	8.93	9.91	9.12	8.32	9.39	8.70	
Ogazi, Samuel (NGR) (2006	time	6.35	11.26	16.30	21.57	27.00	32.61	38.42	44.50	44.50	5 / 2							
reaction time 0.223	interval		4.91	5.04	5.27	5.43	5.61	5.81	6.08	PB	# of strides	11.26	10.31	11.04	11.89	21.57	22.93	1.36
	velocity	7.87	10.18	9.92	9.49	9.21	8.91	8.61	8.22	8.99	160.5	8.88	9.70	9.06	8.41	9.27	8.72	
Holder, Reece (AUS) (2002)	time	6.07	10.86	15.76	20.88	26.28	31.99	38.05	44.53	44.53	6 / 3							
reaction time 0.144	interval		4.79	4.90	5.12	5.40	5.71	6.06	6.48	PB	# of strides	10.86	10.02	11.11	12.54	20.88	23.65	2.77
	velocity	8.24	10.44	10.20	9.77	9.26	8.76	8.25	7.72	8.98	171.0	9.21	9.98	9.00	7.97	9.58	8.46	
Sacoor, Jonathan (BEL) (1	time	6.30	11.40	16.52	21.74	27.12	32.74	38.61	45.08	45.08	8 / 4							
reaction time 0.146	interval		5.10	5.12	5.22	5.38	5.62	5.87	6.47		# of strides	11.40	10.34	11.00	12.34	21.74	23.34	1.60
	velocity	7.94	9.80	9.77	9.58	9.29	8.90	8.52	7.73	8.87	169.0	8.77	9.67	9.09	8.10	9.20	8.57	
Ogando, Alexander (DOM)	time	6.30	11.24	16.32	21.55	27.06	32.86	38.80	45.11	45.11	2 / 5							
reaction time 0.215	interval		4.94	5.08	5.23	5.51	5.80	5.94	6.31		# of strides	11.24	10.31	11.31	12.25	21.55	23.56	2.01
	velocity	7.94	10.12	9.84	9.56	9.07	8.62	8.42	7.92	8.87	177.0	8.90	9.70	8.84	8.16	9.28	8.49	
Larregina, Elián (ARG) (200	time	6.26	11.34	16.51	21.83	27.41	33.28	39.44	47.80	47.80	3 / 6							
reaction time 0.155	interval		5.08	5.17	5.32	5.58	5.87	6.16	8.36		# of strides	11.34	10.49	11.45	14.52	21.83	25.97	4.14
	velocity	7.99	9.84	9.67	9.40	8.96	8.52	8.12	5.98	8.37	169.0	8.82	9.53	8.73	6.89	9.16	7.70	

Heat 3

date 04-Aug-24

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		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Samukonga, Muzala (ZAM)	time	6.10	10.83	15.83	21.09	26.51	32.15	38.03	44.56	44.56	3 / 1							
reaction time 0.151	interval		4.73	5.00	5.26	5.42	5.64	5.88	6.53		# of strides	10.83	10.26	11.06	12.41	21.09	23.47	2.38
	velocity	8.20	10.57	10.00	9.51	9.23	8.87	8.50	7.66	8.98	177.0	9.23	9.75	9.04	8.06	9.48	8.52	
Ndori, Bayapo (BOT) (1999	time	6.14	11.03	16.05	21.22	26.60	32.24	38.21	44.87	44.87	2 / 2							
reaction time 0.156	interval		4.89	5.02	5.17	5.38	5.64	5.97	6.66		# of strides	11.03	10.19	11.02	12.63	21.22	23.65	2.43
	velocity	8.14	10.22	9.96	9.67	9.29	8.87	8.38	7.51	8.91	175.0	9.07	9.81	9.07	7.92	9.43	8.46	
Sito, Luca (ITA) (2003)	time	6.13	11.11	16.20	21.49	27.01	32.70	38.54	44.99	44.99	8 / 3							
reaction time 0.163	interval		4.98	5.09	5.29	5.52	5.69	5.84	6.45		# of strides	11.11	10.38	11.21	12.29	21.49	23.50	2.01
	velocity	8.16	10.04	9.82	9.45	9.06	8.79	8.56	7.75	8.89	173.0	9.00	9.63	8.92	8.14	9.31	8.51	
Bredau, Jean Paul (GER) (1	time	6.17	11.11	16.16	21.42	26.97	32.76	38.73	45.07	45.07	5 / 4							
reaction time 0.158	interval		4.94	5.05	5.26	5.55	5.79	5.97	6.34		# of strides	11.11	10.31	11.34	12.31	21.42	23.65	2.23
	velocity	8.10	10.12	9.90	9.51	9.01	8.64	8.38	7.89	8.88	173.0	9.00	9.70	8.82	8.12	9.34	8.46	
Borlée, Dylan (BEL) (1992)	time	6.22	11.23	16.30	21.56	27.07	32.86	38.90	45.36	45.36	7 / 5							
reaction time 0.158	interval		5.01	5.07	5.26	5.51	5.79	6.04	6.46		# of strides	11.23	10.33	11.30	12.50	21.56	23.80	2.24
	velocity	8.04	9.98	9.86	9.51	9.07	8.64	8.28	7.74	8.82	173.0	8.90	9.68	8.85	8.00	9.28	8.40	
Nakajima, Yuki Joseph (JPN	time	6.32	11.33	16.47	21.81	27.34	33.00	38.94	45.37	45.37	9 / 6							
reaction time 0.194	interval		5.01	5.14	5.34	5.53	5.66	5.94	6.43		# of strides	11.33	10.48	11.19	12.37	21.81	23.56	1.75
	velocity	7.91	9.98	9.73	9.36	9.04	8.83	8.42	7.78	8.82	174.0	8.83	9.54	8.94	8.08	9.17	8.49	
Pillay, Lythe (RSA) (2003)	time	6.16	11.07	16.12	21.37	26.87	32.65	38.79	45.60	45.60	6 / 7							
reaction time 0.157	interval		4.91	5.05	5.25	5.50	5.78	6.14	6.81		# of strides	11.07	10.30	11.28	12.95	21.37	24.23	2.86
	velocity	8.12	10.18	9.90	9.52	9.09	8.65	8.14	7.34	8.77	174.5	9.03	9.71	8.87	7.72	9.36	8.25	
Krsekm, Matěj (CZE) (2000)	time	6.21	11.30	16.58	21.94	27.48	33.22	39.21	45.71	45.71	4 / 8							
reaction time 0.130	interval		5.09	5.28	5.36	5.54	5.74	5.99	6.50		# of strides	11.30	10.64	11.28	12.49	21.94	23.77	1.83
	velocity	8.05	9.82	9.47	9.33	9.03	8.71	8.35	7.69	8.75	180.0	8.85	9.40	8.87	8.01	9.12	8.41	

Heat 2

date 04-Aug-24

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		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Norman, Michael (USA) (19	time	6.11	11.16	16.17	21.37	26.66	32.18	37.97	44.10	44.10	6 / 1							
reaction time 0.161	interval		5.05	5.01	5.20	5.29	5.52	5.79	6.13		# of strides	11.16	10.21	10.81	11.92	21.37	22.73	1.36
	velocity	8.18	9.90	9.98	9.62	9.45	9.06	8.64	8.16	9.07	171.0	8.96	9.79	9.25	8.39	9.36	8.80	
Richards, Jereem (TTO) (19	time	6.15	11.01	15.94	21.05	26.43	32.07	37.95	44.31	44.31	9 / 2							
reaction time 0.188	interval		4.86	4.93	5.11	5.38	5.64	5.88	6.36		# of strides	11.01	10.04	11.02	12.24	21.05	23.26	2.21
	velocity	8.13	10.29	10.14	9.78	9.29	8.87	8.50	7.86	9.03	171.0	9.08	9.96	9.07	8.17	9.50	8.60	
Kebinatshipi, Collen (BOT)	time	6.09	11.04	16.15	21.51	27.00	32.69	38.46	44.45	44.45	2 / 3							
reaction time 0.155	interval		4.95	5.11	5.36	5.49	5.69	5.77	5.99		# of strides	11.04	10.47	11.18	11.76	21.51	22.94	1.43
	velocity	8.21	10.10	9.78	9.33	9.11	8.79	8.67	8.35	9.00	185.2	9.06	9.55	8.94	8.50	9.30	8.72	
Yahia Ibrahim, Ammar Isma	time	6.25	11.13	16.05	21.08	26.43	32.08	38.14	44.66	44.66	8 / 4							
reaction time 0.171	interval		4.88	4.92	5.03	5.35	5.65	6.06	6.52		# of strides	11.13	9.95	11.00	12.58	21.08	23.58	2.50
	velocity	8.00	10.25	10.16	9.94	9.35	8.85	8.25	7.67	8.96	176.0	8.98	10.05	9.09	7.95	9.49	8.48	
Bailey, Sean (JAM) (1997)	time	6.21	11.15	16.14	21.31	26.70	32.36	38.32	44.68	44.68	5 / 5							
reaction time 0.197	interval		4.94	4.99	5.17	5.39	5.66	5.96	6.36		# of strides	11.15	10.16	11.05	12.32	21.31	23.37	2.06
	velocity	8.05	10.12	10.02	9.67	9.28	8.83	8.39	7.86	8.95	175.5	8.97	9.84	9.05	8.12	9.39	8.56	
Molnár, Attila (HUN) (2002)	time	6.28	11.17	16.18	21.40	26.86	32.57	38.62	45.24	45.24	4 / 6							
reaction time 0.163	interval		4.89	5.01	5.22	5.46	5.71	6.05	6.62		# of strides	11.17	10.23	11.17	12.67	21.40	23.84	2.44
	velocity	7.96	10.22	9.98	9.58	9.16	8.76	8.26	7.55	8.84	174.5	8.95	9.78	8.95	7.89	9.35	8.39	

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Zambrano, Anthony (COL)	time	6.32	11.41	16.59	21.89	27.32	33.03	38.98	45.49	45.49	7 / 7							
reaction time 0.159	interval		5.09	5.18	5.30	5.43	5.71	5.95	6.51		# of strides	11.41	10.48	11.14	12.46	21.89	23.60	1.71
	velocity	7.91	9.82	9.65	9.43	9.21	8.76	8.40	7.68	8.79	175.0	8.76	9.54	8.98	8.03	9.14	8.47	
Joseph, Michael (LCA) (20(	time	6.06	11.04	16.06	21.31	26.87	32.72	38.91	45.69	45.69	3 / 8							
reaction time 0.175	interval		4.98	5.02	5.25	5.56	5.85	6.19	6.78		# of strides	11.04	10.27	11.41	12.97	21.31	24.38	3.07
	velocity	8.25	10.04	9.96	9.52	8.99	8.55	8.08	7.37	8.75	176.0	9.06	9.74	8.76	7.71	9.39	8.20	

Heat 1

date 04-Aug-24

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		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hudson-Smith, Matthew (C	time	6.12	11.04	16.11	21.37	26.84	32.49	38.41	44.78	44.78	6 / 1							
reaction time 0.165	interval		4.92	5.07	5.26	5.47	5.65	5.92	6.37		# of strides	11.04	10.33	11.12	12.29	21.37	23.41	2.04
	velocity	8.17	10.16	9.86	9.51	9.14	8.85	8.45	7.85	8.93	161.0	9.06	9.68	8.99	8.14	9.36	8.54	
Bailey, Chris (USA) (2000)	time	6.29	11.30	16.36	21.57	26.96	32.53	38.46	44.89	44.89	3 / 2							
reaction time 0.209	interval		5.01	5.06	5.21	5.39	5.57	5.93	6.43		# of strides	11.30	10.27	10.96	12.36	21.57	23.32	1.75
	velocity	7.95	9.98	9.88	9.60	9.28	8.98	8.43	7.78	8.91	182.0	8.85	9.74	9.12	8.09	9.27	8.58	
Ingvaldsen, Håvard Bentda	time	6.36	11.34	16.38	21.61	27.09	32.80	38.83	45.46	45.46	4 / 3							
reaction time 0.204	interval		4.98	5.04	5.23	5.48	5.71	6.03	6.63		# of strides	11.34	10.27	11.19	12.66	21.61	23.85	2.24
	velocity	7.86	10.04	9.92	9.56	9.12	8.76	8.29	7.54	8.80	182.7	8.82	9.74	8.94	7.90	9.25	8.39	
Okezie, Chidi (NGR) (1993)	time	6.25	11.20	16.26	21.63	27.23	32.98	39.04	45.52	45.52	7 / 4							
reaction time 0.192	interval		4.95	5.06	5.37	5.60	5.75	6.06	6.48		# of strides	11.20	10.43	11.35	12.54	21.63	23.89	2.26
	velocity	8.00	10.10	9.88	9.31	8.93	8.70	8.25	7.72	8.79	166.0	8.93	9.59	8.81	7.97	9.25	8.37	
Sato, Kentaro (JPN) (1994)	time	6.30	11.41	16.59	21.85	27.32	33.01	39.09	45.60	45.60	2 / 5							
reaction time 0.185	interval		5.11	5.18	5.26	5.47	5.69	6.08	6.51		# of strides	11.41	10.44	11.16	12.59	21.85	23.75	1.90
	velocity	7.94	9.78	9.65	9.51	9.14	8.79	8.22	7.68	8.77	175.0	8.76	9.58	8.96	7.94	9.15	8.42	
Pohorilko, Oleksandr (UKR	time	6.37	11.53	16.68	22.08	27.67	33.34	39.28	45.71	45.71	8 / 6							
reaction time 0.175	interval		5.16	5.15	5.40	5.59	5.67	5.94	6.43		# of strides	11.53	10.55	11.26	12.37	22.08	23.63	1.55
	velocity	7.85	9.69	9.71	9.26	8.94	8.82	8.42	7.78	8.75	175.2	8.67	9.48	8.88	8.08	9.06	8.46	
Watkin, Deandre (JAM) (20	time	6.14	11.02	16.07	21.46	27.13	32.95	39.14	45.97	45.97	5 / 7							
reaction time 0.190	interval		4.88	5.05	5.39	5.67	5.82	6.19	6.83		# of strides	11.02	10.44	11.49	13.02	21.46	24.51	3.05
	velocity	8.14	10.25	9.90	9.28	8.82	8.59	8.08	7.32	8.70	180.0	9.07	9.58	8.70	7.68	9.32	8.16	

Decathlon - Heat

date 02-Aug-24

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		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Owens-Delerme, Ayden (PL	time	6.31	11.34	16.51	21.83	27.51	33.59	39.74	46.17	46.17	8 / 1							
reaction time 0.261	interval		5.03	5.17	5.32	5.68	6.08	6.15	6.43		# of strides	11.34	10.49	11.76	12.58	21.83	24.34	2.51
	velocity	7.92	9.94	9.67	9.40	8.80	8.22	8.13	7.78	8.66	174.2	8.82	9.53	8.50	7.95	9.16	8.22	
Roosen, Sven (NED) (2001)	time	6.49	11.66	16.94	22.40	28.15	34.13	40.16	46.40	46.40	2 / 2							
reaction time 0.170	interval		5.17	5.28	5.46	5.75	5.98	6.03	6.24	PB	# of strides	11.66	10.74	11.73	12.27	22.40	24.00	1.60
	velocity	7.70	9.67	9.47	9.16	8.70	8.36	8.29	8.01	8.62	183.0	8.58	9.31	8.53	8.15	8.93	8.33	
Williams, Harrison (USA) (1	time	6.45	11.50	16.67	22.14	27.83	33.84	40.05	46.71	46.71	6 / 3							
reaction time 0.238	interval		5.05	5.17	5.47	5.69	6.01	6.21	6.66		# of strides	11.50	10.64	11.70	12.87	22.14	24.57	2.43
	velocity	7.75	9.90	9.67	9.14	8.79	8.32	8.05	7.51	8.56	161.2	8.70	9.40	8.55	7.77	9.03	8.14	
Erm, Johannes (EST) (1998	time	6.37	11.56	16.95	22.52	28.29	34.40	40.71	47.19	47.19	3 / 4							
reaction time 0.212	interval		5.19	5.39	5.57	5.77	6.11	6.31	6.48		# of strides	11.56	10.96	11.88	12.79	22.52	24.67	2.15
	velocity	7.85	9.63	9.28	8.98	8.67	8.18	7.92	7.72	8.48	167.0	8.65	9.12	8.42	7.82	8.88	8.11	
Warner, Damian (CAN) (19	time	6.21	11.26	16.49	21.94	27.64	33.68	40.15	47.34	47.34	4 / 5							
reaction time 0.225	interval		5.05	5.23	5.45	5.70	6.04	6.47	7.19		# of strides	11.26	10.68	11.74	13.66	21.94	25.40	3.46
	velocity	8.05	9.90	9.56	9.17	8.77	8.28	7.73	6.95	8.45	178.2	8.88	9.36	8.52	7.32	9.12	7.87	
Taam, Rik (NED) (1997)	time	6.46	11.60	16.87	22.38	28.16	34.31	40.78	47.73	47.73	5 / 6							
reaction time 0.196	interval		5.14	5.27	5.51	5.78	6.15	6.47	6.95		# of strides	11.60	10.78	11.93	13.42	22.38	25.35	2.97
	velocity	7.74	9.73	9.49	9.07	8.65	8.13	7.73	7.19	8.38	182.0	8.62	9.28	8.38	7.45	8.94	7.89	
Steinforth, Till (GER) (2002	time	6.42	11.69	16.98	22.48	28.24	34.39	40.89	47.96	47.96	7 / 7							
reaction time 0.156	interval		5.27	5.29	5.50	5.76	6.15	6.50	7.07		# of strides	11.69	10.79	11.91	13.57	22.48	25.48	3.00
	velocity	7.79	9.49	9.45	9.09	8.68	8.13	7.69	7.07	8.34	178.0	8.55	9.27	8.40	7.37	8.90	7.85	

Decathlon - Heat

date 02-Aug-24

Paris 2024 Olympic Games - Results Book (2024)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Skotheim, Sander (NOR) (2	time	6.42	11.54	16.79	22.23	27.91	33.90	40.21	47.02	47.02	2 / 1							
reaction time 0.175	interval		5.12	5.25	5.44	5.68	5.99	6.31	6.81	PB	# of strides	11.54	10.69	11.67	13.12	22.23	24.79	2.56
	velocity	7.79	9.77	9.52	9.19	8.80	8.35	7.92	7.34	8.51	183.0	8.67	9.35	8.57	7.62	9.00	8.07	
Gletty, Makenson (FRA) (1!	time	6.45	11.69	17.20	22.89	28.68	34.70	40.86	47.78	47.48	7 / 2							
reaction time 0.191	interval		5.24	5.51	5.69	5.79	6.02	6.16	6.92	PB	# of strides	11.69	11.20	11.81	13.08	22.89	24.89	2.00
	velocity	7.75	9.54	9.07	8.79	8.64	8.31	8.12	7.23	8.42	167.5	8.55	8.93	8.47	7.65	8.74	8.04	
Rooth, Markus (NOR) (200	time	6.52	11.95	17.47	23.16	28.94	34.93	41.11	47.69	47.69	8 / 3							
reaction time 0.163	interval		5.43	5.52	5.69	5.78	5.99	6.18	6.58	PB	# of strides	11.95	11.21	11.77	12.76	23.16	24.53	1.37
	velocity	7.67	9.21	9.06	8.79	8.65	8.35	8.09	7.60	8.39	178.0	8.37	8.92	8.50	7.84	8.64	8.15	

Neugebauer, Leo (GER) (2(	time	6.72	12.23	17.89	23.60	29.32	35.14	41.13	47.70	47.70	9 / 4							
reaction time 0.218	interval		5.51	5.66	5.71	5.72	5.82	5.99	6.57		# of strides	12.23	11.37	11.54	12.56	23.60	24.10	0.50
	velocity	7.44	9.07	8.83	8.76	8.74	8.59	8.35	7.61	8.39	161.0	8.18	8.80	8.67	7.96	8.47	8.30	
Victor, Lindon (GRN) (1993	time	6.26	11.41	16.72	22.25	28.06	34.30	40.85	47.84	47.84	5 / 5							
reaction time 0.153	interval		5.15	5.31	5.53	5.81	6.24	6.55	6.99		# of strides	11.41	10.84	12.05	13.54	22.25	25.59	3.34
	velocity	7.99	9.71	9.42	9.04	8.61	8.01	7.63	7.15	8.36	176.0	8.76	9.23	8.30	7.39	8.99	7.82	
Ureña, Jorge (ESP) (1993)	time	6.61	11.98	17.40	23.08	28.91	34.89	41.19	48.08	48.08	3 / 6							
reaction time 0.141	interval		5.37	5.42	5.68	5.83	5.98	6.30	6.89		# of strides	11.98	11.10	11.81	13.19	23.08	25.00	1.92
	velocity	7.56	9.31	9.23	8.80	8.58	8.36	7.94	7.26	8.32	174.0	8.35	9.01	8.47	7.58	8.67	8.00	
Tilga, Karel (EST) (1998)	time	6.50	11.82	17.25	22.92	28.84	35.10	41.65	48.67	48.67	6 / 7							
reaction time 0.189	interval		5.32	5.43	5.67	5.92	6.26	6.55	7.02		# of strides	11.82	11.10	12.18	13.57	22.92	25.75	2.83
	velocity	7.69	9.40	9.21	8.82	8.45	7.99	7.63	7.12	8.22	165.0	8.46	9.01	8.21	7.37	8.73	7.77	
Baldwin, Heath (USA) (200	time	6.49	11.72	17.16	22.88	28.83	35.14	41.87	49.04	49.04	4 / 8							
reaction time 0.149	interval		5.23	5.44	5.72	5.95	6.31	6.73	7.17		# of strides	11.72	11.16	12.26	13.90	22.88	26.16	3.28
	velocity	7.70	9.56	9.19	8.74	8.40	7.92	7.43	6.97	8.16	176.2	8.53	8.96	8.16	7.19	8.74	7.65	

Decathlon - Heat

date 02-Aug-24

Paris 2024 Olympic Games - Results Book (2024)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Õiglane, Janek (EST) (1994)	time	6.34	11.59	17.13	22.84	28.71	34.79	41.20	48.02	48.02	4 / 1							
reaction time 0.160	interval		5.25	5.54	5.71	5.87	6.08	6.41	6.82	PB	# of strides	11.59	11.25	11.95	13.23	22.84	25.18	2.34
	velocity	7.89	9.52	9.03	8.76	8.52	8.22	7.80	7.33	8.33	181.7	8.63	8.89	8.37	7.56	8.76	7.94	
Ferreira Santana, José (BR.	time	6.49	11.84	17.43	23.22	29.26	35.57	42.07	48.78	48.78	6 / 2							
reaction time 0.157	interval		5.35	5.59	5.79	6.04	6.31	6.50	6.71	PB	# of strides	11.84	11.38	12.35	13.21	23.22	25.56	2.34
	velocity	7.70	9.35	8.94	8.64	8.28	7.92	7.69	7.45	8.20	181.0	8.45	8.79	8.10	7.57	8.61	7.82	
Kaul, Niklas (GER) (1998)	time	6.65	12.06	17.70	23.43	29.28	35.47	42.08	49.13	49.13	5 / 3							
reaction time 0.173	interval		5.41	5.64	5.73	5.85	6.19	6.61	7.05		# of strides	12.06	11.37	12.04	13.66	23.43	25.70	2.27
	velocity	7.52	9.24	8.87	8.73	8.55	8.08	7.56	7.09	8.14	170.0	8.29	8.80	8.31	7.32	8.54	7.78	
Mullings, Ken (BAH) (1997	time	6.30	11.52	13.97	22.75	28.86	35.23	42.04	49.43	49.43	7 / 4							
reaction time 0.177	interval		5.22	2.45	8.78	6.11	6.37	6.81	7.39		# of strides	11.52	11.23	12.48	14.20	22.75	26.68	3.93
	velocity	7.94	9.58	20.41	5.69	8.18	7.85	7.34	6.77	8.09	180.0	8.68	8.90	8.01	7.04	8.79	7.50	
Golubovic, Daniel (AUS) (1	time	6.68	12.12	17.82	23.72	29.99	36.55	43.35	50.37	50.37	8 / 5							
reaction time 0.165	interval		5.44	5.70	5.90	6.27	6.56	6.80	7.02		# of strides	12.12	11.60	12.83	13.82	23.72	26.65	2.93
	velocity	7.49	9.19	8.77	8.47	7.97	7.62	7.35	7.12	7.94		8.25	8.62	7.79	7.24	8.43	7.50	
Ziemek, Zachaery (USA) (1!	time	6.37	11.45	16.83	22.39	28.37	35.01	42.39	50.79	50.79	3 / 6							
reaction time 0.172	interval		5.08	5.38	5.56	5.98	6.64	7.38	8.40		# of strides	11.45	10.94	12.62	15.78	22.39	28.40	6.01
	velocity	7.85	9.84	9.29	8.99	8.36	7.53	6.78	5.95	7.88	171.5	8.73	9.14	7.92	6.34	8.93	7.04	

2024 Japanese National High School Championsips (Fukuoka, JPN)

FINAL

date 28-Jul-24

Takashima (2024) - national high school sports festival - biomechanics data

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kikuta, Kyo (JPN) (2006)	time		11.53		22.12		33.85		46.93	46.93	6 / 1							
reaction time 0.180	interval				10.59		11.73		13.08		# of strides	11.53	10.59	11.73	13.08	22.12	24.81	2.69
	velocity		8.67		9.44		8.53		7.65	8.52		8.67	9.44	8.53	7.65	9.04	8.06	
Ooishi, Ryouta (JPN) (2006	time		11.73		22.47		34.27		47.17	47.17	5 / 2							
reaction time 0.185	interval				10.74		11.80		12.90		# of strides	11.73	10.74	11.80	12.90	22.47	24.70	2.23
	velocity		8.53		9.31		8.47		7.75	8.48		8.53	9.31	8.47	7.75	8.90	8.10	
Kishimoto, Kyota (JPN) (2(	time		11.41		22.52		34.58		47.23	47.23	9 / 3							
reaction time 0.202	interval				11.11		12.06		12.65		# of strides	11.41	11.11	12.06	12.65	22.52	24.71	2.19
	velocity		8.76		9.00		8.29		7.91	8.47		8.76	9.00	8.29	7.91	8.88	8.09	
Kubo, Takumi (JPN) (2007)	time		11.63		22.74		34.38		47.59	47.59	2 / 4							
reaction time 0.179	interval				11.11		11.64		13.21		# of strides	11.63	11.11	11.64	13.21	22.74	24.85	2.11
	velocity		8.60		9.00		8.59		7.57	8.41		8.60	9.00	8.59	7.57	8.80	8.05	
Kawakami, Daichi (JPN) (20	time		11.96		22.81		34.85		47.81	47.81	8 / 5							
reaction time 0.235	interval				10.85		12.04		12.96		# of strides	11.96	10.85	12.04	12.96	22.81	25.00	2.19
	velocity		8.36		9.22		8.31		7.72	8.37		8.36	9.22	8.31	7.72	8.77	8.00	
Hukumura, Yuto (JPN) (20(	time		11.58		22.79		34.80		48.55	48.55	3 / 6							
reaction time 0.178	interval				11.21		12.01		13.75		# of strides	11.58	11.21	12.01	13.75	22.79	25.76	2.97
	velocity		8.64		8.92		8.33		7.27	8.24		8.64	8.92	8.33	7.27	8.78	7.76	
Hasidume, Tatuki (JPN) (20	time		11.76		22.96		35.19		48.84	48.84	7 / 7							
reaction time 0.170	interval				11.20		12.23		13.65		# of strides	11.76	11.20	12.23	13.65	22.96	25.88	2.92
	velocity		8.50		8.93		8.18		7.33	8.19		8.50	8.93	8.18	7.33	8.71	7.73	
Ozawa, Yohei (JPN) (2007)	time		12.06		22.62		34.83		49.63	49.63	4 / 8							
reaction time 0.280	interval				10.56		12.21		14.80		# of strides	12.06	10.56	12.21	14.80	22.62	27.01	4.39
	velocity		8.29		9.47		8.19		6.76	8.06		8.29	9.47	8.19	6.76	8.84	7.40	

2024 London Athletics Meet (London, GBR)

FINAL

date 20-Jul-24

Omega Timing (2024) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hudson-Smith, Matthew (G	time	6.07	10.88	15.82	20.96	26.23	31.71	37.50	43.74	43.74	5 / 1							
reaction time 0.158	interval		4.81	4.94	5.14	5.27	5.48	5.79	6.24	AR	# of strides	10.88	10.08	10.75	12.03	20.96	22.78	1.82
	velocity	8.24	10.40	10.12	9.73	9.49	9.12	8.64	8.01	9.14	161.0	9.19	9.92	9.30	8.31	9.54	8.78	
Norwood, Vernon (USA) (1	time	6.17	11.09	16.11	21.31	26.67	32.18	37.89	44.10	44.10	4 / 2							
reaction time 0.168	interval		4.92	5.02	5.20	5.36	5.51	5.71	6.21	PB	# of strides	11.09	10.22	10.87	11.92	21.31	22.79	1.48
	velocity	8.10	10.16	9.96	9.62	9.33	9.07	8.76	8.05	9.07		9.02	9.78	9.20	8.39	9.39	8.78	
Richards, Jereem (TTO) (19	time	6.12	10.91	15.87	21.08	26.48	32.02	37.82	44.18	44.18	8 / 3							
reaction time 0.182	interval		4.79	4.96	5.21	5.40	5.54	5.80	6.36	PB	# of strides	10.91	10.17	10.94	12.16	21.08	23.10	2.02
	velocity	8.17	10.44	10.08	9.60	9.26	9.03	8.62	7.86	9.05		9.17	9.83	9.14	8.22	9.49	8.66	
Dobson, Charles (GBR) (19	time	6.10	11.14	16.33	21.65	27.05	32.60	38.30	44.23	44.23	3 / 4							
reaction time 0.142	interval		5.04	5.19	5.32	5.40	5.55	5.70	5.93	PB	# of strides	11.14	10.51	10.95	11.63	21.65	22.58	0.93
	velocity	8.20	9.92	9.63	9.40	9.26	9.01	8.77	8.43	9.04		8.98	9.51	9.13	8.60	9.24	8.86	
James, Kirani (GRN) (1992)	time	6.17	11.03	16.08	21.28	26.61	32.18	38.05	44.38	44.38	7 / 5							
reaction time 0.156	interval		4.86	5.05	5.20	5.33	5.57	5.87	6.33		# of strides	11.03	10.25	10.90	12.20	21.28	23.10	1.82
	velocity	8.10	10.29	9.90	9.62	9.38	8.98	8.52	7.90	9.01	159.2	9.07	9.76	9.17	8.20	9.40	8.66	
Morales-Williams, Christop	time	6.17	11.04	16.06	21.35	26.85	32.63	38.56	44.90	44.90	6 / 6							
reaction time 0.188	interval		4.87	5.02	5.29	5.50	5.78	5.93	6.34		# of strides	11.04	10.31	11.28	12.27	21.35	23.55	2.20
	velocity	8.10	10.27	9.96	9.45	9.09	8.65	8.43	7.89	8.91		9.06	9.70	8.87	8.15	9.37	8.49	
Ndori, Bayapo (BOT) (1999	time	6.29	11.21	16.30	21.62	27.13	32.82	38.74	45.03	45.03	2 / 7							
reaction time 0.164	interval		4.92	5.09	5.32	5.51	5.69	5.92	6.29		# of strides	11.21	10.41	11.20	12.21	21.62	23.41	1.79
	velocity	7.95	10.16	9.82	9.40	9.07	8.79	8.45	7.95	8.88		8.92	9.61	8.93	8.19	9.25	8.54	

National FINAL date 20-Jul-24 *Omega Timing (2024) - diamond league race analysis*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Reardon, Samuel (GBR) (2(	time	6.28	11.32	16.43	21.70	27.15	32.72	38.49	44.70	44.70	7 / 1							
reaction time 0.181	interval		5.04	5.11	5.27	5.45	5.57	5.77	6.21	PB	# of strides	11.32	10.38	11.02	11.98	21.70	23.00	1.30
	velocity	7.96	9.92	9.78	9.49	9.17	8.98	8.67	8.05	8.95		8.83	9.63	9.07	8.35	9.22	8.70	
Haydock-Wilson, Alex (GBI	time	6.21	11.14	16.08	21.24	26.74	32.52	38.58	45.37	45.37	4 / 2							
reaction time 0.153	interval		4.93	4.94	5.16	5.50	5.78	6.06	6.79		# of strides	11.14	10.10	11.28	12.85	21.24	24.13	2.89
	velocity	8.05	10.14	10.12	9.69	9.09	8.65	8.25	7.36	8.82		8.98	9.90	8.87	7.78	9.42	8.29	
Swift, Bailey (GBR) (2002)	time	6.21	11.32	16.57	21.96	27.50	33.23	39.21	45.70	45.70	8 / 3							
reaction time 0.144	interval		5.11	5.25	5.39	5.54	5.73	5.98	6.49	PB	# of strides	11.32	10.64	11.27	12.47	21.96	23.74	1.78
	velocity	8.05	9.78	9.52	9.28	9.03	8.73	8.36	7.70	8.75		8.83	9.40	8.87	8.02	9.11	8.42	
Davey, Lewis (GBR) (2000)	time	6.33	11.29	16.36	21.65	27.26	33.08	39.20	45.80	45.80	5 / 4							
reaction time 0.160	interval		4.96	5.07	5.29	5.61	5.82	6.12	6.60		# of strides	11.29	10.36	11.43	12.72	21.65	24.15	2.50
	velocity	7.90	10.08	9.86	9.45	8.91	8.59	8.17	7.58	8.73		8.86	9.65	8.75	7.86	9.24	8.28	
Brier, Joseph (GBR) (1999)	time	6.16	11.13	16.18	21.39	26.90	32.70	38.88	45.83	45.83	2 / 5							
reaction time 0.151	interval		4.97	5.05	5.21	5.51	5.80	6.18	6.95		# of strides	11.13	10.26	11.31	13.13	21.39	24.44	3.05
	velocity	8.12	10.06	9.90	9.60	9.07	8.62	8.09	7.19	8.73		8.98	9.75	8.84	7.62	9.35	8.18	
Mitcham, Rio (GBR) (1999)	time	6.23	11.31	16.37	21.61	27.17	33.04	39.17	45.87	45.87	3 / 6							
reaction time 0.156	interval		5.08	5.06	5.24	5.56	5.87	6.13	6.70		# of strides	11.31	10.30	11.43	12.83	21.61	24.26	2.65
	velocity	8.03	9.84	9.88	9.54	8.99	8.52	8.16	7.46	8.72		8.84	9.71	8.75	7.79	9.25	8.24	
Harries, Toby (GBR) (1998)	time	6.12	11.06	16.11	21.39	27.02	32.86	39.04	46.02	46.02	6 / 7							
reaction time 0.138	interval		4.94	5.05	5.28	5.63	5.84	6.18	6.98		# of strides	11.06	10.33	11.47	13.16	21.39	24.63	3.24
	velocity	8.17	10.12	9.90	9.47	8.88	8.56	8.09	7.16	8.69		9.04	9.68	8.72	7.60	9.35	8.12	
Knibbs, Alex (GBR) (1999)	time		11.32	16.57	21.98	27.74	33.69	39.76	46.17	46.17	1 / 8							
reaction time 0.149	interval			5.25	5.41	5.76	5.95	6.07	6.41	PB	# of strides	11.32	10.66	11.71	12.48	21.98	24.19	2.21
	velocity		8.83	9.52	9.24	8.68	8.40	8.24	7.80	8.66		8.83	9.38	8.54	8.01	9.10	8.27	

2024 Holloway Pro Classic (Gainesville, FL)

FINAL date 19-Jul-24 *Track Newsletter (2024) - Holloway pro classic*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Wilson, Quincy (USA) (200	time		11.4		21.4		32.3		44.2	44.20	/ 1							
reaction time	interval				10.00		10.90		11.90	WYR	# of strides	11.40	10.00	10.90	11.90	21.40	22.80	1.40
	velocity		8.77		10.00		9.17		8.40	9.05		8.77	10.00	9.17	8.40	9.35	8.77	

2024 Herculis Meeting International d'Athlétisme (Monaco, MON)

FINAL date 12-Jul-24 *Omega Timing (2024) - diamond league race analysis*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hall, Quincy (USA) (1998)	time	6.26	11.14	16.09	21.19	26.59	32.15	37.83	43.80	43.80	5 / 1							
reaction time 0.185	interval		4.88	4.95	5.10	5.40	5.56	5.68	5.97	PB	# of strides	11.14	10.05	10.96	11.65	21.19	22.61	1.42
	velocity	7.99	10.25	10.10	9.80	9.26	8.99	8.80	8.38	9.13	158.0	8.98	9.95	9.12	8.58	9.44	8.85	
Norwood, Vernon (USA) (1	time	6.13	10.96	15.98	21.21	26.69	32.36	38.13	44.34	44.34	7 / 2							
reaction time 0.174	interval		4.83	5.02	5.23	5.48	5.67	5.77	6.21		# of strides	10.96	10.25	11.15	11.98	21.21	23.13	1.92
	velocity	8.16	10.35	9.96	9.56	9.12	8.82	8.67	8.05	9.02	172.0	9.12	9.76	8.97	8.35	9.43	8.65	
Pillay, Lythe (RSA) (2003)	time	6.21	11.14	16.18	21.38	26.87	32.49	38.33	44.58	44.58	3 / 3							
reaction time 0.150	interval		4.93	5.04	5.20	5.49	5.62	5.84	6.25		# of strides	11.14	10.24	11.11	12.09	21.38	23.20	1.82

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

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
	velocity	8.05	10.14	9.92	9.62	9.11	8.90	8.56	8.00	8.97	172.2	8.98	9.77	9.00	8.27	9.35	8.62	
Kebinatshipi, Collen (BOT)	time	6.15	11.02	16.21	21.61	27.21	32.83	38.62	44.67	44.67	8 / 4							
reaction time 0.166	interval		4.87	5.19	5.40	5.60	5.62	5.79	6.05	PB	# of strides	11.02	10.59	11.22	11.84	21.61	23.06	1.45
	velocity	8.13	10.27	9.63	9.26	8.93	8.90	8.64	8.26	8.95	185.5	9.07	9.44	8.91	8.45	9.25	8.67	
Ndori, Bayapo (BOT) (1999	time	6.18	11.12	16.20	21.46	26.95	32.58	38.46	44.71	44.71	4 / 5							
reaction time 0.170	interval		4.94	5.08	5.26	5.49	5.63	5.88	6.25		# of strides	11.12	10.34	11.12	12.13	21.46	23.25	1.79
	velocity	8.09	10.12	9.84	9.51	9.11	8.88	8.50	8.00	8.95	173.2	8.99	9.67	8.99	8.24	9.32	8.60	
Morales-Williams, Christop	time	6.18	11.05	16.08	21.45	27.11	32.98	38.85	45.11	45.11	6 / 6							
reaction time 0.213	interval		4.87	5.03	5.37	5.66	5.87	5.87	6.26		# of strides	11.05	10.40	11.53	12.13	21.45	23.66	2.21
	velocity	8.09	10.27	9.94	9.31	8.83	8.52	8.52	7.99	8.87	163.0	9.05	9.62	8.67	8.24	9.32	8.45	
Sito, Luca (ITA) (2003)	time	6.19	11.13	16.17	21.42	27.01	32.75	38.65	45.26	45.26	2 / 7							
reaction time 0.169	interval		4.94	5.04	5.25	5.59	5.74	5.90	6.61		# of strides	11.13	10.29	11.33	12.51	21.42	23.84	2.42
	velocity	8.08	10.12	9.92	9.52	8.94	8.71	8.47	7.56	8.84	174.2	8.98	9.72	8.83	7.99	9.34	8.39	
Andant, Téo (FRA) (1999)	time	6.14	11.08	16.17	21.44	27.09	33.04	39.25	45.89	45.89	1 / 8							
reaction time 0.157	interval		4.94	5.09	5.27	5.65	5.95	6.21	6.64		# of strides	11.08	10.36	11.60	12.85	21.44	24.45	3.01
	velocity	8.14	10.12	9.82	9.49	8.85	8.40	8.05	7.53	8.72	181.0	9.03	9.65	8.62	7.78	9.33	8.18	

2024 FBK Games (Hengelo, NED)

National FINAL date 07-Jul-24

Omega Timing (2024) - continental tour gold race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Boers, Isayah (NED) (1999)	time	6.16	11.04	16.00	21.22	26.77	32.63	38.91	45.86	45.86	6 / 1							
reaction time 0.174	interval		4.88	4.96	5.22	5.55	5.86	6.28	6.95		# of strides	11.04	10.18	11.41	13.23	21.22	24.64	3.42
	velocity	8.12	10.25	10.08	9.58	9.01	8.53	7.96	7.19	8.72		9.06	9.82	8.76	7.56	9.43	8.12	
Omalla, Eugene (NED) (200	time	6.15	11.05	16.05	21.26	26.84	32.72	39.04	46.12	46.12	5 / 2							
reaction time 0.192	interval		4.90	5.00	5.21	5.58	5.88	6.32	7.08		# of strides	11.05	10.21	11.46	13.40	21.26	24.86	3.60
	velocity	8.13	10.20	10.00	9.60	8.96	8.50	7.91	7.06	8.67		9.05	9.79	8.73	7.46	9.41	8.05	
Schuwer, Juno (NED) (200	time	6.35	11.44	16.63	22.15	27.86	33.70	39.76	46.32	46.32	8 / 3							
reaction time 0.150	interval		5.09	5.19	5.52	5.71	5.84	6.06	6.56	PB	# of strides	11.44	10.71	11.55	12.62	22.15	24.17	2.02
	velocity	7.87	9.82	9.63	9.06	8.76	8.56	8.25	7.62	8.64		8.74	9.34	8.66	7.92	9.03	8.27	
Agard, Terrence (NED) (19	time	6.43	11.42	16.60	21.89	27.37	33.19	39.52	46.67	46.67	4 / 4							
reaction time 0.166	interval		4.99	5.18	5.29	5.48	5.82	6.33	7.15		# of strides	11.42	10.47	11.30	13.48	21.89	24.78	2.89
	velocity	7.78	10.02	9.65	9.45	9.12	8.59	7.90	6.99	8.57		8.76	9.55	8.85	7.42	9.14	8.07	
Wardenburg, Nout (NED) (	time	6.25	11.19	16.22	21.55	27.20	33.24	39.64	46.72	46.72	7 / 5							
reaction time 0.174	interval		4.94	5.03	5.33	5.65	6.04	6.40	7.08		# of strides	11.19	10.36	11.69	13.48	21.55	25.17	3.62
	velocity	8.00	10.12	9.94	9.38	8.85	8.28	7.81	7.06	8.56		8.94	9.65	8.55	7.42	9.28	7.95	
Kneppers, Daan (NED) (20(	time	6.52	11.60	16.86	22.33	28.12	34.16	40.48	47.29	47.29	2 / 6							
reaction time 0.172	interval		5.08	5.26	5.47	5.79	6.04	6.32	6.81	PB	# of strides	11.60	10.73	11.83	13.13	22.33	24.96	2.63
	velocity	7.67	9.84	9.51	9.14	8.64	8.28	7.91	7.34	8.46		8.62	9.32	8.45	7.62	8.96	8.01	
Omalla, Jaimie (NED) (2000	time	6.32	11.24	16.33	21.64	27.38	33.59	40.17	47.38	47.38	3 / 7							
reaction time 0.168	interval		4.92	5.09	5.31	5.74	6.21	6.58	7.21		# of strides	11.24	10.40	11.95	13.79	21.64	25.74	4.10
	velocity	7.91	10.16	9.82	9.42	8.71	8.05	7.60	6.93	8.44		8.90	9.62	8.37	7.25	9.24	7.77	

2024 USA Olympic Trials (Eugene, OR)

FINAL date 24-Jun-24

USATF and Karmarush (2024) - USA Olympic trials results and race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hall, Quincy (USA) (1998)	time		11.25		21.52		32.59		44.17	44.17	8 / 1							
reaction time	interval				10.27		11.07		11.58	PB	# of strides	11.25	10.27	11.07	11.58	21.52	22.65	1.13
	velocity		8.89		9.74		9.03		8.64	9.06		8.89	9.74	9.03	8.64	9.29	8.83	
Norman, Michael (USA) (19	time		10.82		20.90		32.15		44.41	44.41	5 / 2							
reaction time	interval				10.08		11.25		12.26		# of strides	10.82	10.08	11.25	12.26	20.90	23.51	2.61
	velocity		9.24		9.92		8.89		8.16	9.01	176.0	9.24	9.92	8.89	8.16	9.57	8.51	
Bailey, Chris (USA) (2000)	time		11.34		21.83		32.70		44.42	44.42	9 / 3							
reaction time	interval				10.49		10.87		11.72	=PB	# of strides	11.34	10.49	10.87	11.72	21.83	22.59	0.76
	velocity		8.82		9.53		9.20		8.53	9.00		8.82	9.53	9.20	8.53	9.16	8.85	
Norwood, Vernon (USA) (1	time		11.40		21.91		33.03		44.47	44.47	7 / 4							
reaction time	interval				10.51		11.12		11.44		# of strides	11.40	10.51	11.12	11.44	21.91	22.56	0.65
	velocity		8.77		9.51		8.99		8.74	8.99		8.77	9.51	8.99	8.74	9.13	8.87	
Deadmon, Bryce (USA) (19	time		11.04		21.58		32.78		44.61	44.61	6 / 5							
reaction time	interval				10.54		11.20		11.83		# of strides	11.04	10.54	11.20	11.83	21.58	23.03	1.45
	velocity		9.06		9.49		8.93		8.45	8.97	167.0	9.06	9.49	8.93	8.45	9.27	8.68	
Wilson, Quincy (USA) (200	time		11.29		21.72		32.96		44.94	44.94	2 / 6							
reaction time	interval				10.43		11.24		11.98		# of strides	11.29	10.43	11.24	11.98	21.72	23.22	1.50
	velocity		8.86		9.59		8.90		8.35	8.90		8.86	9.59	8.90	8.35	9.21	8.61	
McRae, Khaleb (USA) (200	time		10.96		21.33		32.60		45.06	45.06	4 / 7							
reaction time	interval				10.37		11.27		12.46		# of strides	10.96	10.37	11.27	12.46	21.33	23.73	2.40
	velocity		9.12		9.64		8.87		8.03	8.88	178.0	9.12	9.64	8.87	8.03	9.38	8.43	

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

Boling, Matthew (USA) (20	time	10.68	20.92	32.32	45.15	45.15	3 / 8								
reaction time	interval		10.24	11.40	12.83		# of strides	10.68	10.24	11.40	12.83	20.92	24.23	3.31	
	velocity	9.36	9.77	8.77	7.79	8.86	177.0	9.36	9.77	8.77	7.79	9.56	8.25		
Robinson, Justin (USA) (2	time	11.03	21.39	32.92	46.08	46.08	1 / 9								
reaction time	interval		10.36	11.53	13.16		# of strides	11.03	10.36	11.53	13.16	21.39	24.69	3.30	
	velocity	9.07	9.65	8.67	7.60	8.68		9.07	9.65	8.67	7.60	9.35	8.10		

Semi-Final 3

date 23-Jun-24

USATF and Karmarush (2024) - USA Olympic trials results and race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Norman, Michael (USA) (19	time		10.85		21.35		32.67		45.30	45.30	5 / 1							
reaction time	interval				10.50		11.32		12.63		# of strides	10.85	10.50	11.32	12.63	21.35	23.95	2.60
	velocity		9.22		9.52		8.83		7.92	8.83	175.2	9.22	9.52	8.83	7.92	9.37	8.35	
McRae, Khaleb (USA) (200	time		11.13		21.73		33.20		45.59	45.59	7 / 2							
reaction time	interval				10.60		11.47		12.39		# of strides	11.13	10.60	11.47	12.39	21.73	23.86	2.13
	velocity		8.98		9.43		8.72		8.07	8.77	178.0	8.98	9.43	8.72	8.07	9.20	8.38	
Blockburger, Johnnie (USA	time		11.05		21.56		33.11		45.63	45.63	6 / 3							
reaction time	interval				10.51		11.55		12.52		# of strides	11.05	10.51	11.55	12.52	21.56	24.07	2.51
	velocity		9.05		9.51		8.66		7.99	8.77	171.0	9.05	9.51	8.66	7.99	9.28	8.31	
Jones, William (USA) (2003	time		11.16		21.84		33.37		46.19	46.19	3 / 4							
reaction time	interval				10.68		11.53		12.82		# of strides	11.16	10.68	11.53	12.82	21.84	24.35	2.51
	velocity		8.96		9.36		8.67		7.80	8.66		8.96	9.36	8.67	7.80	9.16	8.21	
O'Bryant, Jevon (USA) (20(	time		11.33		22.11		33.86		46.39	46.39	1 / 5							
reaction time	interval				10.78		11.75		12.53		# of strides	11.33	10.78	11.75	12.53	22.11	24.28	2.17
	velocity		8.83		9.28		8.51		7.98	8.62		8.83	9.28	8.51	7.98	9.05	8.24	
Bynum, Emmanuel (USA) (	time		11.37		22.14		33.65		46.50	46.50	2 / 6							
reaction time	interval				10.77		11.51		12.85		# of strides	11.37	10.77	11.51	12.85	22.14	24.36	2.22
	velocity		8.80		9.29		8.69		7.78	8.60		8.80	9.29	8.69	7.78	9.03	8.21	
Tomlyanovich, TJ (USA) (2	time		11.14		22.00		33.62		46.65	46.65	4 / 7							
reaction time	interval				10.86		11.62		13.03		# of strides	11.14	10.86	11.62	13.03	22.00	24.65	2.65
	velocity		8.98		9.21		8.61		7.67	8.57		8.98	9.21	8.61	7.67	9.09	8.11	
Miller, Evan (USA) (2000)	time		11.00		21.86		34.10		46.95	46.95	8 / 8							
reaction time	interval				10.86		12.24		12.85		# of strides	11.00	10.86	12.24	12.85	21.86	25.09	3.23
	velocity		9.09		9.21		8.17		7.78	8.52		9.09	9.21	8.17	7.78	9.15	7.97	
Lightner, Kennedy (USA) (	time		11.13		21.86		33.81		47.88	47.88	9 / 9							
reaction time	interval				10.73		11.95		14.07		# of strides	11.13	10.73	11.95	14.07	21.86	26.02	4.16
	velocity		8.98		9.32		8.37		7.11	8.35		8.98	9.32	8.37	7.11	9.15	7.69	

Semi-Final 2

date 23-Jun-24

USATF and Karmarush (2024) - USA Olympic trials results and race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Deadmon, Bryce (USA) (19	time		10.85		21.10		32.41		44.44	44.44	5 / 1							
reaction time	interval				10.25		11.31		12.03		# of strides	10.85	10.25	11.31	12.03	21.10	23.34	2.24
	velocity		9.22		9.76		8.84		8.31	9.00		9.22	9.76	8.84	8.31	9.48	8.57	
Norwood, Vernon (USA) (1	time		10.78		21.05		32.23		44.50	44.50	7 / 2							
reaction time	interval				10.27		11.18		12.27		# of strides	10.78	10.27	11.18	12.27	21.05	23.45	2.40
	velocity		9.28		9.74		8.94		8.15	8.99		9.28	9.74	8.94	8.15	9.50	8.53	
Wilson, Quincy (USA) (200	time		11.00		21.37		32.54		44.59	44.59	6 / 3							
reaction time	interval				10.37		11.17		12.05	WU18B PB	# of strides	11.00	10.37	11.17	12.05	21.37	23.22	1.85
	velocity		9.09		9.64		8.95		8.30	8.97		9.09	9.64	8.95	8.30	9.36	8.61	
Lincoln, Judson (USA) (20(	time		10.76		20.86		32.13		44.98	44.98	8 / 4							
reaction time	interval				10.10		11.27		12.85		# of strides	10.76	10.10	11.27	12.85	20.86	24.12	3.26
	velocity		9.29		9.90		8.87		7.78	8.89		9.29	9.90	8.87	7.78	9.59	8.29	
McKiver, Jenoah (USA) (20	time		10.98		21.19		32.35		45.12	45.12	4 / 5							
reaction time	interval				10.21		11.16		12.77		# of strides	10.98	10.21	11.16	12.77	21.19	23.93	2.74
	velocity		9.11		9.79		8.96		7.83	8.87		9.11	9.79	8.96	7.83	9.44	8.36	
Benson, James (USA) (200	time		10.94		21.33		32.66		45.30	45.30	3 / 6							
reaction time	interval				10.39		11.33		12.64		# of strides	10.94	10.39	11.33	12.64	21.33	23.97	2.64
	velocity		9.14		9.62		8.83		7.91	8.83		9.14	9.62	8.83	7.91	9.38	8.34	
Faust, Brian (USA) (1999)	time		10.81		21.21		32.94		45.41	45.41	9 / 7							
reaction time	interval				10.40		11.73		12.47		# of strides	10.81	10.40	11.73	12.47	21.21	24.20	2.99
	velocity		9.25		9.62		8.53		8.02	8.81		9.25	9.62	8.53	8.02	9.43	8.26	
Patterson, Jacory (USA) (2	time		10.79		21.27		32.67		45.89	45.89	1 / 8							
reaction time	interval				10.48		11.40		13.22		# of strides	10.79	10.48	11.40	13.22	21.27	24.62	3.35
	velocity		9.27		9.54		8.77		7.56	8.72		9.27	9.54	8.77	7.56	9.40	8.12	
Godwin, Elija (USA) (1999)	time		11.06		21.63		33.32		46.73	46.73	2 / 9							
reaction time	interval				10.57		11.69		13.41		# of strides	11.06	10.57	11.69	13.41	21.63	25.10	3.47

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
	velocity		9.04		9.46		8.55		7.46	8.56		9.04	9.46	8.55	7.46	9.25	7.97	

Semi-Final 1

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USATF and Karmarush (2024) - USA Olympic trials results and race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hall, Quincy (USA) (1998)	time		11.30		21.61		32.74		44.42	44.42	6 / 1							
reaction time	interval				10.31		11.13		11.68		# of strides	11.30	10.31	11.13	11.68	21.61	22.81	1.20
	velocity		8.85		9.70		8.98		8.56	9.00	158.5	8.85	9.70	8.98	8.56	9.25	8.77	
Bailey, Chris (USA) (2000)	time		11.55		22.15		33.01		44.82	44.82	5 / 2							
reaction time	interval				10.60		10.86		11.81		# of strides	11.55	10.60	10.86	11.81	22.15	22.67	0.52
	velocity		8.66		9.43		9.21		8.47	8.92		8.66	9.43	9.21	8.47	9.03	8.82	
Boling, Matthew (USA) (20	time		10.78		21.02		32.65		44.91	44.91	8 / 3							
reaction time	interval				10.24		11.63		12.26	PB	# of strides	10.78	10.24	11.63	12.26	21.02	23.89	2.87
	velocity		9.28		9.77		8.60		8.16	8.91		9.28	9.77	8.60	8.16	9.51	8.37	
Robinson, Justin (USA) (2	time		11.19		21.79		33.16		44.95	44.95	7 / 4							
reaction time	interval				10.60		11.37		11.79		# of strides	11.19	10.60	11.37	11.79	21.79	23.16	1.37
	velocity		8.94		9.43		8.80		8.48	8.90		8.94	9.43	8.80	8.48	9.18	8.64	
Kent, Nathan (USA) (2003)	time		11.10		21.38		32.88		45.32	45.32	9 / 5							
reaction time	interval				10.28		11.50		12.44	PB	# of strides	11.10	10.28	11.50	12.44	21.38	23.94	2.56
	velocity		9.01		9.73		8.70		8.04	8.83		9.01	9.73	8.70	8.04	9.35	8.35	
Popelka, Logan (USA) (200	time		11.28		21.76		32.97		45.34	45.34	4 / 6							
reaction time	interval				10.48		11.21		12.37		# of strides	11.28	10.48	11.21	12.37	21.76	23.58	1.82
	velocity		8.87		9.54		8.92		8.08	8.82		8.87	9.54	8.92	8.08	9.19	8.48	
Dedewo, Paul (USA) (1991)	time		11.19		21.33		32.69		45.36	45.36	2 / 7							
reaction time	interval				10.14		11.36		12.67		# of strides	11.19	10.14	11.36	12.67	21.33	24.03	2.70
	velocity		8.94		9.86		8.80		7.89	8.82		8.94	9.86	8.80	7.89	9.38	8.32	
Strader, Solomon (USA) (2	time		11.03		21.44		32.72		45.72	45.72	3 / 8							
reaction time	interval				10.41		11.28		13.00		# of strides	11.03	10.41	11.28	13.00	21.44	24.28	2.84
	velocity		9.07		9.61		8.87		7.69	8.75		9.07	9.61	8.87	7.69	9.33	8.24	
Stewart, Trevor (USA) (199	time		11.38		21.96		33.37		45.80	45.80	1 / 9							
reaction time	interval				10.58		11.41		12.43		# of strides	11.38	10.58	11.41	12.43	21.96	23.84	1.88
	velocity		8.79		9.45		8.76		8.05	8.73		8.79	9.45	8.76	8.05	9.11	8.39	

Decathlon - Heat

date 21-Jun-24

USATF and Karmarush (2024) - USA Olympic trials results and race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Williams, Harrison (USA) (	time		11.24		21.82		33.80		46.56	46.56	9 / 1							
reaction time	interval				10.58		11.98		12.76		# of strides	11.24	10.58	11.98	12.76	21.82	24.74	2.92
	velocity		8.90		9.45		8.35		7.84	8.59		8.90	9.45	8.35	7.84	9.17	8.08	
Bair, Peyton (USA) (2001)	time		11.12		21.58		33.35		46.89	46.89	4 / 2							
reaction time	interval				10.46		11.77		13.54	PB	# of strides	11.12	10.46	11.77	13.54	21.58	25.31	3.73
	velocity		8.99		9.56		8.50		7.39	8.53		8.99	9.56	8.50	7.39	9.27	7.90	
West, Austin (USA) (2000)	time		11.37		21.91		33.79		46.91	46.91	8 / 3							
reaction time	interval				10.54		11.88		13.12		# of strides	11.37	10.54	11.88	13.12	21.91	25.00	3.09
	velocity		8.80		9.49		8.42		7.62	8.53		8.80	9.49	8.42	7.62	9.13	8.00	
Talbot, Ryan (USA) (2000)	time		11.76		22.42		34.30		47.21	47.21	5 / 4							
reaction time	interval				10.66		11.88		12.91	PB	# of strides	11.76	10.66	11.88	12.91	22.42	24.79	2.37
	velocity		8.50		9.38		8.42		7.75	8.47		8.50	9.38	8.42	7.75	8.92	8.07	
Rogers, Denim (USA) (199	time		11.52		22.90		34.95		47.48	47.48	6 / 5							
reaction time	interval				11.38		12.05		12.53	PB	# of strides	11.52	11.38	12.05	12.53	22.90	24.58	1.68
	velocity		8.68		8.79		8.30		7.98	8.42		8.68	8.79	8.30	7.98	8.73	8.14	
Garland, Kyle (USA) (2000)	time		11.33		22.30		34.95		48.91	48.91	7 / 6							
reaction time	interval				10.97		12.65		13.96		# of strides	11.33	10.97	12.65	13.96	22.30	26.61	4.31
	velocity		8.83		9.12		7.91		7.16	8.18		8.83	9.12	7.91	7.16	8.97	7.52	

Decathlon - Heat

date 21-Jun-24

USATF and Karmarush (2024) - USA Olympic trials results and race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ziemek, Zach (USA) (1993)	time		11.29		22.17		34.86		49.72	49.72	6 / 1							
reaction time	interval				10.88		12.69		14.86		# of strides	11.29	10.88	12.69	14.86	22.17	27.55	5.38
	velocity		8.86		9.19		7.88		6.73	8.05		8.86	9.19	7.88	6.73	9.02	7.26	
Spejcher, Daniel (USA) (20	time		11.56		22.85		35.71		50.00	50.00	8 / 2							
reaction time	interval				11.29		12.86		14.29		# of strides	11.56	11.29	12.86	14.29	22.85	27.15	4.30
	velocity		8.65		8.86		7.78		7.00	8.00		8.65	8.86	7.78	7.00	8.75	7.37	
Flood, Jack (USA) (1995)	time		11.99		23.25		35.81		50.03	50.03	5 / 3							
reaction time	interval				11.26		12.56		14.22		# of strides	11.99	11.26	12.56	14.22	23.25	26.78	3.53
	velocity		8.34		8.88		7.96		7.03	8.00		8.34	8.88	7.96	7.03	8.60	7.47	
Jones, Hunter (USA) (2000	time		11.71		23.14		36.09		50.51	50.51	9 / 4							
reaction time	interval				11.43		12.95		14.42		# of strides	11.71	11.43	12.95	14.42	23.14	27.37	4.23
	velocity		8.54		8.75		7.72		6.93	7.92		8.54	8.75	7.72	6.93	8.64	7.31	

Victor, Lindon (GRN) (1993	time		11.22		22.52				dnf	3 / --								
reaction time	interval				11.30					# of strides	11.22	11.30				22.52		
	velocity		8.91		8.85						8.91	8.85				8.88		

Decathlon - Heat

date 21-Jun-24

USATF and Karmarush (2024) - USA Olympic trials results and race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Williams, Devon (USA) (19	time		11.45		22.81		35.02		48.42	48.42	5 / 1							
reaction time	interval				11.36		12.21		13.40		# of strides	11.45	11.36	12.21	13.40	22.81	25.61	2.80
	velocity		8.73		8.80		8.19		7.46	8.26		8.73	8.80	8.19	7.46	8.77	7.81	
Walburn, Lee (USA) (2000)	time		11.27		22.23		34.54		48.44	48.44	9 / 2							
reaction time	interval				10.96		12.31		13.90		# of strides	11.27	10.96	12.31	13.90	22.23	26.21	3.98
	velocity		8.87		9.12		8.12		7.19	8.26		8.87	9.12	8.12	7.19	9.00	7.63	
Baldwin, Heath (USA) (200	time		11.46		22.48		34.79		48.58	48.58	8 / 3							
reaction time	interval				11.02		12.31		13.79	PB	# of strides	11.46	11.02	12.31	13.79	22.48	26.10	3.62
	velocity		8.73		9.07		8.12		7.25	8.23		8.73	9.07	8.12	7.25	8.90	7.66	
Delgado, Joe (USA) (1995)	time		11.71		22.94		35.43		48.74	48.74	7 / 4							
reaction time	interval				11.23		12.49		13.31		# of strides	11.71	11.23	12.49	13.31	22.94	25.80	2.86
	velocity		8.54		8.90		8.01		7.51	8.21		8.54	8.90	8.01	7.51	8.72	7.75	
Black, Sam (USA) (1995)	time		11.74		22.98		35.19		48.78	48.78	6 / 5							
reaction time	interval				11.24		12.21		13.59		# of strides	11.74	11.24	12.21	13.59	22.98	25.80	2.82
	velocity		8.52		8.90		8.19		7.36	8.20		8.52	8.90	8.19	7.36	8.70	7.75	
Farmer, Josh (USA) (1999)	time		11.42		22.43		34.80		49.00	49.00	4 / 6							
reaction time	interval				11.01		12.37		14.20		# of strides	11.42	11.01	12.37	14.20	22.43	26.57	4.14
	velocity		8.76		9.08		8.08		7.04	8.16		8.76	9.08	8.08	7.04	8.92	7.53	

Heat 5

date 21-Jun-24

USATF and Karmarush (2024) - USA Olympic trials results and race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Norman, Michael (USA) (19	time		10.93		21.36		32.76		45.31	45.31	5 / 1							
reaction time	interval				10.43		11.40		12.55		# of strides	10.93	10.43	11.40	12.55	21.36	23.95	2.59
	velocity		9.15		9.59		8.77		7.97	8.83	173.5	9.15	9.59	8.77	7.97	9.36	8.35	
Miller, Evan (USA) (2000)	time		11.07		21.74		33.27		45.70	45.70	8 / 2							
reaction time	interval				10.67		11.53		12.43		# of strides	11.07	10.67	11.53	12.43	21.74	23.96	2.22
	velocity		9.03		9.37		8.67		8.05	8.75	176.0	9.03	9.37	8.67	8.05	9.20	8.35	
Tomlyanovich, TJ (USA) (2	time		11.13		21.70		33.15		45.76	45.76	3 / 3							
reaction time	interval				10.57		11.45		12.61		# of strides	11.13	10.57	11.45	12.61	21.70	24.06	2.36
	velocity		8.98		9.46		8.73		7.93	8.74	170.0	8.98	9.46	8.73	7.93	9.22	8.31	
Benson, James (USA) (200	time		11.12		21.60		33.08		45.81	45.81	4 / 4							
reaction time	interval				10.48		11.48		12.73		# of strides	11.12	10.48	11.48	12.73	21.60	24.21	2.61
	velocity		8.99		9.54		8.71		7.86	8.73	178.0	8.99	9.54	8.71	7.86	9.26	8.26	
Stewart, Trevor (USA) (199	time		11.63		22.33		33.62		45.83	45.83	9 / 5							
reaction time	interval				10.70		11.29		12.21		# of strides	11.63	10.70	11.29	12.21	22.33	23.50	1.17
	velocity		8.60		9.35		8.86		8.19	8.73		8.60	9.35	8.86	8.19	8.96	8.51	
Prude, Rios (USA) (2003)	time		11.34		22.12		33.59		46.09	46.09	6 / 6							
reaction time	interval				10.78		11.47		12.50		# of strides	11.34	10.78	11.47	12.50	22.12	23.97	1.85
	velocity		8.82		9.28		8.72		8.00	8.68	170.0	8.82	9.28	8.72	8.00	9.04	8.34	
Willie, Ryan (USA) (2002)	time		11.45		22.30		34.02		46.59	46.59	7 / 7							
reaction time	interval				10.85		11.72		12.57		# of strides	11.45	10.85	11.72	12.57	22.30	24.29	1.99
	velocity		8.73		9.22		8.53		7.96	8.59	172.2	8.73	9.22	8.53	7.96	8.97	8.23	

Heat 4

date 21-Jun-24

USATF and Karmarush (2024) - USA Olympic trials results and race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Norwood, Vernon (USA) (1	time		11.34		22.04		33.38		45.40	45.40	4 / 1							
reaction time	interval				10.70		11.34		12.02		# of strides	11.34	10.70	11.34	12.02	22.04	23.36	1.32
	velocity		8.82		9.35		8.82		8.32	8.81	173.5	8.82	9.35	8.82	8.32	9.07	8.56	
McRae, Khaleb (USA) (2000)			no information available							45.54	6 / 2						# of strides	176.5
Faust, Brian (USA) (1999)	time		11.13		21.72		33.30		45.58	45.58	3 / 3							
reaction time	interval				10.59		11.58		12.28		# of strides	11.13	10.59	11.58	12.28	21.72	23.86	2.14
	velocity		8.98		9.44		8.64		8.14	8.78	183.0	8.98	9.44	8.64	8.14	9.21	8.38	
Dedewo, Paul (USA) (1991)	time		11.42		21.94		33.47		45.75	45.75	7 / 4							
reaction time	interval				10.52		11.53		12.28		# of strides	11.42	10.52	11.53	12.28	21.94	23.81	1.87
	velocity		8.76		9.51		8.67		8.14	8.74	164.0	8.76	9.51	8.67	8.14	9.12	8.40	
Strader, Solomon (USA) (2	time				22.01		32.78		45.76	45.76	9 / 5							
reaction time	interval						10.77		12.98		# of strides			10.77	12.98	22.01	23.75	1.74
	velocity				9.09		9.29		7.70	8.74	180.0			9.29	7.70	9.09	8.42	
Robinson, Auhmad (USA)	time		11.59		22.30		33.97		46.02	46.02	8 / 6							
reaction time	interval				10.71		11.67		12.05		# of strides	11.59	10.71	11.67	12.05	22.30	23.72	1.42

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
	velocity		8.63		9.34		8.57		8.30	8.69	182.2	8.63	9.34	8.57	8.30	8.97	8.43	

Heat 3

date 21-Jun-24

USATF and Karmarush (2024) - USA Olympic trials results and race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Blockburger, Johnnie (USA	time		11.02		21.47		33.03		45.08	45.08	9 / 1							
reaction time	interval				10.45		11.56		12.05		# of strides	11.02	10.45	11.56	12.05	21.47	23.61	2.14
	velocity		9.07		9.57		8.65		8.30	8.87	162.0	9.07	9.57	8.65	8.30	9.32	8.47	
Deadmon, Bryce (USA) (19	time		10.94		21.21		32.76		45.21	45.21	8 / 2							
reaction time	interval				10.27		11.55		12.45		# of strides	10.94	10.27	11.55	12.45	21.21	24.00	2.79
	velocity		9.14		9.74		8.66		8.03	8.85	165.5	9.14	9.74	8.66	8.03	9.43	8.33	
Popelka, Logan (USA) (200	time		11.00		21.48		32.75		45.22	45.22	7 / 3							
reaction time	interval				10.48		11.27		12.47	PB	# of strides	11.00	10.48	11.27	12.47	21.48	23.74	2.26
	velocity		9.09		9.54		8.87		8.02	8.85	175.0	9.09	9.54	8.87	8.02	9.31	8.42	
Kent, Nathan (USA) (2003)	time		10.86		21.08		32.75		45.42	45.42	5 / 4							
reaction time	interval				10.22		11.67		12.67	PB	# of strides	10.86	10.22	11.67	12.67	21.08	24.34	3.26
	velocity		9.21		9.78		8.57		7.89	8.81	169.0	9.21	9.78	8.57	7.89	9.49	8.22	
Jones, William (USA) (2003	time		11.16		21.47		32.90		45.50	45.50	4 / 5							
reaction time	interval				10.31		11.43		12.60		# of strides	11.16	10.31	11.43	12.60	21.47	24.03	2.56
	velocity		8.96		9.70		8.75		7.94	8.79	166.5	8.96	9.70	8.75	7.94	9.32	8.32	
O'Bryant, Jevon (USA) (20(	time		11.23		21.57		33.18		45.51	45.51	6 / 6							
reaction time	interval				10.34		11.61		12.33		# of strides	11.23	10.34	11.61	12.33	21.57	23.94	2.37
	velocity		8.90		9.67		8.61		8.11	8.79	171.5	8.90	9.67	8.61	8.11	9.27	8.35	
Wright, Willington (USA) (	time		10.76		21.14		32.70		45.55	45.55	3 / 7							
reaction time	interval				10.38		11.56		12.85		# of strides	10.76	10.38	11.56	12.85	21.14	24.41	3.27
	velocity		9.29		9.63		8.65		7.78	8.78	169.5	9.29	9.63	8.65	7.78	9.46	8.19	

Heat 2

date 21-Jun-24

USATF and Karmarush (2024) - USA Olympic trials results and race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Wilson, Quincy (USA) (200	time		11.15		21.33		32.66		44.66	44.66	7 / 1							
reaction time	interval				10.18		11.33		12.00	WU18B PB	# of strides	11.15	10.18	11.33	12.00	21.33	23.33	2.00
	velocity		8.97		9.82		8.83		8.33	8.96	173.5	8.97	9.82	8.83	8.33	9.38	8.57	
Bailey, Chris (USA) (2000)	time		11.45		21.98		32.86		44.86	44.86	4 / 2							
reaction time	interval				10.53		10.88		12.00		# of strides	11.45	10.53	10.88	12.00	21.98	22.88	0.90
	velocity		8.73		9.50		9.19		8.33	8.92	179.2	8.73	9.50	9.19	8.33	9.10	8.74	
Robinson, Justin (USA) (2(	time		11.26		21.53		32.86		45.15	45.15	8 / 3							
reaction time	interval				10.27		11.33		12.29		# of strides	11.26	10.27	11.33	12.29	21.53	23.62	2.09
	velocity		8.88		9.74		8.83		8.14	8.86	167.0	8.88	9.74	8.83	8.14	9.29	8.47	
Lightner, Kennedy (USA) (2001)			no information available						PB	45.17	6 / 4						# of strides	173.0
Bynum, Emmanuel (USA) (	time		11.53		21.91		33.12		45.34	45.34	9 / 5							
reaction time	interval				10.38		11.21		12.22		# of strides	11.53	10.38	11.21	12.22	21.91	23.43	1.52
	velocity		8.67		9.63		8.92		8.18	8.82	166.0	8.67	9.63	8.92	8.18	9.13	8.54	
Patterson, Jacory (USA) (2(	time		11.12		21.49		32.92		45.46	45.46	5 / 6							
reaction time	interval				10.37		11.43		12.54		# of strides	11.12	10.37	11.43	12.54	21.49	23.97	2.48
	velocity		8.99		9.64		8.75		7.97	8.80	174.0	8.99	9.64	8.75	7.97	9.31	8.34	
Gregory, Eric (USA) (2000)	time		11.19		21.66		32.96		45.79	45.79	3 / 7							
reaction time	interval				10.47		11.30		12.83		# of strides	11.19	10.47	11.30	12.83	21.66	24.13	2.47
	velocity		8.94		9.55		8.85		7.79	8.74	171.0	8.94	9.55	8.85	7.79	9.23	8.29	

Heat 1

date 21-Jun-24

USATF and Karmarush (2024) - USA Olympic trials results and race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hall, Quincy (USA) (1998)	time		11.18		21.40		32.50		44.60	44.60	7 / 1							
reaction time	interval				10.22		11.10		12.10		# of strides	11.18	10.22	11.10	12.10	21.40	23.20	1.80
	velocity		8.94		9.78		9.01		8.26	8.97	158.0	8.94	9.78	9.01	8.26	9.35	8.62	
Boling, Matthew (USA) (20	time		10.70		21.06		32.46		44.94	44.94	4 / 2							
reaction time	interval				10.36		11.40		12.48	PB	# of strides	10.70	10.36	11.40	12.48	21.06	23.88	2.82
	velocity		9.35		9.65		8.77		8.01	8.90	173.0	9.35	9.65	8.77	8.01	9.50	8.38	
Lincoln, Judson (USA) (20(	time		10.89		21.14		32.49		45.09	45.09	6 / 3							
reaction time	interval				10.25		11.35		12.60		# of strides	10.89	10.25	11.35	12.60	21.14	23.95	2.81
	velocity		9.18		9.76		8.81		7.94	8.87	181.0	9.18	9.76	8.81	7.94	9.46	8.35	
McKiver, Jenoah (USA) (20	time		11.00		21.15		32.45		45.26	45.26	3 / 4							
reaction time	interval				10.15		11.30		12.81		# of strides	11.00	10.15	11.30	12.81	21.15	24.11	2.96
	velocity		9.09		9.85		8.85		7.81	8.84	168.5	9.09	9.85	8.85	7.81	9.46	8.30	
Godwin, Elija (USA) (1999)	time		10.71		21.07		32.53		45.53	45.53	8 / 5							
reaction time	interval				10.36		11.46		13.00		# of strides	10.71	10.36	11.46	13.00	21.07	24.46	3.39
	velocity		9.34		9.65		8.73		7.69	8.79	182.0	9.34	9.65	8.73	7.69	9.49	8.18	
Herron, Brian (USA) (2000)	time		10.87		21.32		32.98		46.32	46.32	5 / 6							

reaction time	interval			10.45		11.66		13.34		# of strides	10.87	10.45	11.66	13.34	21.32	25.00	3.68
	velocity		9.20	9.57		8.58		7.50	8.64	170.0	9.20	9.57	8.58	7.50	9.38	8.00	

2024 Japanese National Multi-Event Championships (Gifu, JPN)

Decathlon - Heat

date 22-Jun-24

Matsubayashi (2025) - performance analysis of decathlon athletes in the 2024 season

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Taue, Shun (JPN) (1997)	time	6.70	12.21	17.96	23.92	30.16	36.67	43.43	50.65	50.65	6 / 4							
reaction time	interval		5.51	5.75	5.96	6.24	6.51	6.76	7.22		# of strides	12.21	11.71	12.75	13.98	23.92	26.73	2.81
	velocity	7.46	9.07	8.70	8.39	8.01	7.68	7.40	6.93	7.90		8.19	8.54	7.84	7.15	8.36	7.48	
Maruyama, Yuma (JPN) (19	time	6.57	12.11	17.87	23.90	30.08	36.63	43.47	50.88	50.88	8 / 5							
reaction time	interval		5.54	5.76	6.03	6.18	6.55	6.84	7.41		# of strides	12.11	11.79	12.73	14.25	23.90	26.98	3.08
	velocity	7.61	9.03	8.68	8.29	8.09	7.63	7.31	6.75	7.86		8.26	8.48	7.86	7.02	8.37	7.41	

Decathlon - Heat

date 22-Jun-24

Matsubayashi (2025) - performance analysis of decathlon athletes in the 2024 season

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Okuda, Keisuke (JPN) (199	time	6.40	11.73	17.18	22.96	29.08	35.32	41.64	48.22	48.22	8 / 1							
reaction time	interval		5.33	5.45	5.78	6.12	6.24	6.32	6.58		# of strides	11.73	11.23	12.36	12.90	22.96	25.26	2.30
	velocity	7.81	9.38	9.17	8.65	8.17	8.01	7.91	7.60	8.30		8.53	8.90	8.09	7.75	8.71	7.92	

2024 European Athletics Championships (Roma, ITA)

FINAL

date 10-Jun-24

European Athletics (2024) - 2024 european athletics championships - results book

			50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Doom, Alexander (BEL) (19	0.187	no information available								NR PB	44.15	8 / 1						# of strides	179.5
Dobson, Charles (GBR) (19	time			11.13		21.52		32.38		44.38	44.38	6 / 2							
reaction time	0.121	interval				10.39		10.86		12.00	PB	# of strides	11.13	10.39	10.86	12.00	21.52	22.86	1.34
		velocity		8.98		9.62		9.21		8.33	9.01	165.2	8.98	9.62	9.21	8.33	9.29	8.75	
Bonevacia, Liemarvin (NED	0.175	no information available									44.88	9 / 3						# of strides	181.7
Sacoor, Jonathan (BEL) (19	time			11.10		21.44		32.42		44.98	44.98	5 / 4							
reaction time	0.184	interval				10.34		10.98		12.56	PB	# of strides	11.10	10.34	10.98	12.56	21.44	23.54	2.10
		velocity		9.01		9.67		9.11		7.96	8.89	169.5	9.01	9.67	9.11	7.96	9.33	8.50	
Sito, Luca (ITA) (2003)	time			11.07		21.26		32.33		45.04	45.04	7 / 5							
reaction time	0.222	interval				10.19		11.07		12.71		# of strides	11.07	10.19	11.07	12.71	21.26	23.78	2.52
		velocity		9.03		9.81		9.03		7.87	8.88	172.7	9.03	9.81	9.03	7.87	9.41	8.41	
Molnár, Attila (HUN) (2002)	time			11.12		21.45		32.66		45.07	45.07	3 / 6							
reaction time	0.193	interval				10.33		11.21		12.41		# of strides	11.12	10.33	11.21	12.41	21.45	23.62	2.17
		velocity		8.99		9.68		8.92		8.06	8.88	175.0	8.99	9.68	8.92	8.06	9.32	8.47	
Bredau, Jean Paul (GER) (1	time			11.36		21.81		32.96		45.11	45.11	4 / 7							
reaction time	0.173	interval				10.45		11.15		12.15		# of strides	11.36	10.45	11.15	12.15	21.81	23.30	1.49
		velocity		8.80		9.57		8.97		8.23	8.87	171.5	8.80	9.57	8.97	8.23	9.17	8.58	
Spitz, Lionel (SUI) (2001)	time			11.14		21.53		32.83		45.69	45.69	2 / 8							
reaction time	0.162	interval				10.39		11.30		12.86		# of strides	11.14	10.39	11.30	12.86	21.53	24.16	2.63
		velocity		8.98		9.62		8.85		7.78	8.75	190.0	8.98	9.62	8.85	7.78	9.29	8.28	

Semi-Final 3

date 09-Jun-24

European Athletics (2024) - 2024 european athletics championships - results book

			50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Doom, Alexander (BEL) (19	time			11.24		21.42		32.73		44.87	44.87	5 / 1							
reaction time	0.197	interval				10.18		11.31		12.14		# of strides	11.24	10.18	11.31	12.14	21.42	23.45	2.03
		velocity		8.90		9.82		8.84		8.24	8.91	179.0	8.90	9.82	8.84	8.24	9.34	8.53	
Bonevacia, Liemarvin (NED	time			11.11		21.45		32.69		45.17	45.17	6 / 2							
reaction time	0.160	interval				10.34		11.24		12.48		# of strides	11.11	10.34	11.24	12.48	21.45	23.72	2.27
		velocity		9.00		9.67		8.90		8.01	8.86	181.2	9.00	9.67	8.90	8.01	9.32	8.43	
Elkhatib, Omar (POR) (2001	time			11.67		22.44		33.76		45.65	45.65	9 / 3							
reaction time	0.188	interval				10.77		11.32		11.89		# of strides	11.67	10.77	11.32	11.89	22.44	23.21	0.77
		velocity		8.57		9.29		8.83		8.41	8.76	179.7	8.57	9.29	8.83	8.41	8.91	8.62	
O'Donnell, Christopher (IR	time			11.27		21.97		33.26		45.72	45.72	3 / ~~4~~							
reaction time	0.160	interval				10.70		11.29		12.46	DQ	# of strides	11.27	10.70	11.29	12.46	21.97	23.75	1.78
		velocity		8.87		9.35		8.86		8.03	8.75	177.0	8.87	9.35	8.86	8.03	9.10	8.42	
Biron, Gilles (FRA) (1995)	time			11.35		21.87		33.13		45.91	45.91	8 / ~~5~~ 4							
reaction time	0.160	interval				10.52		11.26		12.78		# of strides	11.35	10.52	11.26	12.78	21.87	24.04	2.17
		velocity		8.81		9.51		8.88		7.82	8.71	181.0	8.81	9.51	8.88	7.82	9.14	8.32	
Scotti, Edoardo (ITA) (2000	time			11.27		21.89		33.23		45.92	45.92	4 / ~~6~~ 5							
reaction time	0.192	interval				10.62		11.34		12.69		# of strides	11.27	10.62	11.34	12.69	21.89	24.03	2.14
		velocity		8.87		9.42		8.82		7.88	8.71	175.5	8.87	9.42	8.82	7.88	9.14	8.32	
Sanders, Manuel (GER) (19	time			11.32		21.76		33.23		46.03	46.03	7 / ~~7~~ 6							
reaction time	0.190	interval				10.44		11.47		12.80		# of strides	11.32	10.44	11.47	12.80	21.76	24.27	2.51
		velocity		8.83		9.58		8.72		7.81	8.69	165.7	8.83	9.58	8.72	7.81	9.19	8.24	
Haydock-Wilson, Alex (GBI	0.176	no information available									46.05	2 / ~~8~~ 7						# of strides	179.5

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

Semi-Final 2

date 09-Jun-24

European Athletics (2024) - 2024 european athletics championships - results book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Dobson, Charles (GBR) (1	time		11.06		21.46		32.70		44.65	44.65	8 / 1							
reaction time 0.151	interval				10.40		11.24		11.95		# of strides	11.06	10.40	11.24	11.95	21.46	23.19	1.73
	velocity		9.04		9.62		8.90		8.37	8.96	165.0	9.04	9.62	8.90	8.37	9.32	8.62	
Bredau, Jean Paul (GER) (1	time		11.20		21.49		32.72		45.03	45.03	5 / 2							
reaction time 0.160	interval				10.29		11.23		12.31		# of strides	11.20	10.29	11.23	12.31	21.49	23.54	2.05
	velocity		8.93		9.72		8.90		8.12	8.88	175.0	8.93	9.72	8.90	8.12	9.31	8.50	
Spitz, Lionel (SUI) (2001)	time		11.21		21.78		33.09		45.28	45.28	9 / 3							
reaction time 0.166	interval				10.57		11.31		12.19		# of strides	11.21	10.57	11.31	12.19	21.78	23.50	1.72
	velocity		8.92		9.46		8.84		8.20	8.83	183.0	8.92	9.46	8.84	8.20	9.18	8.51	
Coelho, João (POR) (1999)	time		11.18		21.62		32.93		45.36	45.36	6 / 4							
reaction time 0.176	interval				10.44		11.31		12.43		# of strides	11.18	10.44	11.31	12.43	21.62	23.74	2.12
	velocity		8.94		9.58		8.84		8.05	8.82	180.0	8.94	9.58	8.84	8.05	9.25	8.42	
Sombe, David (FRA) (2000)	time		11.40		22.12		33.43		45.36	45.36	4 / 5							
reaction time 0.204	interval				10.72		11.31		11.93		# of strides	11.40	10.72	11.31	11.93	22.12	23.24	1.12
	velocity		8.77		9.33		8.84		8.38	8.82	170.2	8.77	9.33	8.84	8.38	9.04	8.61	
Borlée, Dylan (BEL) (1992)	time		11.23		21.73		33.03		45.46	45.46	7 / 6							
reaction time 0.163	interval				10.50		11.30		12.43		# of strides	11.23	10.50	11.30	12.43	21.73	23.73	2.00
	velocity		8.90		9.52		8.85		8.05	8.80	173.2	8.90	9.52	8.85	8.05	9.20	8.43	
Nielsen, Gustav Lundholm	time		11.22		21.80		33.26		46.01	46.01	2 / 7							
reaction time 0.170	interval				10.58		11.46		12.75		# of strides	11.22	10.58	11.46	12.75	21.80	24.21	2.41
	velocity		8.91		9.45		8.73		7.84	8.69	186.0	8.91	9.45	8.73	7.84	9.17	8.26	
Grimerud, Andreas (NOR) (	time		11.45		21.98		33.53		46.25	46.25	3 / 8							
reaction time 0.151	interval				10.53		11.55		12.72		# of strides	11.45	10.53	11.55	12.72	21.98	24.27	2.29
	velocity		8.73		9.50		8.66		7.86	8.65	173.0	8.73	9.50	8.66	7.86	9.10	8.24	

Semi-Final 1

date 09-Jun-24

European Athletics (2024) - 2024 european athletics championships - results book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Sito, Luca (ITA) (2003)	time		11.20		21.53		32.60		44.75	44.75	5 / 1							
reaction time 0.153	interval				10.33		11.07		12.15	NR PB	# of strides	11.20	10.33	11.07	12.15	21.53	23.22	1.69
	velocity		8.93		9.68		9.03		8.23	8.94	172.0	8.93	9.68	9.03	8.23	9.29	8.61	
Sacoor, Jonathan (BEL) (1	time		11.17		21.59		32.64		44.99	44.99	4 / 2							
reaction time 0.165	interval				10.42		11.05		12.35	PB	# of strides	11.17	10.42	11.05	12.35	21.59	23.40	1.81
	velocity		8.95		9.60		9.05		8.10	8.89	171.7	8.95	9.60	9.05	8.10	9.26	8.55	
Molnár, Attila (HUN) (2002)	time		11.10		21.40		32.62		45.04	45.04	8 / 3							
reaction time 0.167	interval				10.30		11.22		12.42		# of strides	11.10	10.30	11.22	12.42	21.40	23.64	2.24
	velocity		9.01		9.71		8.91		8.05	8.88	176.0	9.01	9.71	8.91	8.05	9.35	8.46	
Ingvaldsen, Hævard Bentd	time		11.23		21.49		32.75		45.37	45.37	6 / 4							
reaction time 0.210	interval				10.26		11.26		12.62		# of strides	11.23	10.26	11.26	12.62	21.49	23.88	2.39
	velocity		8.90		9.75		8.88		7.92	8.82	182.0	8.90	9.75	8.88	7.92	9.31	8.38	
Pohorilko, Oleksandr (UKR	time		11.43		21.73		32.83		45.41	45.41	7 / 5							
reaction time 0.207	interval				10.30		11.10		12.58		# of strides	11.43	10.30	11.10	12.58	21.73	23.68	1.95
	velocity		8.75		9.71		9.01		7.95	8.81	175.0	8.75	9.71	9.01	7.95	9.20	8.45	
Petrucciani, Ricky (SUI) (20	time		11.10		21.63		32.94		45.47	45.47	3 / 6							
reaction time 0.158	interval				10.53		11.31		12.53		# of strides	11.10	10.53	11.31	12.53	21.63	23.84	2.21
	velocity		9.01		9.50		8.84		7.98	8.80	177.2	9.01	9.50	8.84	7.98	9.25	8.39	
Ferlan, Rok (SLO) (1997)	time		11.10		21.76		33.08		45.63	45.63	2 / 7							
reaction time 0.156	interval				10.66		11.32		12.55		# of strides	11.10	10.66	11.32	12.55	21.76	23.87	2.11
	velocity		9.01		9.38		8.83		7.97	8.77	188.7	9.01	9.38	8.83	7.97	9.19	8.38	
Andant, Teo (FRA) (1999)	time		11.17		21.84		33.26		45.72	45.72	9 / 8							
reaction time 0.184	interval				10.67		11.42		12.46		# of strides	11.17	10.67	11.42	12.46	21.84	23.88	2.04
	velocity		8.95		9.37		8.76		8.03	8.75	184.0	8.95	9.37	8.76	8.03	9.16	8.38	

Heat 3

date 08-Jun-24

European Athletics (2024) - 2024 european athletics championships - results book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Sito, Luca (ITA) (2003)	time		11.25		21.72		32.89		45.12	45.12	3 / 1							
reaction time 0.197	interval				10.47		11.17		12.23	PB	# of strides	11.25	10.47	11.17	12.23	21.72	23.40	1.68
	velocity		8.89		9.55		8.95		8.18	8.87		8.89	9.55	8.95	8.18	9.21	8.55	
Sombe, David (FRA) (2000)	time		11.51		22.17		33.54		45.45	45.45	4 / 2							
reaction time 0.221	interval				10.66		11.37		11.91		# of strides	11.51	10.66	11.37	11.91	22.17	23.28	1.11
	velocity		8.69		9.38		8.80		8.40	8.80		8.69	9.38	8.80	8.40	9.02	8.59	
Ferlan, Rok (SLO) (1997)	time		11.19		21.74		33.24		45.52	45.52	6 / 3							
reaction time 0.172	interval				10.55		11.50		12.28	PB	# of strides	11.19	10.55	11.50	12.28	21.74	23.78	2.04
	velocity		8.94		9.48		8.70		8.14	8.79		8.94	9.48	8.70	8.14	9.20	8.41	
Borlée, Dylan (BEL) (1992)	time		11.41		21.88		33.27		45.62	45.62	5 / 4							

reaction time 0.157	interval		10.47	11.39	12.35		# of strides	11.41	10.47	11.39	12.35	21.88	23.74	1.86
	velocity	8.76	9.55	8.78	8.10	8.77		8.76	9.55	8.78	8.10	9.14	8.42	
Nielsen, Gustav Lundholm	time	11.37	21.97	33.38	45.84	45.84	7 / 5							
reaction time 0.146	interval		10.60	11.41	12.46		# of strides	11.37	10.60	11.41	12.46	21.97	23.87	1.90
	velocity	8.80	9.43	8.76	8.03	8.73		8.80	9.43	8.76	8.03	9.10	8.38	
Grimerud, Andreas (NOR)	time	11.62	22.26	33.66	45.90	45.90	9 / 6							
reaction time 0.222	interval		10.64	11.40	12.24	=PB	# of strides	11.62	10.64	11.40	12.24	22.26	23.64	1.38
	velocity	8.61	9.40	8.77	8.17	8.71		8.61	9.40	8.77	8.17	8.98	8.46	
Maslák, Pavel (CZE) (1991)	time	11.93	23.23	35.18	47.99	47.99	8 / 7							
reaction time 0.239	interval		11.30	11.95	12.81		# of strides	11.93	11.30	11.95	12.81	23.23	24.76	1.53
	velocity	8.38	8.85	8.37	7.81	8.34		8.38	8.85	8.37	7.81	8.61	8.08	

Heat 2

date 08-Jun-24

European Athletics (2024) - 2024 european athletics championships - results book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Spitz, Lionel (SUI) (2001)	time		11.34		21.75		33.06		45.37	45.37	3 / 1							
reaction time 0.166	interval				10.41		11.31		12.31		# of strides	11.34	10.41	11.31	12.31	21.75	23.62	1.87
	velocity		8.82		9.61		8.84		8.12	8.82		8.82	9.61	8.84	8.12	9.20	8.47	
Elkhatib, Omar (POR) (2001	time		11.57		22.12		33.60		45.80	45.80	4 / 2							
reaction time 0.155	interval				10.55		11.48		12.20		# of strides	11.57	10.55	11.48	12.20	22.12	23.68	1.56
	velocity		8.64		9.48		8.71		8.20	8.73		8.64	9.48	8.71	8.20	9.04	8.45	
Haydock-Wilson, Alex (GBI	time		11.36		21.92		33.27		46.04	46.04	6 / 3							
reaction time 0.177	interval				10.56		11.35		12.77		# of strides	11.36	10.56	11.35	12.77	21.92	24.12	2.20
	velocity		8.80		9.47		8.81		7.83	8.69		8.80	9.47	8.81	7.83	9.12	8.29	
Meli, Riccardo (ITA) (2001)	time		11.44		22.00		33.52		46.17	46.17	7 / 4							
reaction time 0.189	interval				10.56		11.52		12.65		# of strides	11.44	10.56	11.52	12.65	22.00	24.17	2.17
	velocity		8.74		9.47		8.68		7.91	8.66		8.74	9.47	8.68	7.91	9.09	8.27	
Koch, Marc (GER) (1994)	time		11.72		22.40		33.82		46.18	46.18	9 / 5							
reaction time 0.205	interval				10.68		11.42		12.36		# of strides	11.72	10.68	11.42	12.36	22.40	23.78	1.38
	velocity		8.53		9.36		8.76		8.09	8.66		8.53	9.36	8.76	8.09	8.93	8.41	
Kijanović, Boško (SRB) (20	time		11.52		22.36		33.67		46.39	46.39	5 / 6							
reaction time 0.149	interval				10.84		11.31		12.72		# of strides	11.52	10.84	11.31	12.72	22.36	24.03	1.67
	velocity		8.68		9.23		8.84		7.86	8.62		8.68	9.23	8.84	7.86	8.94	8.32	
Šorm, Patrik (CZE) (1993)	time		11.55		22.17		33.63		46.40	46.40	8 / 7							
reaction time 0.205	interval				10.62		11.46		12.77		# of strides	11.55	10.62	11.46	12.77	22.17	24.23	2.06
	velocity		8.66		9.42		8.73		7.83	8.62		8.66	9.42	8.73	7.83	9.02	8.25	
Bujna, Šimon (SVK) (1995)	time		11.46		22.16		33.77		46.52	46.52	2 / 9							
reaction time 0.165	interval				10.70		11.61		12.75		# of strides	11.46	10.70	11.61	12.75	22.16	24.36	2.20
	velocity		8.73		9.35		8.61		7.84	8.60		8.73	9.35	8.61	7.84	9.03	8.21	

Heat 1

date 08-Jun-24

European Athletics (2024) - 2024 european athletics championships - results book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Sacoor, Jonathan (BEL) (1	time		11.44		22.19		33.42		45.50	45.50	8 / 1							
reaction time 0.174	interval				10.75		11.23		12.08		# of strides	11.44	10.75	11.23	12.08	22.19	23.31	1.12
	velocity		8.74		9.30		8.90		8.28	8.79		8.74	9.30	8.90	8.28	9.01	8.58	
Scotti, Edoardo (ITA) (2000	time		11.41		22.04		33.54		45.59	45.59	7 / 2							
reaction time 0.180	interval				10.63		11.50		12.05		# of strides	11.41	10.63	11.50	12.05	22.04	23.55	1.51
	velocity		8.76		9.41		8.70		8.30	8.77		8.76	9.41	8.70	8.30	9.07	8.49	
Andant, Téo (FRA) (1999)	time		11.27		21.91		33.33		45.65	45.65	4 / 3							
reaction time 0.187	interval				10.64		11.42		12.32		# of strides	11.27	10.64	11.42	12.32	21.91	23.74	1.83
	velocity		8.87		9.40		8.76		8.12	8.76		8.87	9.40	8.76	8.12	9.13	8.42	
O'Donnell, Christopher (IR	time		11.48		22.14		33.44		45.69	45.69	5 / 4							
reaction time 0.154	interval				10.66		11.30		12.25		# of strides	11.48	10.66	11.30	12.25	22.14	23.55	1.41
	velocity		8.71		9.38		8.85		8.16	8.75		8.71	9.38	8.85	8.16	9.03	8.49	
Zalewski, Karol (POL) (1993	time		11.19		21.71		33.13		45.80	45.80	3 / 5							
reaction time 0.165	interval				10.52		11.42		12.67		# of strides	11.19	10.52	11.42	12.67	21.71	24.09	2.38
	velocity		8.94		9.51		8.76		7.89	8.73		8.94	9.51	8.76	7.89	9.21	8.30	
Pohorilko, Oleksandr (UKR	time		11.37		21.94		33.28		45.90	45.90	2 / 6							
reaction time 0.169	interval				10.57		11.34		12.62		# of strides	11.37	10.57	11.34	12.62	21.94	23.96	2.02
	velocity		8.80		9.46		8.82		7.92	8.71		8.80	9.46	8.82	7.92	9.12	8.35	
Krsek, Matěj (CZE) (2000)	time		11.72		22.51		34.06		46.69	46.69	6 / 7							
reaction time 0.145	interval				10.79		11.55		12.63		# of strides	11.72	10.79	11.55	12.63	22.51	24.18	1.67
	velocity		8.53		9.27		8.66		7.92	8.57		8.53	9.27	8.66	7.92	8.88	8.27	

2024 Bauhaus Galan (Stockholm, SWE)

FINAL

date 02-Jun-24

Omega Timing (2024) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hall, Quincy (USA) (1998)	time	6.35	11.42	16.50	21.73	27.24	32.89	38.62	44.68	44.68	5 / 1							

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

reaction time 0.211	interval		5.07	5.08	5.23	5.51	5.65	5.73	6.06		# of strides	11.42	10.31	11.16	11.79	21.73	22.95	1.22
	velocity	7.87	9.86	9.84	9.56	9.07	8.85	8.73	8.25	8.95		8.76	9.70	8.96	8.48	9.20	8.71	
Norwood, Vernon (USA) (1	time	6.15	11.09	16.18	21.47	26.96	32.68	38.49	44.80	44.80	6 / 2							
reaction time 0.160	interval		4.94	5.09	5.29	5.49	5.72	5.81	6.31		# of strides	11.09	10.38	11.21	12.12	21.47	23.33	1.86
	velocity	8.13	10.12	9.82	9.45	9.11	8.74	8.61	7.92	8.93		9.02	9.63	8.92	8.25	9.32	8.57	
Nene, Zakithi (RSA) (1998)	time	6.14	11.00	16.05	21.34	26.90	32.63	38.61	45.29	45.29	7 / 3							
reaction time 0.153	interval		4.86	5.05	5.29	5.56	5.73	5.98	6.68		# of strides	11.00	10.34	11.29	12.66	21.34	23.95	2.61
	velocity	8.14	10.29	9.90	9.45	8.99	8.73	8.36	7.49	8.83		9.09	9.67	8.86	7.90	9.37	8.35	
Scotch, Leungo (BOT) (19	time	6.17	11.20	16.36	21.66	27.24	33.00	38.96	45.60	45.60	3 / 4							
reaction time 0.173	interval		5.03	5.16	5.30	5.58	5.76	5.96	6.64		# of strides	11.20	10.46	11.34	12.60	21.66	23.94	2.28
	velocity	8.10	9.94	9.69	9.43	8.96	8.68	8.39	7.53	8.77		8.93	9.56	8.82	7.94	9.23	8.35	
Trulsson, William (SWE) (2	time	6.24	11.46	16.76	22.18	27.83	33.87	40.19	46.97	46.97	4 / 5							
reaction time 0.148	interval		5.22	5.30	5.42	5.65	6.04	6.32	6.78	PB	# of strides	11.46	10.72	11.69	13.10	22.18	24.79	2.61
	velocity	8.01	9.58	9.43	9.23	8.85	8.28	7.91	7.37	8.52		8.73	9.33	8.55	7.63	9.02	8.07	
Tornée, Marcus (SWE) (199	time	6.24	11.30	16.51	21.99	27.96	34.16	40.55	47.32	47.32	8 / 6							
reaction time 0.160	interval		5.06	5.21	5.48	5.97	6.20	6.39	6.77		# of strides	11.30	10.69	12.17	13.16	21.99	25.33	3.34
	velocity	8.01	9.88	9.60	9.12	8.38	8.06	7.82	7.39	8.45		8.85	9.35	8.22	7.60	9.10	7.90	
Johansson, Emil (SWE) (20	time	6.27	11.54	16.88	22.45	28.35	34.60	40.92	47.62	47.62	2 / 7							
reaction time 0.157	interval		5.27	5.34	5.57	5.90	6.25	6.32	6.70		# of strides	11.54	10.91	12.15	13.02	22.45	25.17	2.72
	velocity	7.97	9.49	9.36	8.98	8.47	8.00	7.91	7.46	8.40		8.67	9.17	8.23	7.68	8.91	7.95	
Gahne, Gustav (SWE) (200	time	6.51	11.88	17.39	23.12	29.15	35.57	42.16	49.19	49.19	1 / 8							
reaction time 0.177	interval		5.37	5.51	5.73	6.03	6.42	6.59	7.03		# of strides	11.88	11.24	12.45	13.62	23.12	26.07	2.95
	velocity	7.68	9.31	9.07	8.73	8.29	7.79	7.59	7.11	8.13		8.42	8.90	8.03	7.34	8.65	7.67	

2024 Bislett Games (Oslo, NOR)

FINAL date 30-May-24

Omega Timing (2024) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hudson-Smith, Matthew (C	time	6.10	10.96	15.88	21.03	26.31	31.91	37.80	44.07	44.07	5 / 1							
reaction time 0.146	interval		4.86	4.92	5.15	5.28	5.60	5.89	6.27	AR	# of strides	10.96	10.07	10.88	12.16	21.03	23.04	2.01
	velocity	8.20	10.29	10.16	9.71	9.47	8.93	8.49	7.97	9.08	160.0	9.12	9.93	9.19	8.22	9.51	8.68	
James, Kirani (GRN) (1992)	time	6.14	11.03	16.10	21.37	26.66	32.37	38.30	44.58	44.58	7 / 2							
reaction time 0.162	interval		4.89	5.07	5.27	5.29	5.71	5.93	6.28		# of strides	11.03	10.34	11.00	12.21	21.37	23.21	1.84
	velocity	8.14	10.22	9.86	9.49	9.45	8.76	8.43	7.96	8.97	158.7	9.07	9.67	9.09	8.19	9.36	8.62	
Norwood, Vernon (USA) (1	time	6.22	11.20	16.32	21.64	27.12	32.79	38.51	44.68	44.68	3 / 3							
reaction time 0.167	interval		4.98	5.12	5.32	5.48	5.67	5.72	6.17		# of strides	11.20	10.44	11.15	11.89	21.64	23.04	1.40
	velocity	8.04	10.04	9.77	9.40	9.12	8.82	8.74	8.10	8.95	173.0	8.93	9.58	8.97	8.41	9.24	8.68	
Scotch, Leungo (BOT) (19	time	6.13	11.02	16.09	21.38	26.88	32.59	38.54	45.02	45.02	8 / 4							
reaction time 0.157	interval		4.89	5.07	5.29	5.50	5.71	5.95	6.48		# of strides	11.02	10.36	11.21	12.43	21.38	23.64	2.26
	velocity	8.16	10.22	9.86	9.45	9.09	8.76	8.40	7.72	8.88	175.5	9.07	9.65	8.92	8.05	9.35	8.46	
Hall, Quincy (USA) (1998)	time	6.36	11.37	16.45	21.69	27.13	32.78	38.68	45.02	45.02	4 / 5							
reaction time 0.201	interval		5.01	5.08	5.24	5.44	5.65	5.90	6.34		# of strides	11.37	10.32	11.09	12.24	21.69	23.33	1.64
	velocity	7.86	9.98	9.84	9.54	9.19	8.85	8.47	7.89	8.88	161.0	8.80	9.69	9.02	8.17	9.22	8.57	
Pillay, Lythe (RSA) (2003)	time	6.23	11.15	16.26	21.61	27.25	33.04	39.03	45.34	45.34	1 / 6							
reaction time 0.156	interval		4.92	5.11	5.35	5.64	5.79	5.99	6.31		# of strides	11.15	10.46	11.43	12.30	21.61	23.73	2.12
	velocity	8.03	10.16	9.78	9.35	8.87	8.64	8.35	7.92	8.82	175.0	8.97	9.56	8.75	8.13	9.25	8.43	
Ingvaldsen, Hævard Bentd	time	6.24	11.13	16.15	21.38	26.84	32.70	38.78	45.41	45.51	6 / 7							
reaction time 0.191	interval		4.89	5.02	5.23	5.46	5.86	6.08	6.63		# of strides	11.13	10.25	11.32	12.71	21.38	24.03	2.65
	velocity	8.01	10.22	9.96	9.56	9.16	8.53	8.22	7.54	8.79	182.0	8.98	9.76	8.83	7.87	9.35	8.32	
McDonald, Rusheen (JAM)	time	6.33	11.35	16.56	22.09	27.93	34.03	40.39	47.60	47.60	2 / 8							
reaction time 0.178	interval		5.02	5.21	5.53	5.84	6.10	6.36	7.21		# of strides	11.35	10.74	11.94	13.57	22.09	25.51	3.42
	velocity	7.90	9.96	9.60	9.04	8.56	8.20	7.86	6.93	8.40		8.81	9.31	8.38	7.37	9.05	7.84	

2024 Shimane High School Championships (Izumo, JPN)

FINAL date 24-May-24

Shimizu (2024) - shimane high school championships 2024 - biomechanics data analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Mitsukiya, Kakeki (JPN)	time		12.12		23.45		35.56		48.32	48.32	5 / 1							
reaction time	interval				11.33		12.11		12.76		# of strides	12.12	11.33	12.11	12.76	23.45	24.87	1.42
	velocity		8.25		8.83		8.26		7.84	8.28		8.25	8.83	8.26	7.84	8.53	8.04	
鐘撞 陽斗	time		12.12		23.58		35.76		48.87	48.87	7 / 2							
reaction time	interval				11.46		12.18		13.11		# of strides	12.12	11.46	12.18	13.11	23.58	25.29	1.71
	velocity		8.25		8.73		8.21		7.63	8.18		8.25	8.73	8.21	7.63	8.48	7.91	
Nishikori, Yushin (JPN)	time		12.13		23.93		36.49		49.99	49.99	8 / 3							
reaction time	interval				11.80		12.56		13.50		# of strides	12.13	11.80	12.56	13.50	23.93	26.06	2.13
	velocity		8.24		8.47		7.96		7.41	8.00		8.24	8.47	7.96	7.41	8.36	7.67	
Miyahiro, Mitsuki (JPN)	time		12.67		24.57		37.21		50.72	50.72	6 / 4							
reaction time	interval				11.90		12.64		13.51		# of strides	12.67	11.90	12.64	13.51	24.57	26.15	1.58

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

	velocity	7.89	8.40	7.91	7.40	7.89		7.89	8.40	7.91	7.40	8.14	7.65			
Naruto, Ueki (JPN)	time	12.77	24.93	37.51	50.78	50.78	2 / 5									
reaction time	interval		12.16	12.58	13.27		# of strides	12.77	12.16	12.58	13.27	24.93	25.85	0.92		
	velocity	7.83	8.22	7.95	7.54	7.88		7.83	8.22	7.95	7.54	8.02	7.74			
Miyamura, Yushi (JPN)	time	12.65	24.77	37.50	50.88	50.88	3 / 6									
reaction time	interval		12.12	12.73	13.38		# of strides	12.65	12.12	12.73	13.38	24.77	26.11	1.34		
	velocity	7.91	8.25	7.86	7.47	7.86		7.91	8.25	7.86	7.47	8.07	7.66			
Kageyama, Hiromasa (JPN)	time	12.15	24.03	37.16	51.20	51.20	4 / 7									
reaction time	interval		11.88	13.13	14.04		# of strides	12.15	11.88	13.13	14.04	24.03	27.17	3.14		
	velocity	8.23	8.42	7.62	7.12	7.81		8.23	8.42	7.62	7.12	8.32	7.36			
Higo, Akiteru (JPN)	time	12.80	24.90	37.57	51.32	51.32	9 / 8									
reaction time	interval		12.10	12.67	13.75		# of strides	12.80	12.10	12.67	13.75	24.90	26.42	1.52		
	velocity	7.81	8.26	7.89	7.27	7.79		7.81	8.26	7.89	7.27	8.03	7.57			

2024 Seashore Doha Meeting (Doha, QAT)

FINAL

date 10-May-24

Omega Timing (2024) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Gardiner, Steven (BAH) (19	time	6.11	11.02	16.16	21.52	27.02	32.80	38.68	44.76	44.76	5 / 1							
reaction time 0.128	interval		4.91	5.14	5.36	5.50	5.78	5.88	6.08		# of strides	11.02	10.50	11.28	11.96	21.52	23.24	1.72
	velocity	8.18	10.18	9.73	9.33	9.09	8.65	8.50	8.22	8.94	158.2	9.07	9.52	8.87	8.36	9.29	8.61	
Samukonga, Muzala (ZAM)	time	6.11	10.99	16.19	21.66	27.30	33.17	38.98	45.07	45.07	3 / 2							
reaction time 0.175	interval		4.88	5.20	5.47	5.64	5.87	5.81	6.09		# of strides	10.99	10.67	11.51	11.90	21.66	23.41	1.75
	velocity	8.18	10.25	9.62	9.14	8.87	8.52	8.61	8.21	8.88		9.10	9.37	8.69	8.40	9.23	8.54	
Scotch, Leungo (BOT) (19	time	6.24	11.35	16.68	22.09	27.63	33.39	39.14	45.29	45.29	8 / 3							
reaction time 0.156	interval		5.11	5.33	5.41	5.54	5.76	5.75	6.15		# of strides	11.35	10.74	11.30	11.90	22.09	23.20	1.11
	velocity	8.01	9.78	9.38	9.24	9.03	8.68	8.70	8.13	8.83	176.7	8.81	9.31	8.85	8.40	9.05	8.62	
Norwood, Vernon (USA) (1	time	6.15	11.14	16.48	21.97	27.44	33.11	38.97	45.49	45.49	6 / 4							
reaction time 0.182	interval		4.99	5.34	5.49	5.47	5.67	5.86	6.52		# of strides	11.14	10.83	11.14	12.38	21.97	23.52	1.55
	velocity	8.13	10.02	9.36	9.11	9.14	8.82	8.53	7.67	8.79	175.0	8.98	9.23	8.98	8.08	9.10	8.50	
Yahia Ibrahim, Ammar Isma	time	6.34	11.45	16.73	22.14	27.67	33.46	39.33	45.47	45.57	1 / 5							
reaction time 0.144	interval		5.11	5.28	5.41	5.53	5.79	5.87	6.14	PB	# of strides	11.45	10.69	11.32	12.01	22.14	23.33	1.19
	velocity	7.89	9.78	9.47	9.24	9.04	8.64	8.52	8.14	8.78		8.73	9.35	8.83	8.33	9.03	8.57	
Ndori, Bayapo (BOT) (1999	time	6.21	11.26	16.58	22.06	27.58	33.30	39.15	45.57	45.57	7 / 6							
reaction time 0.171	interval		5.05	5.32	5.48	5.52	5.72	5.85	6.42		# of strides	11.26	10.80	11.24	12.27	22.06	23.51	1.45
	velocity	8.05	9.90	9.40	9.12	9.06	8.74	8.55	7.79	8.78	177.0	8.88	9.26	8.90	8.15	9.07	8.51	
Hall, Quincy (USA) (1998)	time	6.36	11.49	16.83	22.40	28.07	33.89	39.72	45.98	45.98	4 / 7							
reaction time 0.186	interval		5.13	5.34	5.57	5.67	5.82	5.83	6.26		# of strides	11.49	10.91	11.49	12.09	22.40	23.58	1.18
	velocity	7.86	9.75	9.36	8.98	8.82	8.59	8.58	7.99	8.70		8.70	9.17	8.70	8.27	8.93	8.48	
Osman, Ashraf (QAT) (200	time	6.37	11.40	16.60	22.03	27.66	33.60	39.71	46.46	46.46	2 / 8							
reaction time 0.169	interval		5.03	5.20	5.43	5.63	5.94	6.11	6.75		# of strides	11.40	10.63	11.57	12.86	22.03	24.43	2.40
	velocity	7.85	9.94	9.62	9.21	8.88	8.42	8.18	7.41	8.61		8.77	9.41	8.64	7.78	9.08	8.19	

Heat B - West Asi

date 10-May-24

Omega Timing (2024) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Merhe Mortada, Mohamad	time	6.31	11.67	17.29	23.13	29.13	35.29	41.57	48.04	48.04	3 / 1							
reaction time 0.152	interval		5.36	5.62	5.84	6.00	6.16	6.28	6.47		# of strides	11.67	11.46	12.16	12.75	23.13	24.91	1.78
	velocity	7.92	9.33	8.90	8.56	8.33	8.12	7.96	7.73	8.33		8.57	8.73	8.22	7.84	8.65	8.03	
Ibrahim Issaka, Hussein (Q/	time	6.39	11.68	17.20	22.98	29.00	35.29	41.86	48.86	48.86	6 / 2							
reaction time 0.228	interval		5.29	5.52	5.78	6.02	6.29	6.57	7.00		# of strides	11.68	11.30	12.31	13.57	22.98	25.88	2.90
	velocity	7.82	9.45	9.06	8.65	8.31	7.95	7.61	7.14	8.19		8.56	8.85	8.12	7.37	8.70	7.73	

Heat A - West Asi

date 10-May-24

Omega Timing (2024) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Karam, Yousef (KUW) (199	time	6.23	11.41	16.81	22.36	28.18	34.21	40.29	46.69	46.69	5 / 1							
reaction time 0.145	interval		5.18	5.40	5.55	5.82	6.03	6.08	6.40		# of strides	11.41	10.95	11.85	12.48	22.36	24.33	1.97
	velocity	8.03	9.65	9.26	9.01	8.59	8.29	8.22	7.81	8.57		8.76	9.13	8.44	8.01	8.94	8.22	
Al Saadi, Yasir Ali (IRQ) (19	time	6.38	11.63	17.21	22.99	28.91	34.98	41.13	47.73	47.73	4 / 2							
reaction time 0.169	interval		5.25	5.58	5.78	5.92	6.07	6.15	6.60		# of strides	11.63	11.36	11.99	12.75	22.99	24.74	1.75
	velocity	7.84	9.52	8.96	8.65	8.45	8.24	8.13	7.58	8.38		8.60	8.80	8.34	7.84	8.70	8.08	
Al-Jabri, Hamza Abdullah (	time	6.32	11.63	17.38	23.26	29.25	35.46	41.81	48.45	48.45	3 / 3							
reaction time 0.188	interval		5.31	5.75	5.88	5.99	6.21	6.35	6.64		# of strides	11.63	11.63	12.20	12.99	23.26	25.19	1.93
	velocity	7.91	9.42	8.70	8.50	8.35	8.05	7.87	7.53	8.26		8.60	8.60	8.20	7.70	8.60	7.94	
Ebed, Amar Ebed (QAT) (2(	time	6.43	11.79	17.33	22.99	28.96	35.30	41.86	48.97	48.97	6 / 4							
reaction time 0.206	interval		5.36	5.54	5.66	5.97	6.34	6.56	7.11		# of strides	11.79	11.20	12.31	13.67	22.99	25.98	2.99
	velocity	7.78	9.33	9.03	8.83	8.38	7.89	7.62	7.03	8.17		8.48	8.93	8.12	7.32	8.70	7.70	

2023 Japanese National Sports Festival (Kagoshima, JPN) (300m)

FINAL

date 15-Oct-23

Yamanaka (2024) - analysis of men's and women's 400m and 300m runs in the 2023 season

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Sato, Kentaro (JPN) (1994)	time	6.29	11.34	16.41	21.64	26.97	32.59			32.59	6 / 1							***100m-300m***
reaction time 0.191	interval		5.05	5.07	5.23	5.33	5.62				# of strides	11.34	10.30	10.95		21.64		*21.25*
	velocity	7.95	9.90	9.86	9.56	9.38	8.90			9.21	131.5	8.82	9.71	9.13		9.24		*9.41*
Fujisawa, Rui (JPN) (2003)	time	6.33	11.37	16.52	21.87	27.26	32.88			32.88	8 / 2							***100m-300m***
reaction time 0.167	interval		5.04	5.15	5.35	5.39	5.62				# of strides	11.37	10.50	11.01		21.87		*21.51*
	velocity	7.90	9.92	9.71	9.35	9.28	8.90			9.12	141.0	8.80	9.52	9.08		9.14		*9.30*
Ekejunia, Ruo (JPN) (2004)	time	6.29	11.34	16.42	21.72	27.16	32.90			32.90	4 / 3							***100m-300m***
reaction time 0.199	interval		5.05	5.08	5.30	5.44	5.74				# of strides	11.34	10.38	11.18		21.72		*21.56*
	velocity	7.95	9.90	9.84	9.43	9.19	8.71			9.12	135.5	8.82	9.63	8.94		9.21		*9.28*
Mori, Masato (JPN) (2001)	time	6.44	11.58	16.60	21.76	27.15	32.98			32.98	1 / 4							***100m-300m***
reaction time 0.195	interval		5.14	5.02	5.16	5.39	5.83				# of strides	11.58	10.18	11.22		21.76		*21.40*
	velocity	7.76	9.73	9.96	9.69	9.28	8.58			9.10		8.64	9.82	8.91		9.19		*9.35*
Imaizumi, Kenki (JPN) (200	time	6.23	11.21	16.36	21.77	27.25	32.98			32.98	2 / 4							***100m-300m***
reaction time 0.184	interval		4.98	5.15	5.41	5.48	5.73				# of strides	11.21	10.56	11.21		21.77		*21.77*
	velocity	8.03	10.04	9.71	9.24	9.12	8.73			9.10	134.0	8.92	9.47	8.92		9.19		*9.19*

2023 Prefontaine Classic (Eugene, OR)

FINAL date 16-Sep-23

Omega Timing (2023) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
James, Kirani (GRN) (1992)	time	6.24	11.36	16.57	21.82	27.03	32.47	38.15	44.30	44.30	6 / 1							
reaction time 0.160	interval		5.12	5.21	5.25	5.21	5.44	5.68	6.15		# of strides	11.36	10.46	10.65	11.83	21.82	22.48	0.66
	velocity	8.01	9.77	9.60	9.52	9.60	9.19	8.80	8.13	9.03	158.5	8.80	9.56	9.39	8.45	9.17	8.90	
Hall, Quincy (USA) (1998)	time	6.25	11.25	16.36	21.64	26.95	32.41	38.17	44.44	44.44	4 / 2							
reaction time 0.161	interval		5.00	5.11	5.28	5.31	5.46	5.76	6.27		# of strides	11.25	10.39	10.77	12.03	21.64	22.80	1.16
	velocity	8.00	10.00	9.78	9.47	9.42	9.16	8.68	7.97	9.00	160.0	8.89	9.62	9.29	8.31	9.24	8.77	
Norwood, Vernon (USA) (1	time	6.12	11.05	16.18	21.54	26.94	32.54	38.31	44.61	44.61	7 / 3							
reaction time 0.164	interval		4.93	5.13	5.36	5.40	5.60	5.77	6.30		# of strides	11.05	10.49	11.00	12.07	21.54	23.07	1.53
	velocity	8.17	10.14	9.75	9.33	9.26	8.93	8.67	7.94	8.97		9.05	9.53	9.09	8.29	9.29	8.67	
Deadmon, Bryce (USA) (19	time	6.10	11.16	16.30	21.62	27.17	32.87	38.68	44.90	44.90	3 / 7							
reaction time 0.145	interval		5.06	5.14	5.32	5.55	5.70	5.81	6.22		# of strides	11.16	10.46	11.25	12.03	21.62	23.28	1.66
	velocity	8.20	9.88	9.73	9.40	9.01	8.77	8.61	8.04	8.91		8.96	9.56	8.89	8.31	9.25	8.59	
McDonald, Rusheen (JAM)	time	6.28	11.20	16.29	21.63	27.32	33.07	38.78	45.10	45.10	8 / 5							
reaction time 0.196	interval		4.92	5.09	5.34	5.69	5.75	5.71	6.32		# of strides	11.20	10.43	11.44	12.03	21.63	23.47	1.84
	velocity	7.96	10.16	9.82	9.36	8.79	8.70	8.76	7.91	8.87		8.93	9.59	8.74	8.31	9.25	8.52	
Scotch, Leungo (BOT) (19	time	6.25	11.33	16.47	21.77	27.20	32.86	38.74	45.18	45.18	9 / 6							
reaction time 0.165	interval		5.08	5.14	5.30	5.43	5.66	5.88	6.44		# of strides	11.33	10.44	11.09	12.32	21.77	23.41	1.64
	velocity	8.00	9.84	9.73	9.43	9.21	8.83	8.50	7.76	8.85		8.83	9.58	9.02	8.12	9.19	8.54	
Biron, Gilles (FRA) (1995)	time	6.37	11.48	16.72	22.06	27.56	33.20	39.14	45.51	45.51	1 / 7							
reaction time 0.174	interval		5.11	5.24	5.34	5.50	5.64	5.94	6.37		# of strides	11.48	10.58	11.14	12.31	22.06	23.45	1.39
	velocity	7.85	9.78	9.54	9.36	9.09	8.87	8.42	7.85	8.79		8.71	9.45	8.98	8.12	9.07	8.53	
Hudson-Smith, Matthew (C	time	6.17	11.16	17.22						dnf	5 / --							
reaction time 0.166	interval		4.99	6.06							# of strides	11.16						
	velocity	8.10	10.02	8.25								8.96						

2023 Memorial van Damme (Brussels, BEL)

FINAL date 08-Sep-23

Omega Timing (2023) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
McDonald, Rusheen (JAM)	time	6.17	11.07	16.15	21.49	27.08	32.74	38.56	44.84	44.84	4 / 1							
reaction time 0.177	interval		4.90	5.08	5.34	5.59	5.66	5.82	6.28		# of strides	11.07	10.42	11.25	12.10	21.49	23.35	1.86
	velocity	8.10	10.20	9.84	9.36	8.94	8.83	8.59	7.96	8.92	182.0	9.03	9.60	8.89	8.26	9.31	8.57	
Ogando, Alexander (DOM)	time	6.11	10.98	16.14	21.51	27.16	32.88	38.83	44.93	44.93	2 / 2							
reaction time 0.157	interval		4.87	5.16	5.37	5.65	5.72	5.95	6.10		# of strides	10.98	10.53	11.37	12.05	21.51	23.42	1.91
	velocity	8.18	10.27	9.69	9.31	8.85	8.74	8.40	8.20	8.90	178.7	9.11	9.50	8.80	8.30	9.30	8.54	
Ingvaldsen, Håvard Bentda	time	6.31	11.29	16.41	21.73	27.25	32.92	38.77	45.07	45.07	6 / 3							
reaction time 0.206	interval		4.98	5.12	5.32	5.52	5.67	5.85	6.30		# of strides	11.29	10.44	11.19	12.15	21.73	23.34	1.61
	velocity	7.92	10.04	9.77	9.40	9.06	8.82	8.55	7.94	8.88	182.5	8.86	9.58	8.94	8.23	9.20	8.57	
Scotch, Leungo (BOT) (19	time	6.07	10.96	16.01	21.30	26.85	32.63	38.63	45.14	45.14	7 / 4							
reaction time 0.153	interval		4.89	5.05	5.29	5.55	5.78	6.00	6.51		# of strides	10.96	10.34	11.33	12.51	21.30	23.84	2.54
	velocity	8.24	10.22	9.90	9.45	9.01	8.65	8.33	7.68	8.86	180.0	9.12	9.67	8.83	7.99	9.39	8.39	
Biron, Gilles (FRA) (1995)	time	6.16	11.14	16.23	21.58	27.08	32.73	38.75	45.26	45.26	8 / 5							
reaction time 0.185	interval		4.98	5.09	5.35	5.50	5.65	6.02	6.51		# of strides	11.14	10.44	11.15	12.53	21.58	23.68	2.10
	velocity	8.12	10.04	9.82	9.35	9.09	8.85	8.31	7.68	8.84	177.0	8.98	9.58	8.97	7.98	9.27	8.45	
Borlée, Dylan (BEL) (1992)	time	6.14	11.09	16.16	21.35	26.85	32.66	38.81	45.39	45.39	3 / 6							
reaction time 0.160	interval		4.95	5.07	5.19	5.50	5.81	6.15	6.58		# of strides	11.09	10.26	11.31	12.73	21.35	24.04	2.69
	velocity	8.14	10.10	9.86	9.63	9.09	8.61	8.13	7.60	8.81	173.7	9.02	9.75	8.84	7.86	9.37	8.32	

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Doom, Alexander (BEL) (1	time	6.44	11.47	16.60	21.95	27.57	33.39	39.45	45.77	45.77	5 / 7							
reaction time 0.178	interval		5.03	5.13	5.35	5.62	5.82	6.06	6.32		# of strides	11.47	10.48	11.44	12.38	21.95	23.82	1.87
	velocity	7.76	9.94	9.75	9.35	8.90	8.59	8.25	7.91	8.74	178.0	8.72	9.54	8.74	8.08	9.11	8.40	

B Race

date 08-Sep-23

Omega Timing (2023) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Boers, Isayah (NED) (1999)	time	6.10	10.98	16.08	21.49	27.15	32.97	39.03	45.47	45.47	4 / 1							
reaction time 0.167	interval		4.88	5.10	5.41	5.66	5.82	6.06	6.44		# of strides	10.98	10.51	11.48	12.50	21.49	23.98	2.49
	velocity	8.20	10.25	9.80	9.24	8.83	8.59	8.25	7.76	8.80		9.11	9.51	8.71	8.00	9.31	8.34	
Vanderbemden, Robin (BE	time	6.14	11.15	16.25	21.56	27.12	32.89	38.92	45.51	45.51	5 / 2							
reaction time 0.145	interval		5.01	5.10	5.31	5.56	5.77	6.03	6.59	PB	# of strides	11.15	10.41	11.33	12.62	21.56	23.95	2.39
	velocity	8.14	9.98	9.80	9.42	8.99	8.67	8.29	7.59	8.79		8.97	9.61	8.83	7.92	9.28	8.35	
Watrin, Julien (BEL) (1992)	time	6.25	11.20	16.23	21.46	27.03	32.87	38.99	45.60	45.60	6 / 3							
reaction time 0.246	interval		4.95	5.03	5.23	5.57	5.84	6.12	6.61		# of strides	11.20	10.26	11.41	12.73	21.46	24.14	2.68
	velocity	8.00	10.10	9.94	9.56	8.98	8.56	8.17	7.56	8.77		8.93	9.75	8.76	7.86	9.32	8.29	
Klein Ikkink, Isaya (NED) (2	time	6.20	11.22	16.44	21.81	27.40	33.19	39.28	45.71	45.71	1 / 4							
reaction time 0.159	interval		5.02	5.22	5.37	5.59	5.79	6.09	6.43	PB	# of strides	11.22	10.59	11.38	12.52	21.81	23.90	2.09
	velocity	8.06	9.96	9.58	9.31	8.94	8.64	8.21	7.78	8.75		8.91	9.44	8.79	7.99	9.17	8.37	
Šorm, Patrik (CZE) (1993)	time	6.33	11.38	16.62	22.13	27.74	33.45	39.39	45.80	45.80	8 / 5							
reaction time 0.168	interval		5.05	5.24	5.51	5.61	5.71	5.94	6.41		# of strides	11.38	10.75	11.32	12.35	22.13	23.67	1.54
	velocity	7.90	9.90	9.54	9.07	8.91	8.76	8.42	7.80	8.73		8.79	9.30	8.83	8.10	9.04	8.45	
Davey, Lewis (GBR) (2000)	time	6.28	11.19	16.35	21.83	27.51	33.33	39.34	45.82	45.82	7 / 6							
reaction time 0.173	interval		4.91	5.16	5.48	5.68	5.82	6.01	6.48	PB	# of strides	11.19	10.64	11.50	12.49	21.83	23.99	2.16
	velocity	7.96	10.18	9.69	9.12	8.80	8.59	8.32	7.72	8.73		8.94	9.40	8.70	8.01	9.16	8.34	
Mabille, Florent (BEL) (199	time	6.29	11.18	16.27	21.65	27.24	33.00	39.20	46.11	46.11	3 / 7							
reaction time 0.164	interval		4.89	5.09	5.38	5.59	5.76	6.20	6.91		# of strides	11.18	10.47	11.35	13.11	21.65	24.46	2.81
	velocity	7.95	10.22	9.82	9.29	8.94	8.68	8.06	7.24	8.67		8.94	9.55	8.81	7.63	9.24	8.18	
Sacoor, Jonathan (BEL) (1	time	6.25	11.23	16.42	21.75	27.23	33.03	39.28	46.18	46.18	2 / 8							
reaction time 0.141	interval		4.98	5.19	5.33	5.48	5.80	6.25	6.90		# of strides	11.23	10.52	11.28	13.15	21.75	24.43	2.68
	velocity	8.00	10.04	9.63	9.38	9.12	8.62	8.00	7.25	8.66		8.90	9.51	8.87	7.60	9.20	8.19	

2023 Xiamen Diamond League (Xiamen, CHN)

FINAL

date 02-Sep-23

Omega Timing (2023) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
James, Kirani (GRN) (1992)	time	6.20	11.20	16.40	21.60	27.00	32.60	38.40	44.38	44.38	4 / 1							
reaction time 0.161	interval		5.00	5.20	5.20	5.40	5.60	5.80	5.98		# of strides	11.20	10.40	11.00	11.78	21.60	22.78	1.18
	velocity	8.06	10.00	9.62	9.62	9.26	8.93	8.62	8.36	9.01	158.7	8.93	9.62	9.09	8.49	9.26	8.78	
Hall, Quincy (USA) (1998)	time	6.20	11.30	16.40	21.70	27.10	32.70	38.40	44.38	44.38	5 / 2							
reaction time 0.173	interval		5.10	5.10	5.30	5.40	5.60	5.70	5.98		# of strides	11.30	10.40	11.00	11.68	21.70	22.68	0.98
	velocity	8.06	9.80	9.80	9.43	9.26	8.93	8.77	8.36	9.01	159.5	8.85	9.62	9.09	8.56	9.22	8.82	
McDonald, Rusheen (JAM)	time	6.26	11.13	16.21	21.60	27.21	32.99	38.76	44.82	44.82	7 / 3							
reaction time 0.179	interval		4.87	5.08	5.39	5.61	5.78	5.77	6.06		# of strides	11.13	10.47	11.39	11.83	21.60	23.22	1.62
	velocity	7.99	10.27	9.84	9.28	8.91	8.65	8.67	8.25	8.92	179.5	8.98	9.55	8.78	8.45	9.26	8.61	
Norwood, Vernon (USA) (1	time	6.19	11.30	16.56	22.00	27.52	33.20	38.86	44.99	44.99	6 / 4							
reaction time 0.166	interval		5.11	5.26	5.44	5.52	5.68	5.66	6.13		# of strides	11.30	10.70	11.20	11.79	22.00	22.99	0.99
	velocity	8.08	9.78	9.51	9.19	9.06	8.80	8.83	8.16	8.89	172.2	8.85	9.35	8.93	8.48	9.09	8.70	
Biron, Gilles (FRA) (1995)	time	6.30	11.40	16.63	22.08	27.50	33.11	38.87	45.10	45.10	9 / 5							
reaction time 0.198	interval		5.10	5.23	5.45	5.42	5.61	5.76	6.23		# of strides	11.40	10.68	11.03	11.99	22.08	23.02	0.94
	velocity	7.94	9.80	9.56	9.17	9.23	8.91	8.68	8.03	8.87	176.5	8.77	9.36	9.07	8.34	9.06	8.69	
Monlár, Attila (HUN) (2002)	time	6.28	11.24	16.38	21.75	27.29	33.00	38.87	45.19	45.19	3 / 6							
reaction time 0.157	interval		4.96	5.14	5.37	5.54	5.71	5.87	6.32		# of strides	11.24	10.51	11.25	12.19	21.75	23.44	1.69
	velocity	7.96	10.08	9.73	9.31	9.03	8.76	8.52	7.91	8.85	174.0	8.90	9.51	8.89	8.20	9.20	8.53	
Nakajima, Yuki Joseph (JPN	time	6.29	11.29	16.48	21.85	27.29	33.01	38.90	45.19	45.19	8 / 7							
reaction time 0.179	interval		5.00	5.19	5.37	5.44	5.72	5.89	6.29		# of strides	11.29	10.56	11.16	12.18	21.85	23.34	1.49
	velocity	7.95	10.00	9.63	9.31	9.19	8.74	8.49	7.95	8.85	170.0	8.86	9.47	8.96	8.21	9.15	8.57	
Barnes, Zandrion (JAM) (2	time	6.28	11.26	16.36	21.70	27.25	33.02	38.98	45.29	45.29	2 / 8							
reaction time 0.155	interval		4.98	5.10	5.34	5.55	5.77	5.96	6.31		# of strides	11.26	10.44	11.32	12.27	21.70	23.59	1.89
	velocity	7.96	10.04	9.80	9.36	9.01	8.67	8.39	7.92	8.83		8.88	9.58	8.83	8.15	9.22	8.48	
Haydock-Wilson, Alex (GBI	time	6.20	11.13	16.26	21.58	27.03	32.76	38.79	45.34	45.34	1 / 9							
reaction time 0.149	interval		4.93	5.13	5.32	5.45	5.73	6.03	6.55		# of strides	11.13	10.45	11.18	12.58	21.58	23.76	2.18
	velocity	8.06	10.14	9.75	9.40	9.17	8.73	8.29	7.63	8.82		8.98	9.57	8.94	7.95	9.27	8.42	

2023 Weltklasse (Zürich, SUI)

FINAL

date 31-Aug-23

Omega Timing (2023) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ingvaldsen, Håvard Bentda	time	6.32	11.37	16.58	21.92	27.43	33.17	39.08	45.28	45.28	6 / 1							
reaction time 0.201	interval		5.05	5.21	5.34	5.51	5.74	5.91	6.20		# of strides	11.37	10.55	11.25	12.11	21.92	23.36	1.44
	velocity	7.91	9.90	9.60	9.36	9.07	8.71	8.46	8.06	8.83		8.80	9.48	8.89	8.26	9.12	8.56	

Re, Davide (ITA) (1993)	time	6.33	11.49	16.79	22.20	27.72	33.43	39.32	45.49	45.49	3 / 2							
reaction time 0.161	interval		5.16	5.30	5.41	5.52	5.71	5.89	6.17		# of strides	11.49	10.71	11.23	12.06	22.20	23.29	1.09
	velocity	7.90	9.69	9.43	9.24	9.06	8.76	8.49	8.10	8.79		8.70	9.34	8.90	8.29	9.01	8.59	
Borlée, Dylan (BEL) (1992)	time	6.21	11.25	16.40	21.70	27.22	33.07	39.18	45.67	45.67	8 / 3							
reaction time 0.184	interval		5.04	5.15	5.30	5.52	5.85	6.11	6.49		# of strides	11.25	10.45	11.37	12.60	21.70	23.97	2.27
	velocity	8.05	9.92	9.71	9.43	9.06	8.55	8.18	7.70	8.76		8.89	9.57	8.80	7.94	9.22	8.34	
Spitz, Lionel (SUI) (2001)	time	6.31	11.43	16.82	22.35	27.92	33.61	39.50	45.83	45.83	4 / 4							
reaction time 0.147	interval		5.12	5.39	5.53	5.57	5.69	5.89	6.33		# of strides	11.43	10.92	11.26	12.22	22.35	23.48	1.13
	velocity	7.92	9.77	9.28	9.04	8.98	8.79	8.49	7.90	8.73		8.75	9.16	8.88	8.18	8.95	8.52	
Bonevacia, Liemarvin (NED	time	6.36	11.45	16.64	22.03	27.59	33.35	39.43	46.25	46.25	5 / 5							
reaction time 0.172	interval		5.09	5.19	5.39	5.56	5.76	6.08	6.82		# of strides	11.45	10.58	11.32	12.90	22.03	24.22	2.19
	velocity	7.86	9.82	9.63	9.28	8.99	8.68	8.22	7.33	8.65		8.73	9.45	8.83	7.75	9.08	8.26	
Petrucciani, Ricky (SUI) (20	time	6.24	11.38	16.68	22.14	27.74	33.62	39.82	46.66	46.66	7 / 6							
reaction time 0.170	interval		5.14	5.30	5.46	5.60	5.88	6.20	6.84		# of strides	11.38	10.76	11.48	13.04	22.14	24.52	2.38
	velocity	8.01	9.73	9.43	9.16	8.93	8.50	8.06	7.31	8.57		8.79	9.29	8.71	7.67	9.03	8.16	
Brier, Joseph (GBR) (1999)	time	6.22	11.29	16.60	22.08	27.70	33.60	39.90	46.82	46.82	2 / 7							
reaction time 0.200	interval		5.07	5.31	5.48	5.62	5.90	6.30	6.92		# of strides	11.29	10.79	11.52	13.22	22.08	24.74	2.66
	velocity	8.04	9.86	9.42	9.12	8.90	8.47	7.94	7.23	8.54		8.86	9.27	8.68	7.56	9.06	8.08	
Brand, Dany (SUI) (1996)	time	6.33	11.36	16.66	22.21	27.93	33.92	40.23	46.83	46.83	1 / 8							
reaction time 0.160	interval		5.03	5.30	5.55	5.72	5.99	6.31	6.60	PB	# of strides	11.36	10.85	11.71	12.91	22.21	24.62	2.41
	velocity	7.90	9.94	9.43	9.01	8.74	8.35	7.92	7.58	8.54		8.80	9.22	8.54	7.75	9.00	8.12	

2023 World Athletics Championships (Budapest, HUN)

Decathlon - Heat

date 25-Aug-23

Seiko Timing (2023) - world championship race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Owens-Delerme, Ayden (PL	time		11.22		21.71		33.51		46.44	46.44	7 / 1							
reaction time 0.162	interval				10.49		11.80		12.93		# of strides	11.22	10.49	11.80	12.93	21.71	24.73	3.02
	velocity		8.91		9.53		8.47		7.73	8.61	173.0	8.91	9.53	8.47	7.73	9.21	8.09	
Williams, Harrison (USA) (1	time		11.41		21.79		33.69		46.52	46.52	6 / 2							
reaction time 0.200	interval				10.38		11.90		12.83		# of strides	11.41	10.38	11.90	12.83	21.79	24.73	2.94
	velocity		8.76		9.63		8.40		7.79	8.60	159.0	8.76	9.63	8.40	7.79	9.18	8.09	
Erm, Johannes (EST) (1998	time		11.76		22.54		34.37		47.05	47.05	5 / 3							
reaction time 0.199	interval				10.78		11.83		12.68		# of strides	11.76	10.78	11.83	12.68	22.54	24.51	1.97
	velocity		8.50		9.28		8.45		7.89	8.50	170.0	8.50	9.28	8.45	7.89	8.87	8.16	
Taam, Rik (NED) (1997)	time		11.67		22.53		34.07		47.12	47.12	9 / 4							
reaction time 0.191	interval				10.86		11.54		13.05	PB	# of strides	11.67	10.86	11.54	13.05	22.53	24.59	2.06
	velocity		8.57		9.21		8.67		7.66	8.49	178.0	8.57	9.21	8.67	7.66	8.88	8.13	
Warner, Damian (CAN) (19	time		11.35		22.26		34.25		47.86	47.86	3 / 5							
reaction time 0.153	interval				10.91		11.99		13.61		# of strides	11.35	10.91	11.99	13.61	22.26	25.60	3.34
	velocity		8.81		9.17		8.34		7.35	8.36	175.0	8.81	9.17	8.34	7.35	8.98	7.81	
Neugebauer, Leo (GER) (2(	time		11.56		22.51		34.50		47.99	47.99	4 / 6							
reaction time 0.204	interval				10.95		11.99		13.49		# of strides	11.56	10.95	11.99	13.49	22.51	25.48	2.97
	velocity		8.65		9.13		8.34		7.41	8.34	168.5	8.65	9.13	8.34	7.41	8.88	7.85	
Skotheim, Sander (NOR) (2	time		11.43		22.29		34.48		48.48	48.48	2 / 7							
reaction time 0.173	interval				10.86		12.19		14.00		# of strides	11.43	10.86	12.19	14.00	22.29	26.19	3.90
	velocity		8.75		9.21		8.20		7.14	8.25	181.5	8.75	9.21	8.20	7.14	8.97	7.64	

Decathlon - Heat

date 25-Aug-23

Seiko Timing (2023) - world championship race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Lepage, Pierce (CAN) (1996	time		11.43		22.84		34.63		47.21	47.21	7 / 1							
reaction time 0.189	interval				11.41		11.79		12.58		# of strides	11.43	11.41	11.79	12.58	22.84	24.37	1.53
	velocity		8.75		8.76		8.48		7.95	8.47	160.7	8.75	8.76	8.48	7.95	8.76	8.21	
Victor, Lindon (GRN) (1993	time		11.46		22.52		34.69		48.05	48.05	2 / 2							
reaction time 0.160	interval				11.06		12.17		13.36	PB	# of strides	11.46	11.06	12.17	13.36	22.52	25.53	3.01
	velocity		8.73		9.04		8.22		7.49	8.32	177.0	8.73	9.04	8.22	7.49	8.88	7.83	
Eitel, Manuel (GER) (1997)	time		11.48		22.73		34.93		48.47	48.47	4 / 3							
reaction time 0.162	interval				11.25		12.20		13.54		# of strides	11.48	11.25	12.20	13.54	22.73	25.74	3.01
	velocity		8.71		8.89		8.20		7.39	8.25	179.0	8.71	8.89	8.20	7.39	8.80	7.77	
Tilga, Karel (EST) (1998)	time		11.78		23.13		34.99		48.58	48.58	9 / 4							
reaction time 0.178	interval				11.35		11.86		13.59		# of strides	11.78	11.35	11.86	13.59	23.13	25.45	2.32
	velocity		8.49		8.81		8.43		7.36	8.23		8.49	8.81	8.43	7.36	8.65	7.86	
Garland, Kyle (USA) (2000)	time		11.76		23.34		35.89		49.24	49.24	5 / 5							
reaction time 0.156	interval				11.58		12.55		13.35		# of strides	11.76	11.58	12.55	13.35	23.34	25.90	2.56
	velocity		8.50		8.64		7.97		7.49	8.12		8.50	8.64	7.97	7.49	8.57	7.72	
Golubovic, Daniel (AUS) (1	time		12.09		23.60		36.22		49.87	49.87	3 / 6							

reaction time 0.180	interval		11.51	12.62	13.65		# of strides	12.09	11.51	12.62	13.65	23.60	26.27	2.67
	velocity	8.27	8.69	7.92	7.33	8.02		8.27	8.69	7.92	7.33	8.47	7.61	

Matsubayashi (2024) - performance analysis of decathlon athletes in the 2023 season

Decathlon - Heat

date 25-Aug-23

Seiko Timing (2023) - world championship race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Rooth, Markus (NOR) (200	time		11.93		23.48		35.12		48.27	48.27	7 / 1							*Seiko Timing (2023)*
reaction time 0.143	interval				11.55		11.64		13.15	PB	# of strides	11.93	11.55	11.64	13.15	23.48	24.79	1.31
	velocity		8.38		8.66		8.59		7.60	8.29	183.5	8.38	8.66	8.59	7.60	8.52	8.07	
Õiglane, Janek (EST) (1994)	time		11.78		23.19		35.29		48.41	48.41	2 / 2							*Seiko Timing (2023)*
reaction time 0.163	interval				11.41		12.10		13.12	PB	# of strides	11.78	11.41	12.10	13.12	23.19	25.22	2.03
	velocity		8.49		8.76		8.26		7.62	8.26	180.7	8.49	8.76	8.26	7.62	8.62	7.93	
Ferreira Santana, Jose (BR	time		12.16		23.67		36.03		49.31	49.31	6 / 3							*Seiko Timing (2023)*
reaction time 0.147	interval				11.51		12.36		13.28		# of strides	12.16	11.51	12.36	13.28	23.67	25.64	1.97
	velocity		8.22		8.69		8.09		7.53	8.11		8.22	8.69	8.09	7.53	8.45	7.80	
Maruyama, Yuma (JPN) (19	time	6.51	11.93	17.58	23.56	29.75	36.26	43.18	50.75	50.75	5 / 4							*Matsubayashi (2024)*
reaction time 0.157	interval		5.42	5.65	5.98	6.19	6.51	6.92	7.57		# of strides	11.93	11.63	12.70	14.49	23.56	27.19	3.63
	velocity	7.68	9.23	8.85	8.36	8.08	7.68	7.23	6.61	7.88		8.38	8.60	7.87	6.90	8.49	7.36	
Nilsson, Marcus (SWE) (19	time		12.33		24.09		37.17		51.36	51.36	3 / 5							*Seiko Timing (2023)*
reaction time 0.204	interval				11.76		13.08		14.19		# of strides	12.33	11.76	13.08	14.19	24.09	27.27	3.18
	velocity		8.11		8.50		7.65		7.05	7.79		8.11	8.50	7.65	7.05	8.30	7.33	

Yamanaka (2024) - analysis of men's and women's 400m and 300m runs in the 2023 season

FINAL

date 24-Aug-23

Seiko Timing (2023) - world championship race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Watson, Antonio (JAM) (2	time	6.26	11.18	16.15	21.28	26.63	32.23	38.03	44.22	44.22	7 / 1							*Yamanaka (2024)*
reaction time 0.165	interval		4.92	4.97	5.13	5.35	5.60	5.80	6.19		# of strides	11.18	10.10	10.95	11.99	21.28	22.94	1.66
	velocity	7.99	10.16	10.06	9.75	9.35	8.93	8.62	8.08	9.05	167.0	8.94	9.90	9.13	8.34	9.40	8.72	
Hudson-Smith, Matthew (	time	5.98	10.93	15.96	21.08	26.36	31.96	37.90	44.31	44.31	5 / 2							*Yamanaka (2024)*
reaction time 0.151	interval		4.95	5.03	5.12	5.28	5.60	5.94	6.41		# of strides	10.93	10.15	10.88	12.35	21.08	23.23	2.15
	velocity	8.36	10.10	9.94	9.77	9.47	8.93	8.42	7.80	9.03	163.5	9.15	9.85	9.19	8.10	9.49	8.61	
Hall, Quincy (USA) (1998)	time	6.25	11.25	16.37	21.60	26.96	32.48	38.23	44.37	44.37	6 / 3							*Yamanaka (2024)*
reaction time 0.192	interval		5.00	5.12	5.23	5.36	5.52	5.75	6.14	PB	# of strides	11.25	10.35	10.88	11.89	21.60	22.77	1.17
	velocity	8.00	10.00	9.77	9.56	9.33	9.06	8.70	8.14	9.02	160.0	8.89	9.66	9.19	8.41	9.26	8.78	
Norwood, Vernon (USA) (1	time	6.00	11.01	16.10	21.33	26.72	32.30	38.12	44.39	44.39	8 / 4							*Yamanaka (2024)*
reaction time 0.163	interval		5.01	5.09	5.23	5.39	5.58	5.82	6.27		# of strides	11.01	10.32	10.97	12.09	21.33	23.06	1.73
	velocity	8.33	9.98	9.82	9.56	9.28	8.96	8.59	7.97	9.01	175.0	9.08	9.69	9.12	8.27	9.38	8.67	
James, Kirani (GRN) (1992)	time		11.13		21.34		32.18		44.52	44.52	4 / ~~5~~							*Seiko Timing (2023)*
reaction time 0.133	interval				10.21		10.84		12.34	DQ	# of strides	11.13	10.21	10.84	12.34	21.34	23.18	1.84
	velocity		8.98		9.79		9.23		8.10	8.98	160.5	8.98	9.79	9.23	8.10	9.37	8.63	
Bailey, Sean (JAM) (1997)	time		11.18		21.67		32.90		44.96	44.96	9 / ~~6~~ 5							*Seiko Timing (2023)*
reaction time 0.169	interval				10.49		11.23		12.06		# of strides	11.18	10.49	11.23	12.06	21.67	23.29	1.62
	velocity		8.94		9.53		8.90		8.29	8.90		8.94	9.53	8.90	8.29	9.23	8.59	
Ingvaldsen, Håvard Bentda	time		11.39		21.66		32.91		45.08	45.08	3 / ~~7~~ 6							*Seiko Timing (2023)*
reaction time 0.199	interval				10.27		11.25		12.17		# of strides	11.39	10.27	11.25	12.17	21.66	23.42	1.76
	velocity		8.78		9.74		8.89		8.22	8.87		8.78	9.74	8.89	8.22	9.23	8.54	
van Niekerk, Wayde (RSA)	time		11.05		21.35		32.44		45.11	45.11	2 / ~~8~~ 7							*Seiko Timing (2023)*
reaction time 0.171	interval				10.30		11.09		12.67		# of strides	11.05	10.30	11.09	12.67	21.35	23.76	2.41
	velocity		9.05		9.71		9.02		7.89	8.87		9.05	9.71	9.02	7.89	9.37	8.42	

Yamanaka (2024) - analysis of men's and women's 400m and 300m runs in the 2023 season

Semi-Final 3

date 22-Aug-23

Seiko Timing (2023) - world championship race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hall, Quincy (USA) (1998)	time	6.22	11.22	16.28	21.51	26.86	32.44	38.22	44.43	44.43	7 / 1							*Yamanaka (2024)*
reaction time 0.176	interval		5.00	5.06	5.23	5.35	5.58	5.78	6.21		# of strides	11.22	10.29	10.93	11.99	21.51	22.92	1.41
	velocity	8.04	10.00	9.88	9.56	9.35	8.96	8.65	8.05	9.00	161.0	8.91	9.72	9.15	8.34	9.30	8.73	
Bailey, Sean (JAM) (1997)	time	6.13	11.08	16.12	21.41	26.92	32.69	38.63	44.94	44.94	4 / 2							*Yamanaka (2024)*
reaction time 0.165	interval		4.88	4.95	5.15	5.36	5.60	5.88	6.40		# of strides	11.08	10.33	11.28	12.25	21.41	23.53	2.12
	velocity	8.28	10.25	10.10	9.71	9.33	8.93	8.50	7.81	8.90	178.0	9.03	9.68	8.87	8.16	9.34	8.50	
Nakajima, Yuki Joseph (JPI	time	6.23	11.19	16.22	21.51	26.96	32.69	38.64	45.04	45.04	9 / 3							*Yamanaka (2024)*
reaction time 0.215	interval		4.88	4.95	5.15	5.36	5.60	5.88	6.40	PB	# of strides	11.19	10.32	11.18	12.35	21.51	23.53	2.02
	velocity	8.28	10.25	10.10	9.71	9.33	8.93	8.50	7.81	8.88	170.0	8.94	9.69	8.94	8.10	9.30	8.50	
Re, Davide (ITA) (1993)	time		11.33		21.69		33.19		45.29	45.29	3 / 4							*Seiko Timing (2023)*
reaction time 0.165	interval				10.36		11.50		12.10		# of strides	11.33	10.36	11.50	12.10	21.69	23.60	1.91
	velocity		8.83		9.65		8.70		8.26	8.83		8.83	9.65	8.70	8.26	9.22	8.47	
Doom, Alexander (BEL) (1	time		11.36		21.56		33.18		45.57	45.57	5 / 4							*Seiko Timing (2023)*
reaction time 0.168	interval				10.20		11.62		12.39		# of strides	11.36	10.20	11.62	12.39	21.56	24.01	2.45
	velocity		8.80		9.80		8.61		8.07	8.78		8.80	9.80	8.61	8.07	9.28	8.33	
Nene, Zakithi (RSA) (1998)	time		11.06		21.45		32.64		45.64	45.64	2 / 6							*Seiko Timing (2023)*
reaction time 0.151	interval				10.39		11.19		13.00		# of strides	11.06	10.39	11.19	13.00	21.45	24.19	2.74

	velocity		9.04		9.62		8.94	7.69	8.76		9.04	9.62	8.94	7.69	9.32	8.27	
Gardiner, Steven (BAH) (19	time		11.17		21.15		32.57		dnf	6 / --							*Seiko Timing (2023)*
reaction time 0.221	interval				9.98		11.42			# of strides	11.17	9.98	11.42		21.15		
	velocity		8.95		10.02		8.76				8.95	10.02	8.76		9.46		
Ndori, Bayapo (BOT) (1999	time		12.69						dnf	8 / --							*Seiko Timing (2023)*
reaction time 0.159	interval									# of strides	12.69						
	velocity		7.88								7.88						

Yamanaka (2024) - analysis of men's and women's 400m and 300m runs in the 2023 season

Semi-Final 2

date 22-Aug-23

Seiko Timing (2023) - world championship race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hudson-Smith, Matthew (	time	6.04	10.92	15.87	21.02	26.38	31.98	37.86	44.26	44.26	7 / 1							*Yamanaka (2024)*
reaction time 0.167	interval		4.88	4.95	5.15	5.36	5.60	5.88	6.40	AR PB	# of strides	10.92	10.10	10.96	12.28	21.02	23.24	2.22
	velocity	8.28	10.25	10.10	9.71	9.33	8.93	8.50	7.81	9.04	163.0	9.16	9.90	9.12	8.14	9.51	8.61	
James, Kirani (GRN) (1992)	time	5.95	10.76	15.68	20.84	26.32	32.10	38.13	44.58	44.58	5 / 2							*Yamanaka (2024)*
reaction time 0.147	interval		4.81	4.92	5.16	5.48	5.78	6.03	6.45		# of strides	10.76	10.08	11.26	12.48	20.84	23.74	2.90
	velocity	8.40	10.40	10.16	9.69	9.12	8.65	8.29	7.75	8.97	162.0	9.29	9.92	8.88	8.01	9.60	8.42	
Ingvaldsen, Håvard Bentda	time	6.20	11.10	16.07	21.28	26.73	32.45	38.34	44.70	44.70	8 / 3							*Yamanaka (2024)*
reaction time 0.190	interval		4.90	4.97	5.21	5.45	5.72	5.89	6.36		# of strides	11.10	10.18	11.17	12.25	21.28	23.42	2.14
	velocity	8.06	10.20	10.06	9.60	9.17	8.74	8.49	7.86	8.95	183.0	9.01	9.82	8.95	8.16	9.40	8.54	
Sato, Fuga (JPN) (1996)	time	6.02	10.88	15.85	21.09	26.60	32.40	38.38	44.88	44.88	6 / 4							*Yamanaka (2024)*
reaction time 0.150	interval		4.86	4.97	5.24	5.51	5.80	5.98	6.50	PB	# of strides	10.88	10.21	11.31	12.48	21.09	23.79	2.70
	velocity	8.31	10.29	10.06	9.54	9.07	8.62	8.36	7.69	8.91	173.0	9.19	9.79	8.84	8.01	9.48	8.41	
Bonevacia, Liemarvin (NED	time		11.32		21.45		32.78		45.23	45.23	4 / 5							*Seiko Timing (2023)*
reaction time 0.175	interval				10.13		11.33		12.45		# of strides	11.32	10.13	11.33	12.45	21.45	23.78	2.33
	velocity		8.83		9.87		8.83		8.03	8.84	181.0	8.83	9.87	8.83	8.03	9.32	8.41	
Barnes, Zandrion (JAM) (2(	time		11.16		21.48		32.70		45.38	45.38	9 / 6							*Seiko Timing (2023)*
reaction time 0.171	interval				10.32		11.22		12.68		# of strides	11.16	10.32	11.22	12.68	21.48	23.90	2.42
	velocity		8.96		9.69		8.91		7.89	8.81	179.0	8.96	9.69	8.91	7.89	9.31	8.37	
Borlée, Dylan (BEL) (1992)	time		11.16		21.38		32.93		45.59	45.59	3 / 7							*Seiko Timing (2023)*
reaction time 0.153	interval				10.22		11.55		12.66		# of strides	11.16	10.22	11.55	12.66	21.38	24.21	2.83
	velocity		8.96		9.78		8.66		7.90	8.77	175.0	8.96	9.78	8.66	7.90	9.35	8.26	
Kebinatshipi, Collen (BOT)	time		11.26		22.30		34.01		46.39	46.39	2 / 8							*Seiko Timing (2023)*
reaction time 0.168	interval				11.04		11.71		12.38		# of strides	11.26	11.04	11.71	12.38	22.30	24.09	1.79
	velocity		8.88		9.06		8.54		8.08	8.62	189.7	8.88	9.06	8.54	8.08	8.97	8.30	

Yamanaka (2024) - analysis of men's and women's 400m and 300m runs in the 2023 season

Semi-Final 1

date 22-Aug-23

Seiko Timing (2023) - world championship race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Watson, Antonio (JAM) (2(	time	6.16	11.00	15.89	20.97	26.33	31.96	37.87	44.13	44.13	5 / 1							*Yamanaka (2024)*
reaction time 0.158	interval		4.84	4.89	5.08	5.36	5.63	5.91	6.26	PB	# of strides	11.00	9.97	10.99	12.17	20.97	23.16	2.19
	velocity	8.12	10.33	10.22	9.84	9.33	8.88	8.46	7.99	9.06	169.5	9.09	10.03	9.10	8.22	9.54	8.64	
Norwood, Vernon (USA) (1	time	6.11	11.12	16.22	21.45	26.85	32.43	38.15	44.26	44.26	7 / 2							*Yamanaka (2024)*
reaction time 0.181	interval		5.01	5.10	5.23	5.40	5.58	5.72	6.11	PB	# of strides	11.12	10.33	10.98	11.83	21.45	22.81	1.36
	velocity	8.18	9.98	9.80	9.56	9.26	8.96	8.74	8.18	9.04	170.0	8.99	9.68	9.11	8.45	9.32	8.77	
van Niekerk, Wayde (RSA) (	time	6.06	10.89	15.83	20.99	26.46	32.16	38.11	44.65	44.65	8 / 3							*Yamanaka (2024)*
reaction time 0.178	interval		4.83	4.94	5.16	5.47	5.70	5.95	6.54		# of strides	10.89	10.10	11.17	12.49	20.99	23.66	2.67
	velocity	8.25	10.35	10.12	9.69	9.14	8.77	8.40	7.65	8.96	163.0	9.18	9.90	8.95	8.01	9.53	8.45	
Richards, Jareem (TTO) (19	time		10.92		20.91		32.20		44.76	44.76	4 / 4							*Seiko Timing (2023)*
reaction time 0.160	interval				9.99		11.29		12.56		# of strides	10.92	9.99	11.29	12.56	20.91	23.85	2.94
	velocity		9.16		10.01		8.86		7.96	8.94	176.0	9.16	10.01	8.86	7.96	9.56	8.39	
Sato, Kentaro (JPN) (1994)	time	6.11	11.11	16.22	21.45	26.82	32.56	38.56	44.99	44.99	6 / 5							*Yamanaka (2024)*
reaction time 0.180	interval		5.00	5.11	5.23	5.37	5.74	6.00	6.43		# of strides	11.11	10.34	11.11	12.43	21.45	23.54	2.09
	velocity	8.18	10.00	9.78	9.56	9.31	8.71	8.33	7.78	8.89	174.0	9.00	9.67	9.00	8.05	9.32	8.50	
Molnár, Attila (HUN) (2002)	time		11.04		21.21		32.55		45.02	45.02	9 / 6							*Seiko Timing (2023)*
reaction time 0.156	interval				10.17		11.34		12.47		# of strides	11.04	10.17	11.34	12.47	21.21	23.81	2.60
	velocity		9.06		9.83		8.82		8.02	8.88	177.0	9.06	9.83	8.82	8.02	9.43	8.40	
Joseph, Michael (LCA) (20(	time		11.17		21.36		33.01		45.50	45.50	2 / 7							*Seiko Timing (2023)*
reaction time 0.161	interval				10.19		11.65		12.49		# of strides	11.17	10.19	11.65	12.49	21.36	24.14	2.78
	velocity		8.95		9.81		8.58		8.01	8.79		8.95	9.81	8.58	8.01	9.36	8.29	
Scotch, Leungo (BOT) (19(	time		11.23		21.56		33.09		45.96	45.96	3 / 8							*Seiko Timing (2023)*
reaction time 0.162	interval				10.33		11.53		12.87		# of strides	11.23	10.33	11.53	12.87	21.56	24.40	2.84
	velocity		8.90		9.68		8.67		7.77	8.70		8.90	9.68	8.67	7.77	9.28	8.20	

Heat 6

date 20-Aug-23

Seiko Timing (2023) - world championship race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ndori, Bayapo (BOT) (1999	time		11.05		21.19		32.32		44.72	44.72	8 / 1							
reaction time 0.155	interval				10.14		11.13		12.40		# of strides	11.05	10.14	11.13	12.40	21.19	23.53	2.34
	velocity		9.05		9.86		8.98		8.06	8.94	172.5	9.05	9.86	8.98	8.06	9.44	8.50	

Doom, Alexander (BEL) (1	time		11.50		21.59		32.90		44.92	44.92	5 / 2						
reaction time 0.171	interval				10.09		11.31		12.02	PB	# of strides	11.50	10.09	11.31	12.02	21.59	23.33	1.74
	velocity		8.70		9.91		8.84		8.32	8.90	177.5	8.70	9.91	8.84	8.32	9.26	8.57	
Barnes, Zandrion (JAM) (2	time		11.26		21.39		32.49		45.05	45.05	9 / 3						
reaction time 0.186	interval				10.13		11.10		12.56		# of strides	11.26	10.13	11.10	12.56	21.39	23.66	2.27
	velocity		8.88		9.87		9.01		7.96	8.88	178.0	8.88	9.87	9.01	7.96	9.35	8.45	
Carvalho, Lucas (BRA) (19	time		11.30		21.67		32.95		45.34	45.34	7 / 4						
reaction time 0.175	interval				10.37		11.28		12.39		# of strides	11.30	10.37	11.28	12.39	21.67	23.67	2.00
	velocity		8.85		9.64		8.87		8.07	8.82	180.7	8.85	9.64	8.87	8.07	9.23	8.45	
Sanders, Manuel (GER) (19	time		11.61		21.90		33.31		45.34	45.34	6 / 4						
reaction time 0.187	interval				10.29		11.41		12.03		# of strides	11.61	10.29	11.41	12.03	21.90	23.44	1.54
	velocity		8.61		9.72		8.76		8.31	8.82	164.0	8.61	9.72	8.76	8.31	9.13	8.53	
Krsek, Matěj (CZE) (2000)	time		11.69		22.45		33.81		45.99	45.99	3 / 6						
reaction time 0.147	interval				10.76		11.36		12.18		# of strides	11.69	10.76	11.36	12.18	22.45	23.54	1.09
	velocity		8.55		9.29		8.80		8.21	8.70		8.55	9.29	8.80	8.21	8.91	8.50	
Deadmon, Bryce (USA) (19	time		11.30		21.81		33.48		46.20	46.20	4 / 7						
reaction time 0.170	interval				10.51		11.67		12.72		# of strides	11.30	10.51	11.67	12.72	21.81	24.39	2.58
	velocity		8.85		9.51		8.57		7.86	8.66		8.85	9.51	8.57	7.86	9.17	8.20	

Yamanaka (2024) - analysis of men's and women's 400m and 300m runs in the 2023 season

Heat 5

date 20-Aug-23

Seiko Timing (2023) - world championship race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Watson, Antonio (JAM) (2	time		11.40		21.56		32.77		44.77	44.77	3 / 1							
reaction time 0.169	interval				10.16		11.21		12.00		# of strides	11.40	10.16	11.21	12.00	21.56	23.21	1.65
	velocity		8.77		9.84		8.92		8.33	8.93	166.2	8.77	9.84	8.92	8.33	9.28	8.62	
Hall, Quincy (USA) (1998)	time		11.38		21.76		33.05		44.86	44.86	5 / 2							
reaction time 0.181	interval				10.38		11.29		11.81		# of strides	11.38	10.38	11.29	11.81	21.76	23.10	1.34
	velocity		8.79		9.63		8.86		8.47	8.92	159.0	8.79	9.63	8.86	8.47	9.19	8.66	
Nakajima, Yuki Joseph (JPI	time	6.26	11.32	16.49	21.77	27.19	32.86	38.74	45.15	45.15	4 / 3							*Yamanaka (2024)*
reaction time 0.181	interval		5.06	5.17	5.28	5.42	5.67	5.88	6.41		# of strides	11.32	10.45	11.09	12.29	21.77	23.38	1.61
	velocity	7.99	9.88	9.67	9.47	9.23	8.82	8.50	7.80	8.86	166.5	8.83	9.57	9.02	8.14	9.19	8.55	
Pillay, Lythe (RSA) (2003)	time		11.20		21.67		33.25		45.58	45.58	7 / 4							
reaction time 0.161	interval				10.47		11.58		12.33		# of strides	11.20	10.47	11.58	12.33	21.67	23.91	2.24
	velocity		8.93		9.55		8.64		8.11	8.78		8.93	9.55	8.64	8.11	9.23	8.36	
Spitz, Lionel (SUI) (2001)	time		11.37		21.85		33.18		45.69	45.69	9 / 5							
reaction time 0.180	interval				10.48		11.33		12.51		# of strides	11.37	10.48	11.33	12.51	21.85	23.84	1.99
	velocity		8.80		9.54		8.83		7.99	8.75		8.80	9.54	8.83	7.99	9.15	8.39	
Zalewski, Karol (POL) (199	time		11.37		22.03		33.80		46.53	46.53	2 / 6							
reaction time 0.168	interval				10.66		11.77		12.73		# of strides	11.37	10.66	11.77	12.73	22.03	24.50	2.47
	velocity		8.80		9.38		8.50		7.86	8.60		8.80	9.38	8.50	7.86	9.08	8.16	
O'Donnell, Christopher (IR	time		11.55		22.30		33.88		46.76	46.76	6 / 7							
reaction time 0.159	interval				10.75		11.58		12.88		# of strides	11.55	10.75	11.58	12.88	22.30	24.46	2.16
	velocity		8.66		9.30		8.64		7.76	8.55		8.66	9.30	8.64	7.76	8.97	8.18	
Boyce, Desean (BAR) (200	time		11.14		21.82		33.77			dnf	8 / --							
reaction time 0.168	interval				10.68		11.95				# of strides	11.14	10.68	11.95		21.82		
	velocity		8.98		9.36		8.37					8.98	9.36	8.37		9.17		

Yamanaka (2024) - analysis of men's and women's 400m and 300m runs in the 2023 season

Heat 4

date 20-Aug-23

Seiko Timing (2023) - world championship race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
James, Kirani (GRN) (1992)	time		11.12		21.70		33.16		44.91	44.91	6 / 1							
reaction time 0.166	interval				10.58		11.46		11.75		# of strides	11.12	10.58	11.46	11.75	21.70	23.21	1.51
	velocity		8.99		9.45		8.73		8.51	8.91	158.0	8.99	9.45	8.73	8.51	9.22	8.62	
Sato, Fuga (JPN) (1996)	time	6.12	11.13	16.25	21.54	27.02	32.73	38.69	44.97	44.97	5 / 2							*Yamanaka (2024)*
reaction time 0.167	interval		5.01	5.12	5.29	5.48	5.71	5.96	6.28	PB	# of strides	11.13	10.41	11.19	12.24	21.54	23.43	1.89
	velocity	8.17	9.98	9.77	9.45	9.12	8.76	8.39	7.96	8.89	176.0	8.98	9.61	8.94	8.17	9.29	8.54	
Bailey, Sean (JAM) (1997)	time		11.36		21.70		33.05		44.98	44.98	3 / 3							
reaction time 0.183	interval				10.34		11.35		11.93		# of strides	11.36	10.34	11.35	11.93	21.70	23.28	1.58
	velocity		8.80		9.67		8.81		8.38	8.89	176.0	8.80	9.67	8.81	8.38	9.22	8.59	
Re, Davide (ITA) (1993)	time		11.48		22.01		33.35		45.07	45.07	4 / 4							
reaction time 0.153	interval				10.53		11.34		11.72		# of strides	11.48	10.53	11.34	11.72	22.01	23.06	1.05
	velocity		8.71		9.50		8.82		8.53	8.88	174.0	8.71	9.50	8.82	8.53	9.09	8.67	
Scotch, Leungo (BOT) (19	time		11.15		21.46		32.88		45.20	45.20	2 / 5							
reaction time 0.169	interval				10.31		11.42		12.32		# of strides	11.15	10.31	11.42	12.32	21.46	23.74	2.28
	velocity		8.97		9.70		8.76		8.12	8.85	181.0	8.97	9.70	8.76	8.12	9.32	8.42	
Nwachukwu, Debem (NGR	time		11.02		21.82		33.37		45.60	45.60	9 / 6							
reaction time 0.190	interval				10.80		11.55		12.23		# of strides	11.02	10.80	11.55	12.23	21.82	23.78	1.96

	velocity		9.07		9.26		8.66		8.18		8.77		9.07	9.26	8.66	8.18	9.17	8.41	
Nielsen, Gustav Lundholm	time		11.36		21.98		33.40		45.66		45.66	7 / 7							
reaction time 0.176	interval				10.62		11.42		12.26		PB	# of strides	11.36	10.62	11.42	12.26	21.98	23.68	1.70
	velocity		8.80		9.42		8.76		8.16		8.76		8.80	9.42	8.76	8.16	9.10	8.45	
Bengtström, Carl (SWE) (2	time		11.26		21.80		33.42		45.72		45.72	8 / ~~9~~							
reaction time 0.191	interval				10.54		11.62		12.30		DQ	# of strides	11.26	10.54	11.62	12.30	21.80	23.92	2.12
	velocity		8.88		9.49		8.61		8.13		8.75		8.88	9.49	8.61	8.13	9.17	8.36	

Heat 3

date 20-Aug-23

Seiko Timing (2023) - world championship race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ingvaldsen, Håvard Bentda	time		11.37		21.46		32.39		44.39	44.39	8 / 1							
reaction time 0.218	interval				10.09		10.93		12.00	NR PB	# of strides	11.37	10.09	10.93	12.00	21.46	22.93	1.47
	velocity		8.80		9.91		9.15		8.33	9.01	177.2	8.80	9.91	9.15	8.33	9.32	8.72	
Norwood, Vernon (USA) (1	time		11.28		21.56		32.76		44.87	44.87	4 / 2							
reaction time 0.194	interval				10.28		11.20		12.11		# of strides	11.28	10.28	11.20	12.11	21.56	23.31	1.75
	velocity		8.87		9.73		8.93		8.26	8.91	173.0	8.87	9.73	8.93	8.26	9.28	8.58	
Richards, Jereem (TTO) (19	time		11.39		21.92		33.17		45.15	45.15	2 / 3							
reaction time 0.153	interval				10.53		11.25		11.98		# of strides	11.39	10.53	11.25	11.98	21.92	23.23	1.31
	velocity		8.78		9.50		8.89		8.35	8.86	169.5	8.78	9.50	8.89	8.35	9.12	8.61	
Borlée, Dylan (BEL) (1992)	time		11.25		21.44		32.85		45.24	45.24	6 / 4							
reaction time 0.160	interval				10.19		11.41		12.39		# of strides	11.25	10.19	11.41	12.39	21.44	23.80	2.36
	velocity		8.89		9.81		8.76		8.07	8.84	175.5	8.89	9.81	8.76	8.07	9.33	8.40	
Pohorilko, Oleksandr (UKR	time		11.80		22.21		33.13		45.37	45.37	3 / 5							
reaction time 0.233	interval				10.41		10.92		12.24		# of strides	11.80	10.41	10.92	12.24	22.21	23.16	0.95
	velocity		8.47		9.61		9.16		8.17	8.82	170.7	8.47	9.61	9.16	8.17	9.00	8.64	
Coelho, João (POR) (1999)	time		11.50		21.83		33.00		45.38	45.38	9 / 6							
reaction time 0.273	interval				10.33		11.17		12.38		# of strides	11.50	10.33	11.17	12.38	21.83	23.55	1.72
	velocity		8.70		9.68		8.95		8.08	8.81	175.0	8.70	9.68	8.95	8.08	9.16	8.49	
Jones, Jonathan (BAR) (19	time		11.40		21.70		32.91		46.03	46.03	7 / 7							
reaction time 0.156	interval				10.30		11.21		13.12		# of strides	11.40	10.30	11.21	13.12	21.70	24.33	2.63
	velocity		8.77		9.71		8.92		7.62	8.69	175.2	8.77	9.71	8.92	7.62	9.22	8.22	

Heat 2

date 20-Aug-23

Seiko Timing (2023) - world championship race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
van Niekerk, Wayde (RSA) (	time		11.17		21.31		32.56		44.57	44.57	4 / 1							
reaction time 0.185	interval				10.14		11.25		12.01		# of strides	11.17	10.14	11.25	12.01	21.31	23.26	1.95
	velocity		8.95		9.86		8.89		8.33	8.97	162.0	8.95	9.86	8.89	8.33	9.39	8.60	
Hudson-Smith, Matthew (C	time		11.16		21.26		32.36		44.69	44.69	3 / 2							
reaction time 0.177	interval				10.10		11.10		12.33		# of strides	11.16	10.10	11.10	12.33	21.26	23.43	2.17
	velocity		8.96		9.90		9.01		8.11	8.95	165.0	8.96	9.90	9.01	8.11	9.41	8.54	
Bonevacia, Liemarvin (NED	time		11.53		21.88		33.13		44.78	44.78	7 / 3							
reaction time 0.186	interval				10.35		11.25		11.65		# of strides	11.53	10.35	11.25	11.65	21.88	22.90	1.02
	velocity		8.67		9.66		8.89		8.58	8.93	178.0	8.67	9.66	8.89	8.58	9.14	8.73	
Kebinatshipi, Collen (BOT)	time		10.92		21.37		32.68		44.80	44.80	6 / 4							
reaction time 0.155	interval				10.45		11.31		12.12	AJR PB	# of strides	10.92	10.45	11.31	12.12	21.37	23.43	2.06
	velocity		9.16		9.57		8.84		8.25	8.93	189.0	9.16	9.57	8.84	8.25	9.36	8.54	
Zambrano, Anthony (COL)	time		11.03		21.29		32.62		44.92	44.92	9 / ~~5~~							
reaction time 0.223	interval				10.26		11.33		12.30	DQ	# of strides	11.03	10.26	11.33	12.30	21.29	23.63	2.34
	velocity		9.07		9.75		8.83		8.13	8.90	176.0	9.07	9.75	8.83	8.13	9.39	8.46	
Larrengina, Elián (ARG) (2(	time		11.15		21.37		32.78		45.42	45.42	8 / ~~6~~ 5							
reaction time 0.181	interval				10.22		11.41		12.64		# of strides	11.15	10.22	11.41	12.64	21.37	24.05	2.68
	velocity		8.97		9.78		8.76		7.91	8.81	169.0	8.97	9.78	8.76	7.91	9.36	8.32	
Russell, Alonzo (BAH) (19	time		11.29		21.63		33.31		46.95	46.95	5 / ~~7~~ 6							
reaction time 0.188	interval				10.34		11.68		13.64		# of strides	11.29	10.34	11.68	13.64	21.63	25.32	3.69
	velocity		8.86		9.67		8.56		7.33	8.52	179.7	8.86	9.67	8.56	7.33	9.25	7.90	

Yamanaka (2024) - analysis of men's and women's 400m and 300m runs in the 2023 season

Heat 1

date 20-Aug-23

Seiko Timing (2023) - world championship race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Gardiner, Steven (BAH) (19	time		11.16		21.29		32.34		44.65	44.65	7 / 1							
reaction time 0.197	interval				10.13		11.05		12.31		# of strides	11.16	10.13	11.05	12.31	21.29	23.36	2.07
	velocity		8.96		9.87		9.05		8.12	8.96	160.0	8.96	9.87	9.05	8.12	9.39	8.56	
Sato, Kentaro (JPN) (1994)	time	6.24	11.31	16.46	21.71	27.07	32.71	38.59	44.77	44.77	6 / 2							*Yamanaka (2024)*
reaction time 0.172	interval		5.07	5.15	5.25	5.36	5.64	5.88	6.18	NR PB	# of strides	11.31	10.40	11.00	12.06	21.71	23.06	1.35
	velocity	8.01	9.86	9.71	9.52	9.33	8.87	8.50	8.09	8.93	174.5	8.84	9.62	9.09	8.29	9.21	8.67	
Molnár, Attila (HUN) (2002)	time		11.25		21.46		32.95		44.84	44.84	9 / 3							
reaction time 0.172	interval				10.21		11.49		11.89	NR PB	# of strides	11.25	10.21	11.49	11.89	21.46	23.38	1.92
	velocity		8.89		9.79		8.70		8.41	8.92	175.2	8.89	9.79	8.70	8.41	9.32	8.55	

Nene, Zakithi (RSA) (1998)	time	11.10	21.39	32.49	44.88	44.88	8 / 4								
reaction time 0.145	interval		10.29	11.10	12.39		# of strides	11.10	10.29	11.10	12.39	21.39	23.49	2.10	
	velocity	9.01	9.72	9.01	8.07	8.91	180.0	9.01	9.72	9.01	8.07	9.35	8.51		
Joseph, Michael (LCA) (20(	time	11.33	21.61	32.79	45.04	45.04	5 / 5								
reaction time 0.153	interval		10.28	11.18	12.25		# of strides	11.33	10.28	11.18	12.25	21.61	23.43	1.82	
	velocity	8.83	9.73	8.94	8.16	8.88	170.0	8.83	9.73	8.94	8.16	9.25	8.54		
Dharshana, Aruna (SRI) (1!	time	11.63	22.35	33.86	45.70	45.70	4 / 6								
reaction time 0.214	interval		10.72	11.51	11.84		# of strides	11.63	10.72	11.51	11.84	22.35	23.35	1.00	
	velocity	8.60	9.33	8.69	8.45	8.75		8.60	9.33	8.69	8.45	8.95	8.57		
Mweresa, Bonface (KEN) (1	time	11.66	22.48	33.85	45.91	45.91	3 / 7								
reaction time 0.190	interval		10.82	11.37	12.06		# of strides	11.66	10.82	11.37	12.06	22.48	23.43	0.95	
	velocity	8.58	9.24	8.80	8.29	8.71		8.58	9.24	8.80	8.29	8.90	8.54		

2023 Japanese National High School Championsips (Sapporo, JPN)

FINAL date 02-Aug-23

Takashima (2023) - national high school sports festival - biomechanics data

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hirakawa, Kei (JPN)	time		11.26		22.12		33.85		46.63	46.63	5 / 1							
reaction time 0.205	interval				10.86		11.73		12.78		# of strides	11.26	10.86	11.73	12.78	22.12	24.51	2.39
	velocity		8.88		9.21		8.53		7.82	8.58		8.88	9.21	8.53	7.82	9.04	8.16	
Hibio, Kikuta (JPN)	time		11.46		22.47		34.27		47.14	47.14	7 / 2							
reaction time 0.256	interval				11.01		11.80		12.87		# of strides	11.46	11.01	11.80	12.87	22.47	24.67	2.20
	velocity		8.73		9.08		8.47		7.77	8.49		8.73	9.08	8.47	7.77	8.90	8.11	
Kouma, Masano (JPN)	time		11.61		22.52		34.58		47.23	47.23	9 / 3							
reaction time 0.244	interval				10.91		12.06		12.65		# of strides	11.61	10.91	12.06	12.65	22.52	24.71	2.19
	velocity		8.61		9.17		8.29		7.91	8.47		8.61	9.17	8.29	7.91	8.88	8.09	
Daisho, Shogo (JPN)	time		11.61		22.74		34.38		47.33	47.33	4 / 4							
reaction time 0.209	interval				11.13		11.64		12.95		# of strides	11.61	11.13	11.64	12.95	22.74	24.59	1.85
	velocity		8.61		8.98		8.59		7.72	8.45		8.61	8.98	8.59	7.72	8.80	8.13	
Yamano, Haruki (JPN)	time		11.63		22.81		34.85		47.75	47.75	2 / 5							
reaction time 0.246	interval				11.18		12.04		12.90		# of strides	11.63	11.18	12.04	12.90	22.81	24.94	2.13
	velocity		8.60		8.94		8.31		7.75	8.38		8.60	8.94	8.31	7.75	8.77	8.02	
Tanino, Yusei (JPN)	time		11.71		22.79		34.80		47.97	47.97	3 / 6							
reaction time 0.203	interval				11.08		12.01		13.17		# of strides	11.71	11.08	12.01	13.17	22.79	25.18	2.39
	velocity		8.54		9.03		8.33		7.59	8.34		8.54	9.03	8.33	7.59	8.78	7.94	
Kawai, Toshito (JPN)	time		11.68		22.96		35.19		48.06	48.06	8 / 7							
reaction time 0.231	interval				11.28		12.23		12.87		# of strides	11.68	11.28	12.23	12.87	22.96	25.10	2.14
	velocity		8.56		8.87		8.18		7.77	8.32		8.56	8.87	8.18	7.77	8.71	7.97	
Shirahata, Kentaro (JPN)	time		11.54		22.62		34.83		48.36	48.36	6 / 8							
reaction time 0.232	interval				11.08		12.21		13.53		# of strides	11.54	11.08	12.21	13.53	22.62	25.74	3.12
	velocity		8.67		9.03		8.19		7.39	8.27		8.67	9.03	8.19	7.39	8.84	7.77	

2023 London Athletics Meet (London, GBR)

FINAL date 23-Jul-23

Omega Timing (2023) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
van Niekerk, Wayde (RSA) (	time	6.06	10.91	15.93	21.15	26.70	32.30	38.06	44.36	44.36	5 / 1							
reaction time 0.167	interval		4.85	5.02	5.22	5.55	5.60	5.76	6.30		# of strides	10.91	10.24	11.15	12.06	21.15	23.21	2.06
	velocity	8.25	10.31	9.96	9.58	9.01	8.93	8.68	7.94	9.02	165.2	9.17	9.77	8.97	8.29	9.46	8.62	
Deadmon, Bryce (USA) (19	time	6.03	10.97	15.97	21.15	26.70	32.40	38.17	44.40	44.40	4 / 2							
reaction time 0.160	interval		4.94	5.00	5.18	5.55	5.70	5.77	6.23		# of strides	10.97	10.18	11.25	12.00	21.15	23.25	2.10
	velocity	8.29	10.12	10.00	9.65	9.01	8.77	8.67	8.03	9.01	169.0	9.12	9.82	8.89	8.33	9.46	8.60	
Norwood, Vernon (USA) (1	time	6.11	11.04	16.11	21.31	26.72	32.35	38.15	44.46	44.46	3 / 3							
reaction time 0.161	interval		4.93	5.07	5.20	5.41	5.63	5.80	6.31		# of strides	11.04	10.27	11.04	12.11	21.31	23.15	1.84
	velocity	8.18	10.14	9.86	9.62	9.24	8.88	8.62	7.92	9.00	175.0	9.06	9.74	9.06	8.26	9.39	8.64	
Hudson-Smith, Matthew (C	time	6.20	11.19	16.28	21.48	26.90	32.47	38.34	44.72	44.72	6 / 4							
reaction time 0.185	interval		4.99	5.09	5.20	5.42	5.57	5.87	6.38		# of strides	11.19	10.29	10.99	12.25	21.48	23.24	1.76
	velocity	8.06	10.02	9.82	9.62	9.23	8.98	8.52	7.84	8.94	162.0	8.94	9.72	9.10	8.16	9.31	8.61	
Scotch, Leungo (BOT) (19!	time	6.09	11.02	16.08	21.26	26.70	32.43	38.40	44.98	44.98	2 / 5							
reaction time 0.162	interval		4.93	5.06	5.18	5.44	5.73	5.97	6.58		# of strides	11.02	10.24	11.17	12.55	21.26	23.72	2.46
	velocity	8.21	10.14	9.88	9.65	9.19	8.73	8.38	7.60	8.89	176.2	9.07	9.77	8.95	7.97	9.41	8.43	
Willie, Ryan (USA) (2002)	time	6.19	11.12	16.21	21.42	26.88	32.54	38.59	45.39	45.39	7 / 6							
reaction time 0.160	interval		4.93	5.09	5.21	5.46	5.66	6.05	6.80		# of strides	11.12	10.30	11.12	12.85	21.42	23.97	2.55
	velocity	8.08	10.14	9.82	9.60	9.16	8.83	8.26	7.35	8.81	175.0	8.99	9.71	8.99	7.78	9.34	8.34	
Bonevacia, Liemarvin (NED	time	6.25	11.24	16.42	21.76	27.36	33.09	39.03	45.51	45.51	8 / 7							
reaction time 0.159	interval		4.99	5.18	5.34	5.60	5.73	5.94	6.48		# of strides	11.24	10.52	11.33	12.42	21.76	23.75	1.99
	velocity	8.00	10.02	9.65	9.36	8.93	8.73	8.42	7.72	8.79	182.0	8.90	9.51	8.83	8.05	9.19	8.42	

Haydock-Wilson, Alex (GBI	time	6.18	11.25	16.41	21.56	26.93	32.66	38.79	45.59	45.59	1 / 8							
reaction time 0.142	interval		5.07	5.16	5.15	5.37	5.73	6.13	6.80		# of strides	11.25	10.31	11.10	12.93	21.56	24.03	2.47
	velocity	8.09	9.86	9.69	9.71	9.31	8.73	8.16	7.35	8.77	177.0	8.89	9.70	9.01	7.73	9.28	8.32	

2023 Chinese National Championships (Quzhou, CHN)

FINAL

date 22-Jul-23

Shandong Athletics Sport Science (2023)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Liang Baotang (CHN) (200	time		11.78		22.52		34.03	39.93	46.26	46.26	4 / 1							
reaction time 0.146	interval				10.74		11.51	5.90	6.33	PB	# of strides	11.78	10.74	11.51	12.23	22.52	23.74	1.22
	velocity		8.49		9.31		8.69	8.47	7.90	8.65	196.0	8.49	9.31	8.69	8.18	8.88	8.42	
Li Yiqing (CHN) (2005)	time		11.61		22.69		34.35	40.23	46.51	46.51	6 / 2							
reaction time 0.194	interval				11.08		11.66	5.88	6.28		# of strides	11.61	11.08	11.66	12.16	22.69	23.82	1.13
	velocity		8.61		9.03		8.58	8.50	7.96	8.60	186.0	8.61	9.03	8.58	8.22	8.81	8.40	
Yang Wang (CHN) (1996)	time		11.33		22.10		33.80	40.03	46.58	46.58	3 / 3							
reaction time 0.198	interval				10.77		11.70	6.23	6.55		# of strides	11.33	10.77	11.70	12.78	22.10	24.48	2.38
	velocity		8.83		9.29		8.55	8.03	7.63	8.59	186.2	8.83	9.29	8.55	7.82	9.05	8.17	
Ju Tianqi (CHN) (2002)	time		11.64		22.62		34.38	40.36	46.72	46.72	5 / 4							
reaction time 0.215	interval				10.98		11.76	5.98	6.36		# of strides	11.64	10.98	11.76	12.34	22.62	24.10	1.48
	velocity		8.59		9.11		8.50	8.36	7.86	8.56	176.5	8.59	9.11	8.50	8.10	8.84	8.30	
Ding Wenhao (CHN) (2003	time		11.16		21.95		33.62	39.86	46.87	46.87	2 / 5							
reaction time 0.216	interval				10.79		11.67	6.24	7.01		# of strides	11.16	10.79	11.67	13.25	21.95	24.92	2.97
	velocity		8.96		9.27		8.57	8.01	7.13	8.53	176.0	8.96	9.27	8.57	7.55	9.11	8.03	
Qiao Zhiyang (CHN) (1999)	time		11.58		22.96		34.78	40.81	47.06	47.06	7 / 6							
reaction time 0.209	interval				11.38		11.82	6.03	6.25		# of strides	11.58	11.38	11.82	12.28	22.96	24.10	1.14
	velocity		8.64		8.79		8.46	8.29	8.00	8.50	175.2	8.64	8.79	8.46	8.14	8.71	8.30	
Xie Yuqiang (CHN) (1997)	time		11.19		22.15		34.13	40.36	47.91	47.11	1 / 7							
reaction time 0.124	interval				10.96		11.98	6.23	7.55		# of strides	11.19	10.96	11.98	13.78	22.15	25.76	3.61
	velocity		8.94		9.12		8.35	8.03	6.62	8.49	177.0	8.94	9.12	8.35	7.26	9.03	7.76	
Sun Jiahao (CHN) (2002)	time		11.83		23.31		35.02	40.94	47.28	47.28	8 / 8							
reaction time 0.206	interval				11.48		11.71	5.92	6.34		# of strides	11.83	11.48	11.71	12.26	23.31	23.97	0.66
	velocity		8.45		8.71		8.54	8.45	7.89	8.46	177.2	8.45	8.71	8.54	8.16	8.58	8.34	

Semi-Final 2

date 21-Jul-23

Shandong Athletics Sport Science (2023)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Liang Baotang (CHN) (200	time		11.55		22.74		34.20	40.19	46.49	46.49	6 / 1							
reaction time 0.166	interval				11.19		11.46	5.99	6.30	PB	# of strides	11.55	11.19	11.46	12.29	22.74	23.75	1.01
	velocity		8.66		8.94		8.73	8.35	7.94	8.60	195.0	8.66	8.94	8.73	8.14	8.80	8.42	
Qiao Zhiyang (CHN) (1999)	time		11.49		22.27		34.16	40.31	46.81	46.81	2 / 1							
reaction time 0.208	interval				10.78		11.89	6.15	6.50	PB	# of strides	11.49	10.78	11.89	12.65	22.27	24.54	2.27
	velocity		8.70		9.28		8.41	8.13	7.69	8.55	177.0	8.70	9.28	8.41	7.91	8.98	8.15	
Sun Jiahao (CHN) (2002)	time		11.40		23.00		34.60	40.54	46.86	46.86	5 / 3							
reaction time 0.203	interval				11.60		11.60	5.94	6.32		# of strides	11.40	11.60	11.60	12.26	23.00	23.86	0.86
	velocity		8.77		8.62		8.62	8.42	7.91	8.54	177.0	8.77	8.62	8.62	8.16	8.70	8.38	

Semi-Final 1

date 21-Jul-23

Shandong Athletics Sport Science (2023)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ju Tianqi (CHN) (2002)	time		11.58		22.27		33.90	39.91	46.22	46.22	4 / 1							
reaction time 0.209	interval				10.69		11.63	6.01	6.31	PB	# of strides	11.58	10.69	11.63	12.32	22.27	23.95	1.68
	velocity		8.64		9.35		8.60	8.32	7.92	8.65	175.7	8.64	9.35	8.60	8.12	8.98	8.35	
Li Yiqing (CHN) (2005)	time		11.44		22.06		33.72	39.84	46.31	46.31	5 / 2							
reaction time 0.213	interval				10.62		11.66	6.12	6.47	PB	# of strides	11.44	10.62	11.66	12.59	22.06	24.25	2.19
	velocity		8.74		9.42		8.58	8.17	7.73	8.64	185.0	8.74	9.42	8.58	7.94	9.07	8.25	
Yang Wang (CHN) (1996)	time		11.25		21.67		33.47	39.79	46.47	46.47	7 / 3							
reaction time 0.165	interval				10.42		11.80	6.32	6.68	PB	# of strides	11.25	10.42	11.80	13.00	21.67	24.80	3.13
	velocity		8.89		9.60		8.47	7.91	7.49	8.61	186.0	8.89	9.60	8.47	7.69	9.23	8.06	
Ding Wenhao (CHN) (2003	time		11.38		22.42		34.32	40.41	46.81	46.81	1 / 4							
reaction time 0.205	interval				11.04		11.90	6.09	6.40	PB	# of strides	11.38	11.04	11.90	12.49	22.42	24.39	1.97
	velocity		8.79		9.06		8.40	8.21	7.81	8.55	170.0	8.79	9.06	8.40	8.01	8.92	8.20	
Xie Yuqiang (CHN) (1997)	time		11.31		22.13		33.92	40.18	46.83	46.83	3 / 5							
reaction time 0.178	interval				10.82		11.79	6.26	6.65		# of strides	11.31	10.82	11.79	12.91	22.13	24.70	2.57
	velocity		8.84		9.24		8.48	7.99	7.52	8.54	176.2	8.84	9.24	8.48	7.75	9.04	8.10	

Heat 1

date 21-Jul-23

Shandong Athletics Sport Science (2023)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Li Yiqing (CHN) (2005)	time		11.57		22.32		34.05	40.13	46.56	46.56	3 / 1							
reaction time 0.208	interval				10.75		11.73	6.08	6.43		# of strides	11.57	10.75	11.73	12.51	22.32	24.24	1.92
	velocity		8.64		9.30		8.53	8.22	7.78	8.59	185.5	8.64	9.30	8.53	7.99	8.96	8.25	
Ju Tianqi (CHN) (2002)	time		11.42		22.19		34.03	40.23	46.88	46.88	6 / 2							
reaction time 0.213	interval				10.77		11.84	6.20	6.65		# of strides	11.42	10.77	11.84	12.85	22.19	24.69	2.50

	velocity	8.76	9.29	8.45	8.06	7.52	8.53	179.5	8.76	9.29	8.45	7.78	9.01	8.10			
Xie Yuqiang (CHN) (1997)	time	11.29	22.21	34.06	40.29	46.88	46.88	5 / 3									
reaction time 0.173	interval		10.92	11.85	6.23	6.59		# of strides	11.29	10.92	11.85	12.82	22.21	24.67	2.46		
	velocity	8.86	9.16	8.44	8.03	7.59	8.53	174.5	8.86	9.16	8.44	7.80	9.00	8.11			
Deng Hantao (CHN) (2000)	time	11.49	22.36	34.20	40.56	47.35	47.35	2 / 7									
reaction time 0.204	interval		10.87	11.84	6.36	6.79		# of strides	11.49	10.87	11.84	13.15	22.36	24.99	2.63		
	velocity	8.70	9.20	8.45	7.86	7.36	8.45	171.2	8.70	9.20	8.45	7.60	8.94	8.00			

2023 Kamila Skolimowska Memorial (Silesia, POL)

FINAL date 16-Jul-23

Omega Timing (2023) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
van Niekerk, Wayde (RSA)	time	6.11	11.00	16.01	21.21	26.68	32.28	37.95	44.08	44.08	5 / 1							
reaction time 0.241	interval		4.89	5.01	5.20	5.47	5.60	5.67	6.13		# of strides	11.00	10.21	11.07	11.80	21.21	22.87	1.66
	velocity	8.18	10.22	9.98	9.62	9.14	8.93	8.82	8.16	9.07	164.0	9.09	9.79	9.03	8.47	9.43	8.75	
Ndori, Bayapo (BOT) (1999	time	6.12	11.12	16.21	21.41	26.89	32.61	38.49	44.61	44.61	2 / 2							
reaction time 0.162	interval		5.00	5.09	5.20	5.48	5.72	5.88	6.12	=PB	# of strides	11.12	10.29	11.20	12.00	21.41	23.20	1.79
	velocity	8.17	10.00	9.82	9.62	9.12	8.74	8.50	8.17	8.97		8.99	9.72	8.93	8.33	9.34	8.62	
dos Santos, Alison (BRA)	time	6.19	11.05	16.04	21.27	26.69	32.42	38.37	44.73	44.73	4 / 3							
reaction time 0.165	interval		4.86	4.99	5.23	5.42	5.73	5.95	6.36		# of strides	11.05	10.22	11.15	12.31	21.27	23.46	2.19
	velocity	8.08	10.29	10.02	9.56	9.23	8.73	8.40	7.86	8.94	157.0	9.05	9.78	8.97	8.12	9.40	8.53	
Nene, Zakhiti (RSA) (1998)	time	6.07	10.93	15.98	21.29	26.72	32.37	38.23	44.74	44.74	9 / 4							
reaction time 0.150	interval		4.86	5.05	5.31	5.43	5.65	5.86	6.51	=PB	# of strides	10.93	10.36	11.08	12.37	21.29	23.45	2.16
	velocity	8.24	10.29	9.90	9.42	9.21	8.85	8.53	7.68	8.94	176.2	9.15	9.65	9.03	8.08	9.39	8.53	
Willie, Ryan (USA) (2002)	time	6.09	11.01	16.07	21.42	26.96	32.66	38.53	44.77	44.77	8 / 5							
reaction time 0.153	interval		4.92	5.06	5.35	5.54	5.70	5.87	6.24		# of strides	11.01	10.41	11.24	12.11	21.42	23.35	1.93
	velocity	8.21	10.16	9.88	9.35	9.03	8.77	8.52	8.01	8.93	172.0	9.08	9.61	8.90	8.26	9.34	8.57	
Deadmon, Bryce (USA) (19	time	6.07	11.03	16.08	21.36	26.92	32.69	38.54	44.81	44.81	6 / 6							
reaction time 0.155	interval		4.96	5.05	5.28	5.56	5.77	5.85	6.27		# of strides	11.03	10.33	11.33	12.12	21.36	23.45	2.09
	velocity	8.24	10.08	9.90	9.47	8.99	8.67	8.55	7.97	8.93	168.0	9.07	9.68	8.83	8.25	9.36	8.53	
Norwood, Vernon (USA) (1	time	6.15	11.13	16.23	21.52	27.00	32.74	38.60	44.88	44.88	7 / 7							
reaction time 0.174	interval		4.98	5.10	5.29	5.48	5.74	5.86	6.28		# of strides	11.13	10.39	11.22	12.14	21.52	23.36	1.84
	velocity	8.13	10.04	9.80	9.45	9.12	8.71	8.53	7.96	8.91	174.0	8.98	9.62	8.91	8.24	9.29	8.56	
Zalewski, Karol (POL) (1993	time	6.15	11.15	16.32	21.60	27.19	33.11	39.24	45.87	45.87	1 / 8							
reaction time 0.138	interval		5.00	5.17	5.28	5.59	5.92	6.13	6.63		# of strides	11.15	10.45	11.51	12.76	21.60	24.27	2.67
	velocity	8.13	10.00	9.67	9.47	8.94	8.45	8.16	7.54	8.72		8.97	9.57	8.69	7.84	9.26	8.24	
Samukonga, Muzala (ZAM)	time	6.27	11.22	21.80						dnf	3 / --							
reaction time 0.218	interval		4.95	10.58							# of strides	11.22						
	velocity	7.97	10.10	4.73								8.91						

2023 European Athletics U23 Championships (Espoo, FIN)

FINAL date 14-Jul-23

European Athletics (2023) - european athletics U23 championships results book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ingvaldsen, Håvard Bentda	time		11.32		21.59		32.92		45.13	45.13	5 / 1							
reaction time 0.232	interval				10.27		11.33		12.21		# of strides	11.32	10.27	11.33	12.21	21.59	23.54	1.95
	velocity		8.83		9.74		8.83		8.19	8.86	184.2	8.83	9.74	8.83	8.19	9.26	8.50	
Spitz, Lionel (SUI) (2001)	time		11.41		21.94		33.39		45.27	45.27	4 / 2							
reaction time 0.212	interval				10.53		11.45		11.88	PB	# of strides	11.41	10.53	11.45	11.88	21.94	23.33	1.39
	velocity		8.76		9.50		8.73		8.42	8.84	182.0	8.76	9.50	8.73	8.42	9.12	8.57	
Molnár, Attila (HUN) (2002)	time		11.19		21.47		32.92		45.36	45.36	7 / 3							
reaction time 0.187	interval				10.28		11.45		12.44		# of strides	11.19	10.28	11.45	12.44	21.47	23.89	2.42
	velocity		8.94		9.73		8.73		8.04	8.82	179.0	8.94	9.73	8.73	8.04	9.32	8.37	
Dringo, Mihai Sorin (ROU)	time		11.36		21.55		32.99		45.56	45.56	6 / 4							
reaction time 0.181	interval				10.19		11.44		12.57		# of strides	11.36	10.19	11.44	12.57	21.55	24.01	2.46
	velocity		8.80		9.81		8.74		7.96	8.78	178.2	8.80	9.81	8.74	7.96	9.28	8.33	
Benati, Lorenzo (ITA) (200	time		11.53		21.96		33.27		45.70	45.70	3 / 5							
reaction time 0.181	interval				10.43		11.31		12.43		# of strides	11.53	10.43	11.31	12.43	21.96	23.74	1.78
	velocity		8.67		9.59		8.84		8.05	8.75	170.0	8.67	9.59	8.84	8.05	9.11	8.42	
Elkhatib, Omar (POR) (2001	time		11.76		22.31		33.92		45.73	45.73	2 / 6							
reaction time 0.168	interval				10.55		11.61		11.81	PB	# of strides	11.76	10.55	11.61	11.81	22.31	23.42	1.11
	velocity		8.50		9.48		8.61		8.47	8.75	176.0	8.50	9.48	8.61	8.47	8.96	8.54	
Raftery, Jack (IRL) (2001)	time		11.55		22.08		33.63		46.00	46.00	8 / 7							
reaction time 0.191	interval				10.53		11.55		12.37		# of strides	11.55	10.53	11.55	12.37	22.08	23.92	1.84
	velocity		8.66		9.50		8.66		8.08	8.70	175.5	8.66	9.50	8.66	8.08	9.06	8.36	
Kersulis, Tomas (LTU) (200	time		11.46		22.19		34.03		46.89	46.89	1 / 8							
reaction time 0.170	interval				10.73		11.84		12.86		# of strides	11.46	10.73	11.84	12.86	22.19	24.70	2.51
	velocity		8.73		9.32		8.45		7.78	8.53	172.2	8.73	9.32	8.45	7.78	9.01	8.10	

Semi-Final 2

date 13-Jul-23

European Athletics (2023) - european athletics U23 championships results book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ingvaldsen, Håvard Bentda	time		11.47		21.97		33.48		45.35	45.35	7 / 1							
reaction time 0.205	interval				10.50		11.51		11.87		# of strides	11.47	10.50	11.51	11.87	21.97	23.38	1.41
	velocity		8.72		9.52		8.69		8.42	8.82	183.0	8.72	9.52	8.69	8.42	9.10	8.55	
Dringo, Mihai Sorin (ROU)	time		11.56		22.35		34.02		45.84	45.84	8 / 2							
reaction time 0.197	interval				10.79		11.67		11.82		# of strides	11.56	10.79	11.67	11.82	22.35	23.49	1.14
	velocity		8.65		9.27		8.57		8.46	8.73	177.7	8.65	9.27	8.57	8.46	8.95	8.51	
Benati, Lorenzo (ITA) (200	time		11.86		22.69		34.39		45.94	45.94	6 / 3							
reaction time 0.212	interval				10.83		11.70		11.55		# of strides	11.86	10.83	11.70	11.55	22.69	23.25	0.56
	velocity		8.43		9.23		8.55		8.66	8.71		8.43	9.23	8.55	8.66	8.81	8.60	
Elkhatib, Omar (POR) (2001	time		11.92		22.87		34.42		45.99	45.99	5 / 4							
reaction time 0.227	interval				10.95		11.55		11.57	PB	# of strides	11.92	10.95	11.55	11.57	22.87	23.12	0.25
	velocity		8.39		9.13		8.66		8.64	8.70		8.39	9.13	8.66	8.64	8.75	8.65	
Phijffers, Jonas (NED) (200	time		11.94		22.94		34.71		46.60	46.60	2 / 5							
reaction time 0.198	interval				11.00		11.77		11.89		# of strides	11.94	11.00	11.77	11.89	22.94	23.66	0.72
	velocity		8.38		9.09		8.50		8.41	8.58		8.38	9.09	8.50	8.41	8.72	8.45	
Meli, Riccardo (ITA) (2001)	time		11.71		22.83		34.74		46.68	46.68	4 / 6							
reaction time 0.212	interval				11.12		11.91		11.94		# of strides	11.71	11.12	11.91	11.94	22.83	23.85	1.02
	velocity		8.54		8.99		8.40		8.38	8.57		8.54	8.99	8.40	8.38	8.76	8.39	
Steigerwald, Ernö (HUN) (2	time		11.81		22.91		35.04		46.92	46.92	3 / 7							
reaction time 0.241	interval				11.10		12.13		11.88		# of strides	11.81	11.10	12.13	11.88	22.91	24.01	1.10
	velocity		8.47		9.01		8.24		8.42	8.53		8.47	9.01	8.24	8.42	8.73	8.33	
Erta, Bernat (ESP) (2001)	time		11.60		22.91		35.13		47.10	47.10	1 / 8							
reaction time 0.226	interval				11.31		12.22		11.97		# of strides	11.60	11.31	12.22	11.97	22.91	24.19	1.28
	velocity		8.62		8.84		8.18		8.35	8.49		8.62	8.84	8.18	8.35	8.73	8.27	

Semi-Final 1

date 13-Jul-23

European Athletics (2023) - european athletics U23 championships results book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Molnár, Attila (HUN) (2002)	time		11.43		21.97		33.60		45.35	45.35	6 / 1							
reaction time 0.216	interval				10.54		11.63		11.75		# of strides	11.43	10.54	11.63	11.75	21.97	23.38	1.41
	velocity		8.75		9.49		8.60		8.51	8.82		8.75	9.49	8.60	8.51	9.10	8.55	
Spitz, Lionel (SUI) (2001)	time		11.47		22.25		33.86		45.50	45.50	5 / 2							
reaction time 0.193	interval				10.78		11.61		11.64		# of strides	11.47	10.78	11.61	11.64	22.25	23.25	1.00
	velocity		8.72		9.28		8.61		8.59	8.79		8.72	9.28	8.61	8.59	8.99	8.60	
Raftery, Jack (IRL) (2001)	time		11.68		22.37		33.93		45.89	45.89	7 / 3							
reaction time 0.197	interval				10.69		11.56		11.96	PB	# of strides	11.68	10.69	11.56	11.96	22.37	23.52	1.15
	velocity		8.56		9.35		8.65		8.36	8.72		8.56	9.35	8.65	8.36	8.94	8.50	
Kersulis, Tomas (LTU) (200	time		11.46		22.27		34.07		46.30	46.30	2 / 4							
reaction time 0.147	interval				10.81		11.80		12.23		# of strides	11.46	10.81	11.80	12.23	22.27	24.03	1.76
	velocity		8.73		9.25		8.47		8.18	8.64		8.73	9.25	8.47	8.18	8.98	8.32	
Sito, Luca (ITA) (2003)	time		11.48		22.29		33.92		46.34	46.34	4 / 5							
reaction time 0.204	interval				10.81		11.63		12.42		# of strides	11.48	10.81	11.63	12.42	22.29	24.05	1.76
	velocity		8.71		9.25		8.60		8.05	8.63		8.71	9.25	8.60	8.05	8.97	8.32	
Grimerud, Andreas (NOR) (	time		11.87		22.74		34.66		46.88	46.88	8 / 6							
reaction time 0.232	interval				10.87		11.92		12.22		# of strides	11.87	10.87	11.92	12.22	22.74	24.14	1.40
	velocity		8.42		9.20		8.39		8.18	8.53		8.42	9.20	8.39	8.18	8.80	8.29	
Fernandez, Markel (ESP) (2	time		11.38		22.13		34.39		46.92	46.92	1 / 7							
reaction time 0.180	interval				10.75		12.26		12.53		# of strides	11.38	10.75	12.26	12.53	22.13	24.79	2.66
	velocity		8.79		9.30		8.16		7.98	8.53		8.79	9.30	8.16	7.98	9.04	8.07	
Ouceni, Ludovic (FRA) (20	time		11.43							dnf	3 / --							
reaction time 0.200	interval										# of strides	11.43						
	velocity		8.75									8.75						

2023 USATF National Championships (Eugene, OR)

FINAL

date 08-Jul-23

Track Newsletter (2023) - USATF championships/WCT men

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Deadmon, Bryce (USA) (19	time		11.06		21.25		32.44		44.22	44.22	7 / 1							
reaction time 0.188	interval				10.19		11.19		11.78	PB	# of strides	11.06	10.19	11.19	11.78	21.25	22.97	1.72
	velocity		9.04		9.81		8.94		8.49	9.05		9.04	9.81	8.94	8.49	9.41	8.71	
Norwood, Vernon (USA) (1	time		11.26		21.61		32.56		44.39	44.39	5 / 2							
reaction time 0.229	interval				10.35		10.95		11.83		# of strides	11.26	10.35	10.95	11.83	21.61	22.78	1.17
	velocity		8.88		9.66		9.13		8.45	9.01		8.88	9.66	9.13	8.45	9.25	8.78	
Hall, Quincy (USA) (1998)	time		11.45		21.79		32.64		44.41	44.41	4 / 3							
reaction time 0.224	interval				10.34		10.85		11.77	PB	# of strides	11.45	10.34	10.85	11.77	21.79	22.62	0.83
	velocity		8.73		9.67		9.22		8.50	9.01		8.73	9.67	9.22	8.50	9.18	8.84	

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

Robinson, Justin (USA) (2	time	11.23	21.63	32.73	44.47	44.47	6 / 4									
reaction time 0.244	interval		10.40	11.10	11.74	PB	# of strides	11.23	10.40	11.10	11.74	21.63	22.84	1.21		
	velocity	8.90	9.62	9.01	8.52	8.99		8.90	9.62	9.01	8.52	9.25	8.76			
Willie, Ryan (USA) (2002)	time	11.43	21.99	33.17	44.87	44.87	3 / 5									
reaction time 0.195	interval		10.56	11.18	11.70		# of strides	11.43	10.56	11.18	11.70	21.99	22.88	0.89		
	velocity	8.75	9.47	8.94	8.55	8.91		8.75	9.47	8.94	8.55	9.10	8.74			
Boling, Matthew (USA) (20	time	11.00	21.49	32.78	45.17	45.17	8 / 6									
reaction time 0.216	interval		10.49	11.29	12.39	PB	# of strides	11.00	10.49	11.29	12.39	21.49	23.68	2.19		
	velocity	9.09	9.53	8.86	8.07	8.86		9.09	9.53	8.86	8.07	9.31	8.45			
Bailey, Chris (USA) (2000)	time	11.56	22.14	33.15	45.25	45.25	2 / 7									
reaction time 0.227	interval		10.58	11.01	12.10		# of strides	11.56	10.58	11.01	12.10	22.14	23.11	0.97		
	velocity	8.65	9.45	9.08	8.26	8.84		8.65	9.45	9.08	8.26	9.03	8.65			
McRae, Khaleb (USA) (200	time	11.32	21.93	33.30	45.50	45.50	1 / 8									
reaction time 0.232	interval		10.61	11.37	12.20		# of strides	11.32	10.61	11.37	12.20	21.93	23.57	1.64		
	velocity	8.83	9.43	8.80	8.20	8.79		8.83	9.43	8.80	8.20	9.12	8.49			

2023 Bauhaus Galan (Stockholm, SWE)

FINAL

date 02-Jul-23

Omega Timing (2023) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Nene, Zakhiti (RSA) (1998)	time	6.21	11.20	16.39	21.79	27.32	33.05	38.89	45.30	45.30	7 / 1							
reaction time 0.163	interval		4.99	5.19	5.40	5.53	5.73	5.84	6.41		# of strides	11.20	10.59	11.26	12.25	21.79	23.51	1.72
	velocity	8.05	10.02	9.63	9.26	9.04	8.73	8.56	7.80	8.83		8.93	9.44	8.88	8.16	9.18	8.51	
Bamidele, Emmanuel (NGR	time	6.34	11.23	16.24	21.47	27.01	32.84	38.91	45.48	45.48	5 / 2							
reaction time 0.194	interval		4.89	5.01	5.23	5.54	5.83	6.07	6.57		# of strides	11.23	10.24	11.37	12.64	21.47	24.01	2.54
	velocity	7.89	10.22	9.98	9.56	9.03	8.58	8.24	7.61	8.80		8.90	9.77	8.80	7.91	9.32	8.33	
Hudson-Smith, Matthew (G	time	6.22	11.30	16.47	21.72	27.15	32.90	39.00	45.57	45.57	6 / 3							
reaction time 0.156	interval		5.08	5.17	5.25	5.43	5.75	6.10	6.57		# of strides	11.30	10.42	11.18	12.67	21.72	23.85	2.13
	velocity	8.04	9.84	9.67	9.52	9.21	8.70	8.20	7.61	8.78		8.85	9.60	8.94	7.89	9.21	8.39	
Coelho, João (POR) (1999)	time	6.44	11.51	16.74	22.14	27.71	33.49	39.40	45.66	45.66	2 / 4							
reaction time 0.224	interval		5.07	5.23	5.40	5.57	5.78	5.91	6.26		# of strides	11.51	10.63	11.35	12.17	22.14	23.52	1.38
	velocity	7.76	9.86	9.56	9.26	8.98	8.65	8.46	7.99	8.76		8.69	9.41	8.81	8.22	9.03	8.50	
Molnár, Attila (HUN) (2002)	time	6.65	11.80	17.03	22.39	27.90	33.64	39.50	45.77	45.77	1 / 5							
reaction time 0.269	interval		5.15	5.23	5.36	5.51	5.74	5.86	6.27		# of strides	11.80	10.59	11.25	12.13	22.39	23.38	0.99
	velocity	7.52	9.71	9.56	9.33	9.07	8.71	8.53	7.97	8.74		8.47	9.44	8.89	8.24	8.93	8.55	
Scotch, Leungo (BOT) (19	time	6.23	11.31	16.53	21.94	27.57	33.39	39.39	45.89	45.89	3 / 6							
reaction time 0.188	interval		5.08	5.22	5.41	5.63	5.82	6.00	6.50		# of strides	11.31	10.63	11.45	12.50	21.94	23.95	2.01
	velocity	8.03	9.84	9.58	9.24	8.88	8.59	8.33	7.69	8.72		8.84	9.41	8.73	8.00	9.12	8.35	
Ndori, Bayapo (BOT) (1999	time	6.20	11.30	16.60	22.00	27.50	33.30	39.40	46.13	46.13	4 / 7							
reaction time 0.167	interval		5.10	5.30	5.40	5.50	5.80	6.10	6.73		# of strides	11.30	10.70	11.30	12.83	22.00	24.13	2.13
	velocity	8.06	9.80	9.43	9.26	9.09	8.62	8.20	7.43	8.67		8.85	9.35	8.85	7.79	9.09	8.29	
Nakajima, Yuki Joseph (JPN	time	6.37	11.49	16.81	22.32	27.98	33.79	39.79	46.21	46.21	8 / 8							
reaction time 0.207	interval		5.12	5.32	5.51	5.66	5.81	6.00	6.42		# of strides	11.49	10.83	11.47	12.42	22.32	23.89	1.57
	velocity	7.85	9.77	9.40	9.07	8.83	8.61	8.33	7.79	8.66		8.70	9.23	8.72	8.05	8.96	8.37	

National FINAL

date 02-Jul-23

Omega Timing (2023) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Johansson, Emil (SWE) (20	time	6.33	11.39	16.61	22.03	27.75	33.81	40.01	46.69	46.69	5 / 1							
reaction time 0.169	interval		5.06	5.22	5.42	5.72	6.06	6.20	6.68	PB	# of strides	11.39	10.64	11.78	12.88	22.03	24.66	2.63
	velocity	7.90	9.88	9.58	9.23	8.74	8.25	8.06	7.49	8.57		8.78	9.40	8.49	7.76	9.08	8.11	
Isaacs, Gardeo (RSA) (1998	time	6.24	11.27	16.54	22.09	27.94	33.94	40.12	47.09	47.09	6 / 2							
reaction time 0.150	interval		5.03	5.27	5.55	5.85	6.00	6.18	6.97		# of strides	11.27	10.82	11.85	13.15	22.09	25.00	2.91
	velocity	8.01	9.94	9.49	9.01	8.55	8.33	8.09	7.17	8.49		8.87	9.24	8.44	7.60	9.05	8.00	
Thid, David (SWE) (2003)	time	6.27	11.53	16.96	22.60	28.42	34.55	40.92	47.75	47.75	8 / 3							
reaction time 0.153	interval		5.26	5.43	5.64	5.82	6.13	6.37	6.83		# of strides	11.53	11.07	11.95	13.20	22.60	25.15	2.55
	velocity	7.97	9.51	9.21	8.87	8.59	8.16	7.85	7.32	8.38		8.67	9.03	8.37	7.58	8.85	7.95	
Gahne, Gustav (SWE) (200	time	6.39	11.63	16.99	22.54	28.37	34.56	41.06	48.12	48.12	2 / 4							
reaction time 0.180	interval		5.24	5.36	5.55	5.83	6.19	6.50	7.06		# of strides	11.63	10.91	12.02	13.56	22.54	25.58	3.04
	velocity	7.82	9.54	9.33	9.01	8.58	8.08	7.69	7.08	8.31		8.60	9.17	8.32	7.37	8.87	7.82	
Waernulf, Mattias (SWE) (2	time	6.28	11.48	16.88	22.45	28.13	34.26	40.90	48.23	48.23	4 / 5							
reaction time 0.160	interval		5.20	5.40	5.57	5.68	6.13	6.64	7.33		# of strides	11.48	10.97	11.81	13.97	22.45	25.78	3.33
	velocity	7.96	9.62	9.26	8.98	8.80	8.16	7.53	6.82	8.29		8.71	9.12	8.47	7.16	8.91	7.76	
Nyström, Alexander (SWE)	time	6.50	11.76	17.26	22.98	28.87	35.07	41.52	48.44	48.44	3 / 7							
reaction time 0.175	interval		5.26	5.50	5.72	5.89	6.20	6.45	6.92		# of strides	11.76	11.22	12.09	13.37	22.98	25.46	2.48
	velocity	7.69	9.51	9.09	8.74	8.49	8.06	7.75	7.23	8.26		8.50	8.91	8.27	7.48	8.70	7.86	
Yousif, Rabah (GBR) (1986	time	6.56	11.87	17.30	22.90	28.82	35.10	41.67	48.89	48.89	7 / 7							

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

reaction time 0.164	interval		5.31	5.43	5.60	5.92	6.28	6.57	7.22		# of strides	11.87	11.03	12.20	13.79	22.90	25.99	3.09
	velocity	7.62	9.42	9.21	8.93	8.45	7.96	7.61	6.93	8.18		8.42	9.07	8.20	7.25	8.73	7.70	

2023 Athletissima (Lausanne, SUI)

FINAL

date 30-Jun-23

Omega Timing (2023) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Scotch, Leungo (BOT) (19	time	6.05	11.08	16.21	21.52	27.01	32.73	38.63	44.94	44.94	5 / 1							
reaction time 0.148	interval		5.03	5.13	5.31	5.49	5.72	5.90	6.31		# of strides	11.08	10.44	11.21	12.21	21.52	23.42	1.90
	velocity	8.26	9.94	9.75	9.42	9.11	8.74	8.47	7.92	8.90		9.03	9.58	8.92	8.19	9.29	8.54	
Borlée, Dylan (BEL) (1992)	time	6.19	11.25	16.30	21.52	27.02	32.87	39.04	45.86	45.86	8 / 2							
reaction time 0.131	interval		5.06	5.05	5.22	5.50	5.85	6.17	6.82		# of strides	11.25	10.27	11.35	12.99	21.52	24.34	2.82
	velocity	8.08	9.88	9.90	9.58	9.09	8.55	8.10	7.33	8.72		8.89	9.74	8.81	7.70	9.29	8.22	
Spitz, Lionel (SUI) (2001)	time	6.39	11.57	16.86	22.28	27.81	33.59	39.49	45.92	45.92	3 / 3							
reaction time 0.146	interval		5.18	5.29	5.42	5.53	5.78	5.90	6.43		# of strides	11.57	10.71	11.31	12.33	22.28	23.64	1.36
	velocity	7.82	9.65	9.45	9.23	9.04	8.65	8.47	7.78	8.71		8.64	9.34	8.84	8.11	8.98	8.46	
Re, Davide (ITA) (1993)	time	6.38	11.57	16.86	22.25	27.79	33.55	39.52	45.95	45.95	2 / 4							
reaction time 0.161	interval		5.19	5.29	5.39	5.54	5.76	5.97	6.43		# of strides	11.57	10.68	11.30	12.40	22.25	23.70	1.45
	velocity	7.84	9.63	9.45	9.28	9.03	8.68	8.38	7.78	8.71		8.64	9.36	8.85	8.06	8.99	8.44	
Bonevacia, Liemarvin (NED	time	6.31	11.40	16.50	21.82	27.36	33.22	39.37	46.29	46.29	4 / 5							
reaction time 0.148	interval		5.09	5.10	5.32	5.54	5.86	6.15	6.92		# of strides	11.40	10.42	11.40	13.07	21.82	24.47	2.65
	velocity	7.92	9.82	9.80	9.40	9.03	8.53	8.13	7.23	8.64		8.77	9.60	8.77	7.65	9.17	8.17	
Petrucciani, Ricky (SUI) (20	time	6.21	11.34	16.51	21.83	27.35	33.18	39.40	46.38	46.38	7 / 6							
reaction time 0.126	interval		5.13	5.17	5.32	5.52	5.83	6.22	6.98		# of strides	11.34	10.49	11.35	13.20	21.83	24.55	2.72
	velocity	8.05	9.75	9.67	9.40	9.06	8.58	8.04	7.16	8.62		8.82	9.53	8.81	7.58	9.16	8.15	
Jordier, Thomas (FRA) (19	time	6.25	11.33	16.52	21.99	27.68	33.62	39.83	46.77	46.77	6 / 7							
reaction time 0.140	interval		5.08	5.19	5.47	5.69	5.94	6.21	6.94		# of strides	11.33	10.66	11.63	13.15	21.99	24.78	2.79
	velocity	8.00	9.84	9.63	9.14	8.79	8.42	8.05	7.20	8.55		8.83	9.38	8.60	7.60	9.10	8.07	
Devantay, Charles (SUI) (19	time	6.27	11.33	16.54	21.99	27.69	33.67	39.98	46.77	46.77	1 / 8							
reaction time 0.131	interval		5.06	5.21	5.45	5.70	5.98	6.31	6.79		# of strides	11.33	10.66	11.68	13.10	21.99	24.78	2.79
	velocity	7.97	9.88	9.60	9.17	8.77	8.36	7.92	7.36	8.55		8.83	9.38	8.56	7.63	9.10	8.07	

2023 Chinese World Championship & Asian Games Trials (Shenyang, CHN)

FINAL

date 28-Jun-23

Shandong Athletics Sport Science (2023)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Wu Yuang (CHN) (1998)	time		11.41		21.95		33.75	39.82	46.27	46.27	7 / 1							
reaction time 0.182	interval				10.54		11.80	6.07	6.45		# of strides	11.41	10.54	11.80	12.52	21.95	24.32	2.37
	velocity		8.76		9.49		8.47	8.24	7.75	8.64	181.5	8.76	9.49	8.47	7.99	9.11	8.22	
Gu Xiofei (CHN) (2001)	time		11.48		22.12		33.75	39.82	46.54	46.54	4 / 2							
reaction time 0.228	interval				10.64		11.63	6.07	6.72		# of strides	11.48	10.64	11.63	12.79	22.12	24.42	2.30
	velocity		8.71		9.40		8.60	8.24	7.44	8.59	176.7	8.71	9.40	8.60	7.82	9.04	8.19	
Ju Tianqi (CHN) (2002)	time		11.54		21.99		33.68	39.82	46.60	46.60	5 / 3							
reaction time 0.242	interval				10.45		11.69	6.14	6.78	PB	# of strides	11.54	10.45	11.69	12.92	21.99	24.61	2.62
	velocity		8.67		9.57		8.55	8.14	7.37	8.58	177.5	8.67	9.57	8.55	7.74	9.10	8.13	
Yang Wang (CHN) (1996)	time		11.43		22.00		33.77	40.06	46.92	46.92	3 / 4							
reaction time 0.210	interval				10.57		11.77	6.29	6.86		# of strides	11.43	10.57	11.77	13.15	22.00	24.92	2.92
	velocity		8.75		9.46		8.50	7.95	7.29	8.53	187.0	8.75	9.46	8.50	7.60	9.09	8.03	
Xie Yuqiang (CHN) (1997)	time		11.33		22.07		33.88	40.19	47.13	47.13	6 / 5							
reaction time 0.218	interval				10.74		11.81	6.31	6.94		# of strides	11.33	10.74	11.81	13.25	22.07	25.06	2.99
	velocity		8.83		9.31		8.47	7.92	7.20	8.49	177.0	8.83	9.31	8.47	7.55	9.06	7.98	
Lu Xhengda (CHN) (2003)	time		11.83		22.58		34.43	40.66	47.53	47.53	2 / 6							
reaction time 0.188	interval				10.75		11.85	6.23	6.87		# of strides	11.83	10.75	11.85	13.10	22.58	24.95	2.37
	velocity		8.45		9.30		8.44	8.03	7.28	8.42	174.0	8.45	9.30	8.44	7.63	8.86	8.02	
Sun Jiahao (CHN) (2002)	time		11.93		22.94		34.75	40.91	47.91	47.91	8 / 7							
reaction time 0.231	interval				11.01		11.81	6.16	7.00		# of strides	11.93	11.01	11.81	13.16	22.94	24.97	2.03
	velocity		8.38		9.08		8.47	8.12	7.14	8.35	181.5	8.38	9.08	8.47	7.60	8.72	8.01	
Meng Xinpeng (CHN) (200	time		11.64		22.37		34.23	40.68	48.19	48.19	1 / 8							
reaction time 0.215	interval				10.73		11.86	6.45	7.51		# of strides	11.64	10.73	11.86	13.96	22.37	25.82	3.45
	velocity		8.59		9.32		8.43	7.75	6.66	8.30	190.0	8.59	9.32	8.43	7.16	8.94	7.75	

Heat 2

date 27-Jun-23

Shandong Athletics Sport Science (2023)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Xie Yuqiang (CHN) (1997)	time		11.24		22.14		33.97	40.28	47.08	47.08	4 / 2							
reaction time 0.174	interval				10.90		11.83	6.31	6.80		# of strides	11.24	10.90	11.83	13.11	22.14	24.94	2.80
	velocity		8.90		9.17		8.45	7.92	7.35	8.50	175.5	8.90	9.17	8.45	7.63	9.03	8.02	

2023 Japanese Multi-Event National Championsips (Akita, JPN)

Decathlon - Heat

date 10-Jun-23

Matsubayashi (2024) - performance analysis of decathlon athletes in the 2023 season

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Maruyama, Yuma (JPN) (19	time	6.57	11.96	17.64	23.47	29.44	35.73	42.36	49.47	49.47	6 / 2							

reaction time	interval		5.39	5.68	5.83	5.97	6.29	6.63	7.11		# of strides	11.96	11.51	12.26	13.74	23.47	26.00	2.53
	velocity	7.61	9.28	8.80	8.58	8.38	7.95	7.54	7.03	8.09		8.36	8.69	8.16	7.28	8.52	7.69	
Taue, Shun (JPN) (1997)	time	6.56	11.97	17.56	23.33	29.42	35.84	42.49	49.69	49.69	7 / 4							
reaction time	interval		5.41	5.59	5.77	6.09	6.42	6.65	7.20		# of strides	11.97	11.36	12.51	13.85	23.33	26.36	3.03
	velocity	7.62	9.24	8.94	8.67	8.21	7.79	7.52	6.94	8.05		8.35	8.80	7.99	7.22	8.57	7.59	

Decathlon - Heat

date 10-Jun-23

Matsubayashi (2024) - performance analysis of decathlon athletes in the 2023 season

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Nakamura, Akihiko (JPN) (1	time	6.85	12.49	18.31	24.37	30.65	37.13	43.65	50.40	50.40	7 / 2							
reaction time	interval		5.64	5.82	6.06	6.28	6.48	6.52	6.75		# of strides	12.49	11.88	12.76	13.27	24.37	26.03	1.66
	velocity	7.30	8.87	8.59	8.25	7.96	7.72	7.67	7.41	7.94		8.01	8.42	7.84	7.54	8.21	7.68	
Ushiro, Keisuke (JPN) (198	time	6.72	12.36	18.22	24.51	31.32	38.75	46.58	55.13	55.13	9 / 7							
reaction time	interval		5.64	5.86	6.29	6.81	7.43	7.83	8.55		# of strides	12.36	12.15	14.24	16.38	24.51	30.62	6.11
	velocity	7.44	8.87	8.53	7.95	7.34	6.73	6.39	5.85	7.26		8.09	8.23	7.02	6.11	8.16	6.53	

2023 Chinese National Grand Prix 5 (Huangshi, CHN)

Heat 3

date 09-Jun-23

Shandong Athletics Sport Science (2023)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Tao Zhongqi (CHN) (2000)	time		11.41		22.26		34.17	40.39	47.05	47.05	5 / 1							
reaction time 0.225	interval				10.85		11.91	6.22	6.66		# of strides	11.41	10.85	11.91	12.88	22.26	24.79	2.53
	velocity		8.76		9.22		8.40	8.04	7.51	8.50	177.2	8.76	9.22	8.40	7.76	8.98	8.07	
Wang Lei (CHN) (2001)	time		11.63		22.69		34.40	40.64	47.37	47.37	6 / 2							
reaction time 0.232	interval				11.06		11.71	6.24	6.73		# of strides	11.63	11.06	11.71	12.97	22.69	24.68	1.99
	velocity		8.60		9.04		8.54	8.01	7.43	8.44	187.0	8.60	9.04	8.54	7.71	8.81	8.10	
Han Zhiyu (CHN) (2004)	time		11.64		22.82		35.30	41.89	48.91	48.91	7 / 6							
reaction time 0.239	interval				11.18		12.48	6.59	7.02		# of strides	11.64	11.18	12.48	13.61	22.82	26.09	3.27
	velocity		8.59		8.94		8.01	7.59	7.12	8.18	169.2	8.59	8.94	8.01	7.35	8.76	7.67	

2023 FBK Games (Hengelo, NED)

FINAL

date 04-Jun-23

Omega Timing (2023) - continental tour race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kebinatshipi, Collen (BOT)	time	6.20	11.24	16.53	22.08	27.71	33.30	38.95	45.01	45.01	7 / 1							
reaction time 0.179	interval		5.04	5.29	5.55	5.63	5.59	5.65	6.06		# of strides	11.24	10.84	11.22	11.71	22.08	22.93	0.85
	velocity	8.06	9.92	9.45	9.01	8.88	8.94	8.85	8.25	8.89		8.90	9.23	8.91	8.54	9.06	8.72	
Norwood, Vernon (USA) (1	time	6.21	11.18	16.32	21.64	27.11	32.77	38.63	45.05	45.05	4 / 2							
reaction time 0.243	interval		4.97	5.14	5.32	5.47	5.66	5.86	6.42		# of strides	11.18	10.46	11.13	12.28	21.64	23.41	1.77
	velocity	8.05	10.06	9.73	9.40	9.14	8.83	8.53	7.79	8.88	177.0	8.94	9.56	8.98	8.14	9.24	8.54	
Nene, Zakhiti (RSA) (1998)	time	6.10	11.08	16.28	21.69	27.26	32.92	38.73	45.17	45.17	6 / 3							
reaction time 0.142	interval		4.98	5.20	5.41	5.57	5.66	5.81	6.44		# of strides	11.08	10.61	11.23	12.25	21.69	23.48	1.79
	velocity	8.20	10.04	9.62	9.24	8.98	8.83	8.61	7.76	8.86	178.0	9.03	9.43	8.90	8.16	9.22	8.52	
Borlée, Dylan (BEL) (1992)	time	6.29	11.38	16.61	21.96	27.51	33.25	39.28	45.80	45.80	2 / 4							
reaction time 0.172	interval		5.09	5.23	5.35	5.55	5.74	6.03	6.52		# of strides	11.38	10.58	11.29	12.55	21.96	23.84	1.88
	velocity	7.95	9.82	9.56	9.35	9.01	8.71	8.29	7.67	8.73		8.79	9.45	8.86	7.97	9.11	8.39	
Bonevacia, Liemarvin (NED	time	6.28	11.28	16.38	21.74	27.26	33.01	39.08	45.87	45.87	5 / 5							
reaction time 0.147	interval		5.00	5.10	5.36	5.52	5.75	6.07	6.79		# of strides	11.28	10.46	11.27	12.86	21.74	24.13	2.39
	velocity	7.96	10.00	9.80	9.33	9.06	8.70	8.24	7.36	8.72	182.5	8.87	9.56	8.87	7.78	9.20	8.29	
Makwala, Isaac (BOT) (1985	time	6.27	11.31	16.50	21.77	27.32	33.14	39.45	46.48	46.48	1 / 6							
reaction time 0.183	interval		5.04	5.19	5.27	5.55	5.82	6.31	7.03		# of strides	11.31	10.46	11.37	13.34	21.77	24.71	2.94
	velocity	7.97	9.92	9.63	9.49	9.01	8.59	7.92	7.11	8.61		8.84	9.56	8.80	7.50	9.19	8.09	
Pesela, Anthony (BOT) (20	time	6.34	11.29	16.55	22.15	27.85	33.72	39.81	46.79	46.79	8 / 7							
reaction time 0.255	interval		4.95	5.26	5.60	5.70	5.87	6.09	6.98		# of strides	11.29	10.86	11.57	13.07	22.15	24.64	2.49
	velocity	7.89	10.10	9.51	8.93	8.77	8.52	8.21	7.16	8.55		8.86	9.21	8.64	7.65	9.03	8.12	
Boers, Isayah (NED) (1999)	time	6.05	10.94	16.03	21.40	27.08	33.14	39.84	47.19	47.19	3 / 8							
reaction time 0.161	interval		4.89	5.09	5.37	5.68	6.06	6.70	7.35		# of strides	10.94	10.46	11.74	14.05	21.40	25.79	4.39
	velocity	8.26	10.22	9.82	9.31	8.80	8.25	7.46	6.80	8.48	174.5	9.14	9.56	8.52	7.12	9.35	7.75	

2023 Japanese National Championsips (Osaka, JPN)

FINAL

date 04-Jun-23

Yamanaka (2024) - analysis of men's and women's 400m and 300m runs in the 2023 season

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Nakajima, Yuki Joseph (JPN	time	6.22	11.20	16.28	21.54	26.97	32.72	38.77	45.15	45.15	7 / 1							
reaction time 0.175	interval		4.98	5.08	5.26	5.43	5.75	6.05	6.38	PB	# of strides	11.20	10.34	11.18	12.43	21.54	23.61	2.07
	velocity	8.04	10.04	9.84	9.51	9.21	8.70	8.26	7.84	8.86	172.5	8.93	9.67	8.94	8.05	9.29	8.47	
Sato, Fuga (JPN) (1999)	time	6.06	11.11	16.22	21.47	26.90	32.62	38.74	45.26	45.26	6 / 2							
reaction time 0.199	interval		5.05	5.11	5.25	5.43	5.72	6.12	6.52	PB	# of strides	11.11	10.36	11.15	12.64	21.47	23.79	2.32
	velocity	8.25	9.90	9.78	9.52	9.21	8.74	8.17	7.67	8.84	174.5	9.00	9.65	8.97	7.91	9.32	8.41	
Sato, Kentaro (JPN) (1994)	time	6.16	11.16	16.28	21.55	26.97	32.80	38.95	45.47	45.47	4 / 3							
reaction time 0.232	interval		5.00	5.12	5.27	5.42	5.83	6.15	6.52		# of strides	11.16	10.39	11.25	12.67	21.55	23.92	2.37
	velocity	8.12	10.00	9.77	9.49	9.23	8.58	8.13	7.67	8.80		8.96	9.62	8.89	7.89	9.28	8.36	
Imaizumi, Kenki (JPN) (200	time	6.16	11.18	16.32	21.67	27.21	33.04	39.09	45.54	45.54	5 / 4							

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

reaction time 0.192	interval		5.02	5.14	5.35	5.54	5.83	6.05	6.45	PB	# of strides	11.18	10.49	11.37	12.50	21.67	23.87	2.20
	velocity	8.12	9.96	9.73	9.35	9.03	8.58	8.26	7.75	8.78	177.2	8.94	9.53	8.80	8.00	9.23	8.38	
Jinushi, Naohiro (JPN) (20(	time	6.46	11.85	17.32	22.83	28.37	34.00	39.78	45.97	45.97	9 / 5							
reaction time 0.149	interval		5.39	5.47	5.51	5.54	5.63	5.78	6.19		# of strides	11.85	10.98	11.17	11.97	22.83	23.14	0.31
	velocity	7.74	9.28	9.14	9.07	9.03	8.88	8.65	8.08	8.70		8.44	9.11	8.95	8.35	8.76	8.64	

Heat 3

date 03-Jun-23

Yamanaka (2024) - analysis of men's and women's 400m and 300m runs in the 2023 season

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Nakajima, Yuki Joseph (JPN	time	6.17	11.12	16.20	21.52	27.07	32.94	39.06	45.49	45.49	5 / 1							
reaction time 0.167	interval		4.95	5.08	5.32	5.55	5.87	6.12	6.43		# of strides	11.12	10.40	11.42	12.55	21.52	23.97	2.45
	velocity	8.10	10.10	9.84	9.40	9.01	8.52	8.17	7.78	8.79	172.0	8.99	9.62	8.76	7.97	9.29	8.34	

Heat 2

date 03-Jun-23

Yamanaka (2024) - analysis of men's and women's 400m and 300m runs in the 2023 season

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Sato, Kentaro (JPN) (1994)	time	6.15	11.21	16.33	21.62	27.16	33.13	39.43	46.06	46.06	7 / 1							
reaction time 0.185	interval		5.06	5.12	5.29	5.54	5.97	6.30	6.63		# of strides	11.21	10.41	11.51	12.93	21.62	24.44	2.82
	velocity	8.13	9.88	9.77	9.45	9.03	8.38	7.94	7.54	8.68	179.0	8.92	9.61	8.69	7.73	9.25	8.18	
Jinushi, Naohiro (JPN) (20(	time	6.37	11.68	17.07	22.51	28.04	33.80	39.86	46.35	46.35	5 / 2							
reaction time 0.174	interval		5.31	5.39	5.44	5.53	5.76	6.06	6.49		# of strides	11.68	10.83	11.29	12.55	22.51	23.84	1.33
	velocity	7.85	9.42	9.28	9.19	9.04	8.68	8.25	7.70	8.63	177.2	8.56	9.23	8.86	7.97	8.88	8.39	

Heat 1

date 03-Jun-23

Yamanaka (2024) - analysis of men's and women's 400m and 300m runs in the 2023 season

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Sato, Fuga (JPN) (1999)	time	6.13	11.12	16.22	21.53	27.10	32.95	39.06	45.62	45.62	6 / 1							
reaction time 0.180	interval		4.99	5.10	5.31	5.57	5.85	6.11	6.56		# of strides	11.12	10.41	11.42	12.67	21.53	24.09	2.56
	velocity	8.16	10.02	9.80	9.42	8.98	8.55	8.18	7.62	8.77	175.0	8.99	9.61	8.76	7.89	9.29	8.30	
Imaizumi, Kenki (JPN) (200	time	6.23	11.34	16.58	22.02	27.63	33.49	39.57	46.01	46.01	5 / 2							
reaction time 0.168	interval		5.11	5.24	5.44	5.61	5.86	6.08	6.44		# of strides	11.34	10.68	11.47	12.52	22.02	23.99	1.97
	velocity	8.03	9.78	9.54	9.19	8.91	8.53	8.22	7.76	8.69	177.0	8.82	9.36	8.72	7.99	9.08	8.34	

2023 Chinese National Grand Prix 4 (Chongqing, CHN)

FINAL

date 02-Jun-23

Shandong Athletics Sport Science (2023)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Fan Tianrui (CHN) (2002)	time		11.65		22.49		33.85	39.85	46.28	46.28	7 / 1							
reaction time 0.257	interval				10.84		11.36	6.00	6.43	PB	# of strides	11.65	10.84	11.36	12.43	22.49	23.79	1.30
	velocity		8.58		9.23		8.80	8.33	7.78	8.64	174.5	8.58	9.23	8.80	8.05	8.89	8.41	
Xie Zhiyu (CHN) (2000)	time		11.70		22.52		33.82	39.83	46.38	46.38	8 / 2							
reaction time 0.253	interval				10.82		11.30	6.01	6.55		# of strides	11.70	10.82	11.30	12.56	22.52	23.86	1.34
	velocity		8.55		9.24		8.85	8.32	7.63	8.62	167.7	8.55	9.24	8.85	7.96	8.88	8.38	
Song Jiahui (CHN) (2002)	time		11.61		22.14		33.68	39.81	46.63	46.63	3 / 3							
reaction time 0.228	interval				10.53		11.54	6.13	6.82	PB	# of strides	11.61	10.53	11.54	12.95	22.14	24.49	2.35
	velocity		8.61		9.50		8.67	8.16	7.33	8.58	168.0	8.61	9.50	8.67	7.72	9.03	8.17	
Sun Jiahao (CHN) (2002)	time		11.52		22.23		33.70	39.94	46.84	46.84	6 / 4							
reaction time 0.213	interval				10.71		11.47	6.24	6.90	PB	# of strides	11.52	10.71	11.47	13.14	22.23	24.61	2.38
	velocity		8.68		9.34		8.72	8.01	7.25	8.54	181.0	8.68	9.34	8.72	7.61	9.00	8.13	
Yang Lei (CHN) (1995)	time		11.51		22.05		33.80	40.01	46.98	46.98	5 / 5							
reaction time 0.206	interval				10.54		11.75	6.21	6.97		# of strides	11.51	10.54	11.75	13.18	22.05	24.93	2.88
	velocity		8.69		9.49		8.51	8.05	7.17	8.51	179.0	8.69	9.49	8.51	7.59	9.07	8.02	

Heat 7

date 02-Jun-23

Shandong Athletics Sport Science (2023)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Song Jiahui (CHN) (2002)	time		11.63		22.37		34.05	40.21	46.97	46.97	7 / 1							
reaction time	interval				10.74		11.68	6.16	6.76		# of strides	11.63	10.74	11.68	12.92	22.37	24.60	2.23
	velocity		8.60		9.31		8.56	8.12	7.40	8.52	165.2	8.60	9.31	8.56	7.74	8.94	8.13	

Heat 5

date 02-Jun-23

Shandong Athletics Sport Science (2023)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Yang Wang (CHN) (1996)	time		11.40		22.17		34.07	40.44	47.42	47.42	4 / 1							
reaction time	interval				10.77		11.90	6.37	6.98		# of strides	11.40	10.77	11.90	13.35	22.17	25.25	3.08
	velocity		8.77		9.29		8.40	7.85	7.16	8.44	188.0	8.77	9.29	8.40	7.49	9.02	7.92	

Heat 4

date 02-Jun-23

Shandong Athletics Sport Science (2023)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Han Zhiyu (CHN) (2004)	time		12.05		23.41		36.04	42.93	50.33	50.33	2 / 8							
reaction time	interval				11.36		12.63	6.89	7.40		# of strides	12.05	11.36	12.63	14.29	23.41	26.92	3.51
	velocity		8.30		8.80		7.92	7.26	6.76	7.95	174.7	8.30	8.80	7.92	7.00	8.54	7.43	

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

FINAL

date 28-May-23

Omega Timing (2023) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Gardiner, Steven (BAH) (19	time	6.22	11.21	16.38	21.73	27.20	32.83	38.56	44.70	44.70	5 / 1							
reaction time 0.160	interval		4.99	5.17	5.35	5.47	5.63	5.73	6.14		# of strides	11.21	10.52	11.10	11.87	21.73	22.97	1.24
	velocity	8.04	10.02	9.67	9.35	9.14	8.88	8.73	8.14	8.95	158.5	8.92	9.51	9.01	8.42	9.20	8.71	
Norwood, Vernon (USA) (1	time	6.22	11.28	16.60	22.07	27.60	33.24	38.91	45.11	45.11	6 / 2							

reaction time 0.167	interval		5.06	5.32	5.47	5.53	5.64	5.67	6.20		# of strides	11.28	10.79	11.17	11.87	22.07	23.04	0.97
	velocity	8.04	9.88	9.40	9.14	9.04	8.87	8.82	8.06	8.87	176.5	8.87	9.27	8.95	8.42	9.06	8.68	
McDonald, Rusheen (JAM)	time	6.28	11.30	16.52	21.96	27.57	33.41	39.29	45.55	45.55	7 / 3							
reaction time 0.203	interval		5.02	5.22	5.44	5.61	5.84	5.88	6.26		# of strides	11.30	10.66	11.45	12.14	21.96	23.59	1.63
	velocity	7.96	9.96	9.58	9.19	8.91	8.56	8.50	7.99	8.78	181.7	8.85	9.38	8.73	8.24	9.11	8.48	
Nene, Zakhiti (RSA) (1998)	time	6.11	10.99	16.13	21.52	27.06	32.88	38.90	45.58	45.58	8 / 4							
reaction time 0.158	interval		4.88	5.14	5.39	5.54	5.82	6.02	6.68		# of strides	10.99	10.53	11.36	12.70	21.52	24.06	2.54
	velocity	8.18	10.25	9.73	9.28	9.03	8.59	8.31	7.49	8.78	178.2	9.10	9.50	8.80	7.87	9.29	8.31	
Ndori, Bayapo (BOT) (1999	time	6.06	11.01	16.20	21.60	27.12	32.93	39.03	45.62	45.62	3 / 5							
reaction time 0.164	interval		4.95	5.19	5.40	5.52	5.81	6.10	6.59		# of strides	11.01	10.59	11.33	12.69	21.60	24.02	2.42
	velocity	8.25	10.10	9.63	9.26	9.06	8.61	8.20	7.59	8.77	177.0	9.08	9.44	8.83	7.88	9.26	8.33	
Haydock-Wilson, Alex (GB	time	6.21	11.24	16.63	22.29	27.79	33.48	39.48	46.08	46.08	2 / 6							
reaction time 0.154	interval		5.03	5.39	5.66	5.50	5.69	6.00	6.60		# of strides	11.24	11.05	11.19	12.60	22.29	23.79	1.50
	velocity	8.05	9.94	9.28	8.83	9.09	8.79	8.33	7.58	8.68		8.90	9.05	8.94	7.94	8.97	8.41	
Dair, Hamza (MAR) (2002)	time	6.31	11.44	16.80	22.46	28.18	34.14	40.36	47.09	47.09	1 / 7							
reaction time 0.180	interval		5.13	5.36	5.66	5.72	5.96	6.22	6.73		# of strides	11.44	11.02	11.68	12.95	22.46	24.63	2.17
	velocity	7.92	9.75	9.33	8.83	8.74	8.39	8.04	7.43	8.49		8.74	9.07	8.56	7.72	8.90	8.12	
Hudson-Smith, Matthew (	time	6.21								dnf	4 / --							
reaction time 0.156	interval										# of strides							
	velocity	8.05																

National FINAL

date 28-May-23

Omega Timing (2023) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Mhamdi, Rachid (MAR) (20	time	6.40	11.57	16.95	22.55	28.17	33.98	40.12	47.35	47.35	4 / 1							
reaction time 0.190	interval		5.17	5.38	5.60	5.62	5.81	6.14	7.23		# of strides	11.57	10.98	11.43	13.37	22.55	24.80	2.25
	velocity	7.81	9.67	9.29	8.93	8.90	8.61	8.14	6.92	8.45		8.64	9.11	8.75	7.48	8.87	8.06	
Mouttakil, Kamal (MAR) (2	time	6.53	11.91	17.52	23.44	29.27	35.19	41.10	47.48	47.48	5 / 2							
reaction time 0.281	interval		5.38	5.61	5.92	5.83	5.92	5.91	6.38		# of strides	11.91	11.53	11.75	12.29	23.44	24.04	0.60
	velocity	7.66	9.29	8.91	8.45	8.58	8.45	8.46	7.84	8.42		8.40	8.67	8.51	8.14	8.53	8.32	
El Guebbaz, Said (MAR) (1	time	6.38	11.88	17.49	23.29	28.99	34.86	40.90	47.59	47.59	6 / 3							
reaction time 0.188	interval		5.50	5.61	5.80	5.70	5.87	6.04	6.69		# of strides	11.88	11.41	11.57	12.73	23.29	24.30	1.01
	velocity	7.84	9.09	8.91	8.62	8.77	8.52	8.28	7.47	8.41		8.42	8.76	8.64	7.86	8.59	8.23	
Dimokrati, El Mehdi (MAR)	time	6.55	12.01	17.62	23.51	29.36	35.28	41.35	47.72	47.72	3 / 4							
reaction time 0.203	interval		5.46	5.61	5.89	5.85	5.92	6.07	6.37		# of strides	12.01	11.50	11.77	12.44	23.51	24.21	0.70
	velocity	7.63	9.16	8.91	8.49	8.55	8.45	8.24	7.85	8.38		8.33	8.70	8.50	8.04	8.51	8.26	
Hssine, Yassine (MAR) (20	time	6.42	11.81	17.37	23.23	29.17	35.14	41.43	48.38	48.38	2 / 5							
reaction time 0.155	interval		5.39	5.56	5.86	5.94	5.97	6.29	6.95	PB	# of strides	11.81	11.42	11.91	13.24	23.23	25.15	1.92
	velocity	7.79	9.28	8.99	8.53	8.42	8.38	7.95	7.19	8.27		8.47	8.76	8.40	7.55	8.61	7.95	
Taleb, Lahssen (MAR) (200	time	6.76	12.23	17.72	23.49	29.32	35.37	41.75	48.70	48.70	8 / 6							
reaction time 0.240	interval		5.47	5.49	5.77	5.83	6.05	6.38	6.95	PB	# of strides	12.23	11.26	11.88	13.33	23.49	25.21	1.72
	velocity	7.40	9.14	9.11	8.67	8.58	8.26	7.84	7.19	8.21		8.18	8.88	8.42	7.50	8.51	7.93	
El Boussiri, Walid (MAR) (	time	6.66	12.14	17.77	23.63	29.58	35.65	41.95	48.84	48.84	7 / 7							
reaction time 0.226	interval		5.48	5.63	5.86	5.95	6.07	6.30	6.89	PB	# of strides	12.14	11.49	12.02	13.19	23.63	25.21	1.58
	velocity	7.51	9.12	8.88	8.53	8.40	8.24	7.94	7.26	8.19		8.24	8.70	8.32	7.58	8.46	7.93	
Hasnaoui, Farid (MAR) (20	time	6.62	12.13	17.80	23.71	29.81	36.09	42.63	49.85	49.85	1 / 8							
reaction time 0.147	interval		5.51	5.67	5.91	6.10	6.28	6.54	7.22		# of strides	12.13	11.58	12.38	13.76	23.71	26.14	2.43
	velocity	7.55	9.07	8.82	8.46	8.20	7.96	7.65	6.93	8.02		8.24	8.64	8.08	7.27	8.44	7.65	

2023 Chinese National Grand Prix 3 (Taizhou, CHN)

FINAL

date 26-May-23

Shandong Athletics Sport Science (2023)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Xie Yuqiang (CHN) (1997)	time		11.28		22.17		33.90	40.11	46.77	46.77	6 / 1							
reaction time 0.167	interval				10.89		11.73	6.21	6.66		# of strides	11.28	10.89	11.73	12.87	22.17	24.60	2.43
	velocity		8.87		9.18		8.53	8.05	7.51	8.55	177.5	8.87	9.18	8.53	7.77	9.02	8.13	
Ju Tianqi (CHN) (2002)	time		11.42		22.24		34.15	40.24	46.85	46.85	5 / 2							
reaction time 0.220	interval				10.82		11.91	6.09	6.61		# of strides	11.42	10.82	11.91	12.70	22.24	24.61	2.37
	velocity		8.76		9.24		8.40	8.21	7.56	8.54	178.0	8.76	9.24	8.40	7.87	8.99	8.13	
Wu Yuang (CHN) (1998)	time		11.40		22.07		34.17	40.31	46.90	46.90	2 / 3							
reaction time 0.185	interval				10.67		12.10	6.14	6.59		# of strides	11.40	10.67	12.10	12.73	22.07	24.83	2.76
	velocity		8.77		9.37		8.26	8.14	7.59	8.53	182.5	8.77	9.37	8.26	7.86	9.06	8.05	
Feng Zhiqiang (CHN) (199	time		11.23		22.19		34.30	40.48	47.16	47.16	4 / 4							
reaction time 0.240	interval				10.96		12.11	6.18	6.68		# of strides	11.23	10.96	12.11	12.86	22.19	24.97	2.78
	velocity		8.90		9.12		8.26	8.09	7.49	8.48	168.7	8.90	9.12	8.26	7.78	9.01	8.01	
Deng Hantao (CHN) (2000)	time		11.44		22.26		34.26	40.58	47.48	47.48	1 / 5							
reaction time 0.222	interval				10.82		12.00	6.32	6.90		# of strides	11.44	10.82	12.00	13.22	22.26	25.22	2.96
	velocity		8.74		9.24		8.33	7.91	7.25	8.42	171.0	8.74	9.24	8.33	7.56	8.98	7.93	

Heat 6

date 26-May-23

Shandong Athletics Sport Science (2023)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Chen Feifeng (CHN) (2002)	time		11.26		22.36		34.59	40.93	47.93	47.93	6 / 1							
reaction time 0.228	interval				11.10		12.23	6.34	7.00		# of strides	11.26	11.10	12.23	13.34	22.36	25.57	3.21
	velocity		8.88		9.01		8.18	7.89	7.14	8.35		8.88	9.01	8.18	7.50	8.94	7.82	
Han Zhiyu (CHN) (2004)	time		11.61		22.72		35.40	42.22	49.48	49.48	8 / 6							
reaction time 0.195	interval				11.11		12.68	6.82	7.26		# of strides	11.61	11.11	12.68	14.08	22.72	26.76	4.04
	velocity		8.61		9.00		7.89	7.33	6.89	8.08	173.0	8.61	9.00	7.89	7.10	8.80	7.47	

Heat 3

date 26-May-23

Shandong Athletics Sport Science (2023)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Feng Zhiqiang (CHN) (1998)			No Information available							46.88	8 / 1		reaction time	0.192				
Ju Tianqi (CHN) (2002)	time		11.58		22.35		33.97	40.19	47.00	47.00	4 / 2							
reaction time 0.230	interval				10.77		11.62	6.22	6.81		# of strides	11.58	10.77	11.62	13.03	22.35	24.65	2.30
	velocity		8.64		9.29		8.61	8.04	7.34	8.51	179.0	8.64	9.29	8.61	7.67	8.95	8.11	
Song Jiahui (CHN) (2002)	time		11.58		22.33		34.06	40.33	47.18	47.18	5 / 3							
reaction time 0.168	interval				10.75		11.73	6.27	6.85		# of strides	11.58	10.75	11.73	13.12	22.33	24.85	2.52
	velocity		8.64		9.30		8.53	7.97	7.30	8.48	169.0	8.64	9.30	8.53	7.62	8.96	8.05	
Qiao Zhen (CHN) (2001)	time		11.21		22.13		34.35	40.92	48.20	48.20	3 / 6							
reaction time 0.197	interval				10.92		12.22	6.57	7.28		# of strides	11.21	10.92	12.22	13.85	22.13	26.07	3.94
	velocity		8.92		9.16		8.18	7.61	6.87	8.30	173.2	8.92	9.16	8.18	7.22	9.04	7.67	

Heat 2

date 26-May-23

Shandong Athletics Sport Science (2023)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Xie Yuqiang (CHN) (1997)	time		11.18		22.00		33.88	40.21	46.92	46.92	7 / 1							
reaction time 0.163	interval				10.82		11.88	6.33	6.71		# of strides	11.18	10.82	11.88	13.04	22.00	24.92	2.92
	velocity		8.94		9.24		8.42	7.90	7.45	8.53	177.2	8.94	9.24	8.42	7.67	9.09	8.03	

2023 Shimane High School Championships (Izumo, JPN)

FINAL

date 26-May-23

Shimizu (2023) - shimane high school championships 2023 - biomechanics data analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Mitsukiya, Kakeki (JPN)	time		11.57		22.73		35.34		49.89	49.89	6 / 1							
reaction time	interval				11.16		12.61		14.55		# of strides	11.57	11.16	12.61	14.55	22.73	27.16	4.43
	velocity		8.64		8.96		7.93		6.87	8.02		8.64	8.96	7.93	6.87	8.80	7.36	
Funo, Shintaro (JPN)	time		12.70		24.83		37.47		50.52	50.52	3 / 2							
reaction time	interval				12.13		12.64		13.05		# of strides	12.70	12.13	12.64	13.05	24.83	25.69	0.86
	velocity		7.87		8.24		7.91		7.66	7.92		7.87	8.24	7.91	7.66	8.05	7.79	
Fujimoto, Takashi (JPN)	time		12.35		24.32		37.11		51.04	51.04	8 / 3							
reaction time	interval				11.97		12.79		13.93		# of strides	12.35	11.97	12.79	13.93	24.32	26.72	2.40
	velocity		8.10		8.35		7.82		7.18	7.84		8.10	8.35	7.82	7.18	8.22	7.49	
Tenkawa, Ten (JPN)	time		12.93		25.30		38.06		51.33	51.33	4 / 4							
reaction time	interval				12.37		12.76		13.27		# of strides	12.93	12.37	12.76	13.27	25.30	26.03	0.73
	velocity		7.73		8.08		7.84		7.54	7.79		7.73	8.08	7.84	7.54	7.91	7.68	
Ishibashi, Naoaki (JPN)	time		12.20		24.17		37.08		51.54	51.54	7 / 5							
reaction time	interval				11.97		12.91		14.46		# of strides	12.20	11.97	12.91	14.46	24.17	27.37	3.20
	velocity		8.20		8.35		7.75		6.92	7.76		8.20	8.35	7.75	6.92	8.27	7.31	
Hashiwata, Hibiki (JPN)	time		12.57		24.92		38.23		52.28	52.28	5 / 6							
reaction time	interval				12.35		13.31		14.05		# of strides	12.57	12.35	13.31	14.05	24.92	27.36	2.44
	velocity		7.96		8.10		7.51		7.12	7.65		7.96	8.10	7.51	7.12	8.03	7.31	
Higashihara, Shun (JPN)	time		12.67		25.25		38.73		52.77	52.77	2 / 7							
reaction time	interval				12.58		13.48		14.04		# of strides	12.67	12.58	13.48	14.04	25.25	27.52	2.27
	velocity		7.89		7.95		7.42		7.12	7.58		7.89	7.95	7.42	7.12	7.92	7.27	
Mukuno, Ryosuke (JPN)	time		13.20		26.37		39.57		53.21	53.21	1 / 8							
reaction time	interval				13.17		13.20		13.64		# of strides	13.20	13.17	13.20	13.64	26.37	26.84	0.47
	velocity		7.58		7.59		7.58		7.33	7.52		7.58	7.59	7.58	7.33	7.58	7.45	

2023 Chinese National Grand Prix 1 (Rizhao, CHN)

FINAL

date 26-Apr-23

Shandong Athletics Sport Science (2023)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Zheng Chiyu (CHN) (2003)	time		11.68		22.39		34.47	40.58	47.12	47.12	5 / 1							
reaction time 0.149	interval				10.71		12.08	6.11	6.54		# of strides	11.68	10.71	12.08	12.65	22.39	24.73	2.34
	velocity		8.56		9.34		8.28	8.18	7.65	8.49	183.0	8.56	9.34	8.28	7.91	8.93	8.09	
Xie Yuqiang (CHN) (1997)	time		11.43		22.62		34.47	40.76	47.34	47.34	6 / 2							
reaction time 0.168	interval				11.19		11.85	6.29	6.58		# of strides	11.43	11.19	11.85	12.87	22.62	24.72	2.10
	velocity		8.75		8.94		8.44	7.95	7.60	8.45	176.2	8.75	8.94	8.44	7.77	8.84	8.09	
Deng Hantao (CHN) (2000)	time		11.48		22.34		34.52	40.88	47.60	47.60	3 / 3							
reaction time 0.172	interval				10.86		12.18	6.36	6.72		# of strides	11.48	10.86	12.18	13.08	22.34	25.26	2.92
	velocity		8.71		9.21		8.21	7.86	7.44	8.40	172.0	8.71	9.21	8.21	7.65	8.95	7.92	

Sun Jiahao (CHN) (2002)	time	11.83	22.96	35.05	41.24	47.88	47.88	7 / 4								
reaction time 0.176	interval		11.13	12.09	6.19	6.64		# of strides	11.83	11.13	12.09	12.83	22.96	24.92	1.96	
	velocity	8.45	8.98	8.27	8.08	7.53	8.35	181.0	8.45	8.98	8.27	7.79	8.71	8.03		
Wumaier Ailixier (CHN) (20	time	11.53	22.63	35.10	41.49	48.20	48.20	4 / 5								
reaction time 0.183	interval		11.10	12.47	6.39	6.71		# of strides	11.53	11.10	12.47	13.10	22.63	25.57	2.94	
	velocity	8.67	9.01	8.02	7.82	7.45	8.30	179.2	8.67	9.01	8.02	7.63	8.84	7.82		
Wang Hongliang (CHN) (2	time	12.09	23.54	35.74	42.06	48.60	48.60	2 / 6								
reaction time 0.155	interval		11.45	12.20	6.32	6.54		# of strides	12.09	11.45	12.20	12.86	23.54	25.06	1.52	
	velocity	8.27	8.73	8.20	7.91	7.65	8.23	174.0	8.27	8.73	8.20	7.78	8.50	7.98		
Tang Jiajun (CHN) (2005)	time	11.96	23.29	35.50	41.90	48.60	48.60	1 / 7								
reaction time 0.179	interval		11.33	12.21	6.40	6.70		# of strides	11.96	11.33	12.21	13.10	23.29	25.31	2.02	
	velocity	8.36	8.83	8.19	7.81	7.46	8.23	180.7	8.36	8.83	8.19	7.63	8.59	7.90		

Heat 5

date 26-Apr-23

Shandong Athletics Sport Science (2023)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Han Zhiyu (CHN) (2004)	time		11.73		22.64		35.22	41.93	48.84	48.84	2 / 4							
reaction time 0.197	interval				10.91		12.58	6.71	6.91	PB	# of strides	11.73	10.91	12.58	13.62	22.64	26.20	3.56
	velocity		8.53		9.17		7.95	7.45	7.24	8.19	172.0	8.53	9.17	7.95	7.34	8.83	7.63	

Heat 4

date 26-Apr-23

Shandong Athletics Sport Science (2023)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Xie Yuqiang (CHN) (1997)	time		11.13		22.51		34.55	40.76	47.39	47.39	6 / 1							
reaction time 0.216	interval				11.38		12.04	6.21	6.63		# of strides	11.13	11.38	12.04	12.84	22.51	24.88	2.37
	velocity		8.98		8.79		8.31	8.05	7.54	8.44	176.0	8.98	8.79	8.31	7.79	8.88	8.04	

2023 Seiko Golden Grand Prix (Yokohama, JPN)

FINAL

date 21-May-23

Yamanaka (2024) - analysis of men's and women's 400m and 300m runs in the 2023 season

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Nakajima, Yuki Joseph (JPN	time	6.15	11.16	16.28	21.55	26.99	32.75	38.83	45.31	45.31	6 / 1							
reaction time 0.171	interval		5.01	5.12	5.27	5.44	5.76	6.08	6.48	PB	# of strides	11.16	10.39	11.20	12.56	21.55	23.76	2.21
	velocity	8.13	9.98	9.77	9.49	9.19	8.68	8.22	7.72	8.83	172.5	8.96	9.62	8.93	7.96	9.28	8.42	
Sato, Fuga (JPN) (1999)	time	6.04	11.06	16.27	21.63	27.21	33.06	39.13	45.52	45.52	4 / 3							
reaction time 0.151	interval		5.02	5.21	5.36	5.58	5.85	6.07	6.39		# of strides	11.06	10.57	11.43	12.46	21.63	23.89	2.26
	velocity	8.28	9.96	9.60	9.33	8.96	8.55	8.24	7.82	8.79	175.0	9.04	9.46	8.75	8.03	9.25	8.37	
Sato, Kentaro (JPN) (1994)	time	6.01	11.00	16.15	21.49	27.02	32.89	39.17	45.75	45.75	5 / 5							
reaction time 0.163	interval		4.99	5.15	5.34	5.53	5.87	6.28	6.58		# of strides	11.00	10.49	11.40	12.86	21.49	24.26	2.77
	velocity	8.32	10.02	9.71	9.36	9.04	8.52	7.96	7.60	8.74	175.5	9.09	9.53	8.77	7.78	9.31	8.24	
Jinushi, Naohiro (JPN) (20(	time	6.32	11.51	16.82	22.25	27.76	33.43	39.36	45.76	45.76	2 / 6							
reaction time 0.159	interval		5.19	5.31	5.43	5.51	5.67	5.93	6.40	PB	# of strides	11.51	10.74	11.18	12.33	22.25	23.51	1.26
	velocity	7.91	9.63	9.42	9.21	9.07	8.82	8.43	7.81	8.74		8.69	9.31	8.94	8.11	8.99	8.51	
Imaizumi, Kenki (JPN) (200	time	6.11	11.23	16.48	21.94	27.56	33.43	39.43	45.76	45.76	8 / 6							
reaction time 0.148	interval		5.12	5.25	5.46	5.62	5.87	6.00	6.33		# of strides	11.23	10.71	11.49	12.33	21.94	23.82	1.88
	velocity	8.18	9.77	9.52	9.16	8.90	8.52	8.33	7.90	8.74		8.90	9.34	8.70	8.11	9.12	8.40	

2023 Michitaka Kinami Memorial (Osaka, JPN)

Decathlon - Heat

date 06-May-23

Matsubayashi (2024) - performance analysis of decathlon athletes in the 2023 season

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Taue, Shun (JPN) (1997)	time	6.49	11.74	17.11	22.79	28.82	35.12	41.76	48.94	48.94	8 / 2							
reaction time 0.141	interval		5.25	5.37	5.68	6.03	6.30	6.64	7.18		# of strides	11.74	11.05	12.33	13.82	22.79	26.15	3.36
	velocity	7.70	9.52	9.31	8.80	8.29	7.94	7.53	6.96	8.17		8.52	9.05	8.11	7.24	8.78	7.65	
Ushiro, Keisuke (JPN) (198	time	6.84	12.47	18.00	24.41	30.80	37.57	44.75	52.61	52.61	7 / 5							
reaction time 0.187	interval		5.63	5.53	6.41	6.39	6.77	7.18	7.86		# of strides	12.47	11.94	13.16	15.04	24.41	28.20	3.79
	velocity	7.31	8.88	9.04	7.80	7.82	7.39	6.96	6.36	7.60		8.02	8.38	7.60	6.65	8.19	7.09	

2023 Doha Diamond League (Doha, QAT)

FINAL

date 05-May-23

Omega Timing (2023) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Osman, Ashraf Hussen (QA	time	6.39	11.53	16.92	22.59	28.42	34.43	40.56	47.30	47.30	4 / 1							
reaction time 0.213	interval		5.14	5.39	5.67	5.83	6.01	6.13	6.74		# of strides	11.53	11.06	11.84	12.87	22.59	24.71	2.12
	velocity	7.82	9.73	9.28	8.82	8.58	8.32	8.16	7.42	8.46		8.67	9.04	8.45	7.77	8.85	8.09	
Ibrahim Issaka, Hussein (Q	time	6.49	11.79	17.40	23.15	29.22	35.35	41.65	48.17	48.17	7 / 2							
reaction time 0.305	interval		5.30	5.61	5.75	6.07	6.13	6.30	6.52		# of strides	11.79	11.36	12.20	12.82	23.15	25.02	1.87
	velocity	7.70	9.43	8.91	8.70	8.24	8.16	7.94	7.67	8.30		8.48	8.80	8.20	7.80	8.64	7.99	
Abdel, Youssouf (QAT)	time	6.59	12.04	17.71	23.60	29.62	35.58	41.88	48.39	48.39	3 / 3							
reaction time 0.173	interval		5.45	5.67	5.89	6.02	5.96	6.30	6.51		# of strides	12.04	11.56	11.98	12.81	23.60	24.79	1.19
	velocity	7.59	9.17	8.82	8.49	8.31	8.39	7.94	7.68	8.27		8.31	8.65	8.35	7.81	8.47	8.07	
Maizen, Ali (QAT)	time	6.38	11.65	17.31	23.14	29.15	35.22	41.43	48.57	48.57	2 / 4							
reaction time 0.199	interval		5.27	5.66	5.83	6.01	6.07	6.21	7.14		# of strides	11.65	11.49	12.08	13.35	23.14	25.43	2.29
	velocity	7.84	9.49	8.83	8.58	8.32	8.24	8.05	7.00	8.24		8.58	8.70	8.28	7.49	8.64	7.86	
Ebed, Amar Ebed (QAT) (2	time	6.40	11.61	17.07	22.80	28.77	34.96	41.56	49.09	49.09	8 / 5							

reaction time 0.277	interval		5.21	5.46	5.73	5.97	6.19	6.60	7.53		# of strides	11.61	11.19	12.16	14.13	22.80	26.29	3.49
	velocity	7.81	9.60	9.16	8.73	8.38	8.08	7.58	6.64	8.15		8.61	8.94	8.22	7.08	8.77	7.61	
Musa, Mubarak Abdulkarim	time	6.85	12.63	18.93	25.04	31.06	36.98	43.33	50.20	50.20	6 / 6							
reaction time 0.230	interval		5.78	6.30	6.11	6.02	5.92	6.35	6.87		# of strides	12.63	12.41	11.94	13.22	25.04	25.16	0.12
	velocity	7.30	8.65	7.94	8.18	8.31	8.45	7.87	7.28	7.97		7.92	8.06	8.38	7.56	7.99	7.95	
Armadi, Daoud Ismail (SUD	time	6.59	11.86	17.54	23.58	30.03	36.57	43.26	50.50	50.50	1 / 7							
reaction time 0.241	interval		5.27	5.68	6.04	6.45	6.54	6.69	7.24		# of strides	11.86	11.72	12.99	13.93	23.58	26.92	3.34
	velocity	7.59	9.49	8.80	8.28	7.75	7.65	7.47	6.91	7.92		8.43	8.53	7.70	7.18	8.48	7.43	
Litvin Mikhail (KAZ) (1996)	time	6.4	11.6	17.6						dnf	5 / --							
reaction time 0.222	interval		5.20	6.00							# of strides	11.60						
	velocity	7.81	9.62	8.33								8.62						

2022 Weltklasse (Zürich, SUI)

FINAL

date 08-Sep-22

Omega Timing (2022) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
James, Kirani (GRN) (1992)	time	6.15	10.97	15.93	21.01	26.28	31.90	37.90	44.26	44.26	4 / 1							
reaction time 0.169	interval		4.82	4.96	5.08	5.27	5.62	6.00	6.36		# of strides	10.97	10.04	10.89	12.36	21.01	23.25	2.24
	velocity	8.13	10.37	10.08	9.84	9.49	8.90	8.33	7.86	9.04	161.0	9.12	9.96	9.18	8.09	9.52	8.60	
Deadmon, Bryce (USA) (19	time	6.16	11.20	16.35	21.61	27.04	32.66	38.42	44.47	44.47	3 / 2							
reaction time 0.135	interval		5.04	5.15	5.26	5.43	5.62	5.76	6.05		# of strides	11.20	10.41	11.05	11.81	21.61	22.86	1.25
	velocity	8.12	9.92	9.71	9.51	9.21	8.90	8.68	8.26	8.99		8.93	9.61	9.05	8.47	9.25	8.75	
Norwood, Vernon (USA) (1	time	6.11	10.97	16.01	21.21	26.53	32.18	38.13	44.66	44.66	6 / 3							
reaction time 0.199	interval		4.86	5.04	5.20	5.32	5.65	5.95	6.53		# of strides	10.97	10.24	10.97	12.48	21.21	23.45	2.24
	velocity	8.18	10.29	9.92	9.62	9.40	8.85	8.40	7.66	8.96	175.0	9.12	9.77	9.12	8.01	9.43	8.53	
Nene, Zakhiti (RSA) (1998)	time	6.08	11.06	16.20	21.49	26.87	32.50	38.39	44.74	44.74	7 / 4							
reaction time 0.137	interval		4.98	5.14	5.29	5.38	5.63	5.89	6.35	PB	# of strides	11.06	10.43	11.01	12.24	21.49	23.25	1.76
	velocity	8.22	10.04	9.73	9.45	9.29	8.88	8.49	7.87	8.94	177.0	9.04	9.59	9.08	8.17	9.31	8.60	
Petrucciani, Ricky (SUI) (20	time	6.18	11.28	16.46	21.79	27.26	32.94	38.89	45.31	45.31	8 / 5							
reaction time 0.188	interval		5.10	5.18	5.33	5.47	5.68	5.95	6.42		# of strides	11.28	10.51	11.15	12.37	21.79	23.52	1.73
	velocity	8.09	9.80	9.65	9.38	9.14	8.80	8.40	7.79	8.83	174.5	8.87	9.51	8.97	8.08	9.18	8.50	
Makwala, Isaac (BOT) (1986	time	6.17	11.26	16.52	21.85	27.29	32.87	38.81	45.56	45.56	2 / 6							
reaction time 0.165	interval		5.09	5.26	5.33	5.44	5.58	5.94	6.75		# of strides	11.26	10.59	11.02	12.69	21.85	23.71	1.86
	velocity	8.10	9.82	9.51	9.38	9.19	8.96	8.42	7.41	8.78		8.88	9.44	9.07	7.88	9.15	8.44	
Bonevacia, Liemarvin (NED	time	6.27	11.37	16.61	21.92	27.40	33.13	39.23	45.84	45.84	1 / 7							
reaction time 0.143	interval		5.10	5.24	5.31	5.48	5.73	6.10	6.61		# of strides	11.37	10.55	11.21	12.71	21.92	23.92	2.00
	velocity	7.97	9.80	9.54	9.42	9.12	8.73	8.20	7.56	8.73		8.80	9.48	8.92	7.87	9.12	8.36	

National FINAL

date 08-Sep-22

Omega Timing (2022) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
van Niekerk, Wayde (RSA)	time	6.12	10.98	16.01	21.31	26.88	32.55	38.30	44.39	44.39	5 / 1							
reaction time 0.185	interval		4.86	5.03	5.30	5.57	5.67	5.75	6.09		# of strides	10.98	10.33	11.24	11.84	21.31	23.08	1.77
	velocity	8.17	10.29	9.94	9.43	8.98	8.82	8.70	8.21	9.01	162.7	9.11	9.68	8.90	8.45	9.39	8.67	
London, Wil (USA) (1997)	time	6.10	11.12	16.36	21.75	27.28	32.88	38.60	44.78	44.78	7 / 2							
reaction time 0.150	interval		5.02	5.24	5.39	5.53	5.60	5.72	6.18		# of strides	11.12	10.63	11.13	11.90	21.75	23.03	1.28
	velocity	8.20	9.96	9.54	9.28	9.04	8.93	8.74	8.09	8.93	178.0	8.99	9.41	8.98	8.40	9.20	8.68	
Spitz, Lionel (SUI) (2001)	time	6.21	11.21	16.38	21.64	27.09	32.84	38.92	45.53	45.53	4 / 3							
reaction time 0.145	interval		5.00	5.17	5.26	5.45	5.75	6.08	6.61		# of strides	11.21	10.43	11.20	12.69	21.64	23.89	2.25
	velocity	8.05	10.00	9.67	9.51	9.17	8.70	8.22	7.56	8.79		8.92	9.59	8.93	7.88	9.24	8.37	
Re, Davide (ITA) (1993)	time	6.31	11.35	16.55	21.91	27.44	33.21	39.21	45.59	45.59	3 / 4							
reaction time 0.152	interval		5.04	5.20	5.36	5.53	5.77	6.00	6.38		# of strides	11.35	10.56	11.30	12.38	21.91	23.68	1.77
	velocity	7.92	9.92	9.62	9.33	9.04	8.67	8.33	7.84	8.77		8.81	9.47	8.85	8.08	9.13	8.45	
Haydock-Wilson, Alex (GB	time	6.14	11.15	16.43	21.79	27.23	32.92	39.07	45.93	45.93	6 / 5							
reaction time 0.145	interval		5.01	5.28	5.36	5.44	5.69	6.15	6.86		# of strides	11.15	10.64	11.13	13.01	21.79	24.14	2.35
	velocity	8.14	9.98	9.47	9.33	9.19	8.79	8.13	7.29	8.71	179.0	8.97	9.40	8.98	7.69	9.18	8.29	
Angela, Ramsey (NED) (19	time	6.48	11.74	17.12	22.66	28.32	34.11	40.12	46.41	46.41	8 / 6							
reaction time 0.195	interval		5.26	5.38	5.54	5.66	5.79	6.01	6.29		# of strides	11.74	10.92	11.45	12.30	22.66	23.75	1.09
	velocity	7.72	9.51	9.29	9.03	8.83	8.64	8.32	7.95	8.62		8.52	9.16	8.73	8.13	8.83	8.42	
Devantay, Charles (SUI) (19	time	6.27	11.41	16.72	22.16	27.82	33.77	39.96	46.53	46.53	2 / 7							
reaction time 0.144	interval		5.14	5.31	5.44	5.66	5.95	6.19	6.57		# of strides	11.41	10.75	11.61	12.76	22.16	24.37	2.21
	velocity	7.97	9.73	9.42	9.19	8.83	8.40	8.08	7.61	8.60		8.76	9.30	8.61	7.84	9.03	8.21	
Brand, Dany (SUI) (1996)	time	6.23	11.23	16.45	21.87	27.51	33.56	40.01	46.85	46.85	1 / 8							
reaction time 0.165	interval		5.00	5.22	5.42	5.64	6.05	6.45	6.84	PB	# of strides	11.23	10.64	11.69	13.29	21.87	24.98	3.11
	velocity	8.03	10.00	9.58	9.23	8.87	8.26	7.75	7.31	8.54		8.90	9.40	8.55	7.52	9.14	8.01	

2022 Memorial van Damme (Brussels, BEL)

FINAL

date 02-Sep-22

Omega Timing (2022) - diamond league race analysis

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential

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

Borlée, Kévin (BEL) (1988)	time	6.35	11.52	16.78	22.17	27.70	33.46	39.44	45.72	45.72	5 / 1							
reaction time 0.171	interval		5.17	5.26	5.39	5.53	5.76	5.98	6.28		# of strides	11.52	10.65	11.29	12.26	22.17	23.55	1.38
	velocity	7.87	9.67	9.51	9.28	9.04	8.68	8.36	7.96	8.75		8.68	9.39	8.86	8.16	9.02	8.49	
O'Donnell, Christopher (IR	time	6.39	11.50	16.79	22.24	27.74	33.41	39.42	45.78	45.78	2 / 2							
reaction time 0.164	interval		5.11	5.29	5.45	5.50	5.67	6.01	6.36		# of strides	11.50	10.74	11.17	12.37	22.24	23.54	1.30
	velocity	7.82	9.78	9.45	9.17	9.09	8.82	8.32	7.86	8.74		8.70	9.31	8.95	8.08	8.99	8.50	
Doom, Alexander (BEL) (1!	time	6.45	11.58	16.81	22.26	27.89	33.70	39.68	45.82	45.82	6 / 3							
reaction time 0.164	interval		5.13	5.23	5.45	5.63	5.81	5.98	6.14		# of strides	11.58	10.68	11.44	12.12	22.26	23.56	1.30
	velocity	7.75	9.75	9.56	9.17	8.88	8.61	8.36	8.14	8.73		8.64	9.36	8.74	8.25	8.98	8.49	
Borlée, Jonathan (BEL) (19	time	6.31	11.43	16.67	22.02	27.52	33.28	39.42	45.90	45.90	3 / 4							
reaction time 0.194	interval		5.12	5.24	5.35	5.50	5.76	6.14	6.48		# of strides	11.43	10.59	11.26	12.62	22.02	23.88	1.86
	velocity	7.92	9.77	9.54	9.35	9.09	8.68	8.14	7.72	8.71		8.75	9.44	8.88	7.92	9.08	8.38	
Borlée, Dylan (BEL) (1992)	time	6.32	11.42	16.64	22.08	27.68	33.52	39.59	46.07	46.07	7 / 5							
reaction time 0.140	interval		5.10	5.22	5.44	5.60	5.84	6.07	6.48		# of strides	11.42	10.66	11.44	12.55	22.08	23.99	1.91
	velocity	7.91	9.80	9.58	9.19	8.93	8.56	8.24	7.72	8.68		8.76	9.38	8.74	7.97	9.06	8.34	
Dobber, Jochem (NED) (19	time	6.34	11.44	16.72	22.14	27.73	33.59	39.82	46.46	46.46	1 / 6							
reaction time 0.160	interval		5.10	5.28	5.42	5.59	5.86	6.23	6.64		# of strides	11.44	10.70	11.45	12.87	22.14	24.32	2.18
	velocity	7.89	9.80	9.47	9.23	8.94	8.53	8.03	7.53	8.61		8.74	9.35	8.73	7.77	9.03	8.22	
Sacoor, Jonathan (BEL) (1!	time	6.46	11.64	16.90	22.36	27.90	33.69	39.85	46.60	46.60	4 / 7							
reaction time 0.153	interval		5.18	5.26	5.46	5.54	5.79	6.16	6.75		# of strides	11.64	10.72	11.33	12.91	22.36	24.24	1.88
	velocity	7.74	9.65	9.51	9.16	9.03	8.64	8.12	7.41	8.58		8.59	9.33	8.83	7.75	8.94	8.25	
Jordier, Thomas (FRA) (19!	time	6.49	11.83	17.15	22.65	28.41	34.44	40.71	47.55	47.55	8 / 8							
reaction time 0.163	interval		5.34	5.32	5.50	5.76	6.03	6.27	6.84		# of strides	11.83	10.82	11.79	13.11	22.65	24.90	2.25
	velocity	7.70	9.36	9.40	9.09	8.68	8.29	7.97	7.31	8.41		8.45	9.24	8.48	7.63	8.83	8.03	

2022 European Athletics Championships (Munich, GER)

FINAL

date 17-Aug-22

European Athletics (2022) - european athletics championships race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hudson-Smith, Matthew (G	time		11.06		21.40		32.36		44.53	44.53	4 / 1							
reaction time 0.213	interval				10.34		10.96		12.17		# of strides	11.06	10.34	10.96	12.17	21.40	23.13	1.73
	velocity		9.04		9.67		9.12		8.22	8.98	165.0	9.04	9.67	9.12	8.22	9.35	8.65	
Petrucciani, Ricky (SUI) (20	time		11.23		21.72		32.91		45.03	45.03	8 / 2							
reaction time 0.197	interval				10.49		11.19		12.12		# of strides	11.23	10.49	11.19	12.12	21.72	23.31	1.59
	velocity		8.90		9.53		8.94		8.25	8.88	178.0	8.90	9.53	8.94	8.25	9.21	8.58	
Haydock-Wilson, Alex (GBI	time		11.10		21.50		32.70		45.17	45.17	6 / 3							
reaction time 0.192	interval				10.40		11.20		12.47		# of strides	11.10	10.40	11.20	12.47	21.50	23.67	2.17
	velocity		9.01		9.62		8.93		8.02	8.86	179.0	9.01	9.62	8.93	8.02	9.30	8.45	
Bonevacia, Liemarvin (NED	time		11.13		21.36		32.66		45.17	45.17	5 / 4							
reaction time 0.177	interval				10.23		11.30		12.51		# of strides	11.13	10.23	11.30	12.51	21.36	23.81	2.45
	velocity		8.98		9.78		8.85		7.99	8.86	181.0	8.98	9.78	8.85	7.99	9.36	8.40	
Borlée, Dylan (BEL) (1992)	time		11.25		21.66		32.98		45.39	45.39	7 / 5							
reaction time 0.157	interval				10.41		11.32		12.41		# of strides	11.25	10.41	11.32	12.41	21.66	23.73	2.07
	velocity		8.89		9.61		8.83		8.06	8.81	173.0	8.89	9.61	8.83	8.06	9.23	8.43	
Zalewski, Karol (POL) (1993	time		11.06		21.57		33.07		45.62	45.62	1 / 6							
reaction time 0.178	interval				10.51		11.50		12.55		# of strides	11.06	10.51	11.50	12.55	21.57	24.05	2.48
	velocity		9.04		9.51		8.70		7.97	8.77	169.0	9.04	9.51	8.70	7.97	9.27	8.32	
Spitz, Lionel (SUI) (2001)	time		11.16		21.76		33.04		45.66	45.66	2 / 7							
reaction time 0.175	interval				10.60		11.28		12.62		# of strides	11.16	10.60	11.28	12.62	21.76	23.90	2.14
	velocity		8.96		9.43		8.87		7.92	8.76	183.0	8.96	9.43	8.87	7.92	9.19	8.37	
Jordier, Thomas (FRA) (19!	time		11.12		21.67		33.15		45.67	45.67	3 / 8							
reaction time 0.171	interval				10.55		11.48		12.52		# of strides	11.12	10.55	11.48	12.52	21.67	24.00	2.33
	velocity		8.99		9.48		8.71		7.99	8.76	188.0	8.99	9.48	8.71	7.99	9.23	8.33	

Semi-Final 3

date 16-Aug-22

European Athletics (2022) - european athletics championships race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Bonevacia, Liemarvin (NED	time		11.44		21.79		32.99		45.40	45.40	6 / 1							
reaction time 0.179	interval				10.35		11.20		12.41		# of strides	11.44	10.35	11.20	12.41	21.79	23.61	1.82
	velocity		8.74		9.66		8.93		8.06	8.81	177.7	8.74	9.66	8.93	8.06	9.18	8.47	
Borlée, Dylan (BEL) (1992)	time		11.60		21.98		33.21		45.67	45.67	3 / 2							
reaction time 0.157	interval				10.38		11.23		12.46		# of strides	11.60	10.38	11.23	12.46	21.98	23.69	1.71
	velocity		8.62		9.63		8.90		8.03	8.76	173.0	8.62	9.63	8.90	8.03	9.10	8.44	
Biron, Gilles (FRA) (1995)	time		11.44		22.06		33.38		45.75	45.75	1 / 3							
reaction time 0.165	interval				10.62		11.32		12.37		# of strides	11.44	10.62	11.32	12.37	22.06	23.69	1.63
	velocity		8.74		9.42		8.83		8.08	8.74	179.0	8.74	9.42	8.83	8.08	9.07	8.44	
Schneider, Patrick (GER) (1	time		11.52		21.89		33.26		45.92	45.92	7 / 4							
reaction time 0.180	interval				10.37		11.37		12.66		# of strides	11.52	10.37	11.37	12.66	21.89	24.03	2.14

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
	velocity		8.68		9.64		8.80		7.90	8.71	169.2	8.68	9.64	8.80	7.90	9.14	8.32	
Re, Davide (ITA) (1993)	time		11.57		21.99		33.47		46.02	46.02	4 / 5							
reaction time 0.228	interval				10.42		11.48		12.55		# of strides	11.57	10.42	11.48	12.55	21.99	24.03	2.04
	velocity		8.64		9.60		8.71		7.97	8.69	173.0	8.64	9.60	8.71	7.97	9.10	8.32	
Maslák, Pavel (CZE) (1991)	time		11.52		22.24		33.77		46.36	46.36	2 / 6							
reaction time 0.197	interval				10.72		11.53		12.59		# of strides	11.52	10.72	11.53	12.59	22.24	24.12	1.88
	velocity		8.68		9.33		8.67		7.94	8.63	181.0	8.68	9.33	8.67	7.94	8.99	8.29	
Dringo, Mihai Sorin (ROU)	time		11.70		22.27		33.84		47.06	47.06	5 / 7							
reaction time 0.188	interval				10.57		11.57		13.22		# of strides	11.70	10.57	11.57	13.22	22.27	24.79	2.52
	velocity		8.55		9.46		8.64		7.56	8.50	178.5	8.55	9.46	8.64	7.56	8.98	8.07	

Semi-Final 2

date 16-Aug-22

European Athletics (2022) - european athletics championships race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Jordier, Thomas (FRA) (19	time		11.15		21.51		32.88		45.37	45.37	4 / 1							
reaction time 0.174	interval				10.36		11.37		12.49	PB	# of strides	11.15	10.36	11.37	12.49	21.51	23.86	2.35
	velocity		8.97		9.65		8.80		8.01	8.82	185.5	8.97	9.65	8.80	8.01	9.30	8.38	
Haydock-Wilson, Alex (GB	time		11.14		21.69		32.83		45.45	45.45	5 / 2							
reaction time 0.176	interval				10.55		11.14		12.62		# of strides	11.14	10.55	11.14	12.62	21.69	23.76	2.07
	velocity		8.98		9.48		8.98		7.92	8.80	179.0	8.98	9.48	8.98	7.92	9.22	8.42	
Zalewski, Karol (POL) (1993	time		10.92		21.19		32.58		45.52	45.52	3 / 3							
reaction time 0.209	interval				10.27		11.39		12.94		# of strides	10.92	10.27	11.39	12.94	21.19	24.33	3.14
	velocity		9.16		9.74		8.78		7.73	8.79	170.7	9.16	9.74	8.78	7.73	9.44	8.22	
Spitz, Lionel (SUI) (2001)	time		11.08		21.66		33.12		45.56	45.56	7 / 4							
reaction time 0.170	interval				10.58		11.46		12.44		# of strides	11.08	10.58	11.46	12.44	21.66	23.90	2.24
	velocity		9.03		9.45		8.73		8.04	8.78	177.0	9.03	9.45	8.73	8.04	9.23	8.37	
Krsek, Matěj (CZE) (2000)	time		11.39		22.01		33.55		45.92	45.92	8 / 5							
reaction time 0.171	interval				10.62		11.54		12.37		# of strides	11.39	10.62	11.54	12.37	22.01	23.91	1.90
	velocity		8.78		9.42		8.67		8.08	8.71	173.0	8.78	9.42	8.67	8.08	9.09	8.36	
Cañal, Iñaki (ESP) (1997)	time		11.28		21.59		33.07		46.10	46.10	1 / 6							
reaction time 0.159	interval				10.31		11.48		13.03		# of strides	11.28	10.31	11.48	13.03	21.59	24.51	2.92
	velocity		8.87		9.70		8.71		7.67	8.68	181.0	8.87	9.70	8.71	7.67	9.26	8.16	
Scotti, Edoardo (ITA) (2000	time		11.28		21.69		33.18		46.49	46.49	2 / 7							
reaction time 0.216	interval				10.41		11.49		13.31		# of strides	11.28	10.41	11.49	13.31	21.69	24.80	3.11
	velocity		8.87		9.61		8.70		7.51	8.60	172.7	8.87	9.61	8.70	7.51	9.22	8.06	
Borleé, Kevin (BEL) (1988)	time		11.30							dnf	6 / --							
reaction time 0.166	interval										# of strides	11.30						
	velocity		8.85									8.85						

Semi-Final 1

date 16-Aug-22

European Athletics (2022) - european athletics championships race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hudson-Smith, Matthew (G	time		10.89		21.31		32.41		44.98	44.98	5 / 1							
reaction time 0.169	interval				10.42		11.10		12.57		# of strides	10.89	10.42	11.10	12.57	21.31	23.67	2.36
	velocity		9.18		9.60		9.01		7.96	8.89	164.7	9.18	9.60	9.01	7.96	9.39	8.45	
Petrucciani, Ricky (SUI) (20	time		11.07		21.49		32.91		45.55	45.55	3 / 2							
reaction time 0.227	interval				10.42		11.42		12.64		# of strides	11.07	10.42	11.42	12.64	21.49	24.06	2.57
	velocity		9.03		9.60		8.76		7.91	8.78	176.0	9.03	9.60	8.76	7.91	9.31	8.31	
Coelho, João (POR) (1999)	time		11.13		21.41		32.82		45.64	45.64	8 / 3							
reaction time 0.206	interval				10.28		11.41		12.82		# of strides	11.13	10.28	11.41	12.82	21.41	24.23	2.82
	velocity		8.98		9.73		8.76		7.80	8.76	177.5	8.98	9.73	8.76	7.80	9.34	8.25	
Šorm, Patrik (CZE) (1993)	time		11.21		21.80		33.20		45.66	45.66	2 / 4							
reaction time 0.227	interval				10.59		11.40		12.46		# of strides	11.21	10.59	11.40	12.46	21.80	23.86	2.06
	velocity		8.92		9.44		8.77		8.03	8.76	173.7	8.92	9.44	8.77	8.03	9.17	8.38	
O'Donnell, Christopher (IR	time		11.09		21.74		33.02		45.73	45.73	4 / 5							
reaction time 0.180	interval				10.65		11.28		12.71		# of strides	11.09	10.65	11.28	12.71	21.74	23.99	2.25
	velocity		9.02		9.39		8.87		7.87	8.75	179.0	9.02	9.39	8.87	7.87	9.20	8.34	
Doom, Alexander (BEL) (19	time		10.97		21.26		32.84		45.77	45.77	6 / 6							
reaction time 0.180	interval				10.29		11.58		12.93		# of strides	10.97	10.29	11.58	12.93	21.26	24.51	3.25
	velocity		9.12		9.72		8.64		7.73	8.74	180.0	9.12	9.72	8.64	7.73	9.41	8.16	
Kijanović, Boško (SRB) (20	time		10.86		21.42		32.86		45.88	45.88	7 / 7							
reaction time 0.162	interval				10.56		11.44		13.02		# of strides	10.86	10.56	11.44	13.02	21.42	24.46	3.04
	velocity		9.21		9.47		8.74		7.68	8.72	170.0	9.21	9.47	8.74	7.68	9.34	8.18	
Nielsen, Gustav Lundholm	time		11.30		22.05		33.51		46.30	46.30	1 / 8							
reaction time 0.190	interval				10.75		11.46		12.79		# of strides	11.30	10.75	11.46	12.79	22.05	24.25	2.20
	velocity		8.85		9.30		8.73		7.82	8.64	180.5	8.85	9.30	8.73	7.82	9.07	8.25	

Heat 4

date 15-Aug-22

European Athletics (2022) - european athletics championships race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Jordier, Thomas (FRA) (19	time		11.36		21.57		32.86		45.39	45.39	3 / 1							
reaction time 0.190	interval				10.21		11.29		12.53	PB	# of strides	11.36	10.21	11.29	12.53	21.57	23.82	2.25
	velocity		8.80		9.79		8.86		7.98	8.81		8.80	9.79	8.86	7.98	9.27	8.40	
Schneider, Patrick (GER) (1	time		11.31		21.77		32.91		45.58	45.58	7 / 2							
reaction time 0.141	interval				10.46		11.14		12.67		# of strides	11.31	10.46	11.14	12.67	21.77	23.81	2.04
	velocity		8.84		9.56		8.98		7.89	8.78		8.84	9.56	8.98	7.89	9.19	8.40	
Scotti, Edoardo (ITA) (2000	time		11.41		22.08		33.45		45.87	45.87	8 / 3							
reaction time 0.251	interval				10.67		11.37		12.42		# of strides	11.41	10.67	11.37	12.42	22.08	23.79	1.71
	velocity		8.76		9.37		8.80		8.05	8.72		8.76	9.37	8.80	8.05	9.06	8.41	
Maslák, Pavel (CZE) (1991)	time		11.11		21.47		32.88		45.92	45.92	4 / 4							
reaction time 0.230	interval				10.36		11.41		13.04		# of strides	11.11	10.36	11.41	13.04	21.47	24.45	2.98
	velocity		9.00		9.65		8.76		7.67	8.71		9.00	9.65	8.76	7.67	9.32	8.18	
Nielsen, Gustav Lundholm	time		11.36		21.98		33.28		46.05	46.05	6 / 5							
reaction time 0.165	interval				10.62		11.30		12.77		# of strides	11.36	10.62	11.30	12.77	21.98	24.07	2.09
	velocity		8.80		9.42		8.85		7.83	8.69		8.80	9.42	8.85	7.83	9.10	8.31	
Guijarro, Manuel (ESP) (19	time		11.17		21.41		32.81		46.18	46.18	5 / 6							
reaction time 0.248	interval				10.24		11.40		13.37		# of strides	11.17	10.24	11.40	13.37	21.41	24.77	3.36
	velocity		8.95		9.77		8.77		7.48	8.66		8.95	9.77	8.77	7.48	9.34	8.07	

Heat 3

date 15-Aug-22

European Athletics (2022) - european athletics championships race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Vedel, Benjamin Lodo (DE!	time		11.26		21.64		32.76		45.50	45.50	7 / 1							
reaction time 0.185	interval				10.38		11.12		12.74	=NR PB	# of strides	11.26	10.38	11.12	12.74	21.64	23.86	2.22
	velocity		8.88		9.63		8.99		7.85	8.79		8.88	9.63	8.99	7.85	9.24	8.38	
Biron, Gilles (FRA) (1995)	time		11.10		21.53		33.01		45.82	45.82	8 / 2							
reaction time 0.157	interval				10.43		11.48		12.81		# of strides	11.10	10.43	11.48	12.81	21.53	24.29	2.76
	velocity		9.01		9.59		8.71		7.81	8.73		9.01	9.59	8.71	7.81	9.29	8.23	
Krsek, Matěj (CZE) (2000)	time		11.50		22.19		33.51		46.12	46.12	4 / 3							
reaction time 0.173	interval				10.69		11.32		12.61		# of strides	11.50	10.69	11.32	12.61	22.19	23.93	1.74
	velocity		8.70		9.35		8.83		7.93	8.67		8.70	9.35	8.83	7.93	9.01	8.36	
Ingvaldsen, Håvard Bentda	time		11.68		22.45		33.89		46.18	46.18	5 / 4							
reaction time 0.218	interval				10.77		11.44		12.29		# of strides	11.68	10.77	11.44	12.29	22.45	23.73	1.28
	velocity		8.56		9.29		8.74		8.14	8.66		8.56	9.29	8.74	8.14	8.91	8.43	
Husillos,Óscar (ESP) (1993)	time		11.31		21.78		33.29		46.42	46.42	3 / 5							
reaction time 0.212	interval				10.47		11.51		13.13		# of strides	11.31	10.47	11.51	13.13	21.78	24.64	2.86
	velocity		8.84		9.55		8.69		7.62	8.62		8.84	9.55	8.69	7.62	9.18	8.12	
Bujna, Šimon (SVK) (1995)	time		11.32		22.15		33.73		46.79	46.79	6 / 6							
reaction time 0.177	interval				10.83		11.58		13.06		# of strides	11.32	10.83	11.58	13.06	22.15	24.64	2.49
	velocity		8.83		9.23		8.64		7.66	8.55		8.83	9.23	8.64	7.66	9.03	8.12	

Heat 2

date 15-Aug-22

European Athletics (2022) - european athletics championships race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Re, Davide (ITA) (1993)	time		11.33		21.69		32.84		45.26	45.26	5 / 1							
reaction time 0.231	interval				10.36		11.15		12.42		# of strides	11.33	10.36	11.15	12.42	21.69	23.57	1.88
	velocity		8.83		9.65		8.97		8.05	8.84		8.83	9.65	8.97	8.05	9.22	8.49	
Petrucciani, Ricky (SUI) (20	time		11.19		21.65		32.87		45.26	45.26	7 / 2							
reaction time 0.198	interval				10.46		11.22		12.39		# of strides	11.19	10.46	11.22	12.39	21.65	23.61	1.96
	velocity		8.94		9.56		8.91		8.07	8.84		8.94	9.56	8.91	8.07	9.24	8.47	
Kijanović, Boško (SRB) (20	time		11.29		21.97		33.32		45.75	45.75	8 / 3							
reaction time	interval				10.68		11.35		12.43		# of strides	11.29	10.68	11.35	12.43	21.97	23.78	1.81
	velocity		8.86		9.36		8.81		8.05	8.74		8.86	9.36	8.81	8.05	9.10	8.41	
Coelho, João (POR) (1999)	time		11.36		21.77		33.14		45.78	45.78	3 / 4							
reaction time 0.291	interval				10.41		11.37		12.64		# of strides	11.36	10.41	11.37	12.64	21.77	24.01	2.24
	velocity		8.80		9.61		8.80		7.91	8.74		8.80	9.61	8.80	7.91	9.19	8.33	
Brier, Joseph (GBR) (1999)	time		11.53		22.11		33.34		46.06	46.06	4 / 5							
reaction time 0.213	interval				10.58		11.23		12.72		# of strides	11.53	10.58	11.23	12.72	22.11	23.95	1.84
	velocity		8.67		9.45		8.90		7.86	8.68		8.67	9.45	8.90	7.86	9.05	8.35	
Schlegel, Marvin (GER) (19	time		11.32		21.67		33.08		46.19	46.19	6 / 6							
reaction time 0.257	interval				10.35		11.41		13.11		# of strides	11.32	10.35	11.41	13.11	21.67	24.52	2.85
	velocity		8.83		9.66		8.76		7.63	8.66		8.83	9.66	8.76	7.63	9.23	8.16	
Dobber, Jochem (NED) (19	time		11.38		21.78		33.18		46.36	46.36	2 / 7							
reaction time 0.281	interval				10.40		11.40		13.18		# of strides	11.38	10.40	11.40	13.18	21.78	24.58	2.80
	velocity		8.79		9.62		8.77		7.59	8.63		8.79	9.62	8.77	7.59	9.18	8.14	

Heat 1

date 15-Aug-22

European Athletics (2022) - european athletics championships race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential

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

Spitz, Lionel (SUI) (2001)	time	11.15	21.71	32.92	45.46	45.46	8 / 1								
reaction time 0.193	interval		10.56	11.21	12.54	PB	# of strides	11.15	10.56	11.21	12.54	21.71	23.75	2.04	
	velocity	8.97	9.47	8.92	7.97	8.80		8.97	9.47	8.92	7.97	9.21	8.42		
Šorm, Patrik (CZE) (1993)	time	11.21	21.47	32.74	45.66	45.66	6 / 2								
reaction time 0.197	interval		10.26	11.27	12.92		# of strides	11.21	10.26	11.27	12.92	21.47	24.19	2.72	
	velocity	8.92	9.75	8.87	7.74	8.76		8.92	9.75	8.87	7.74	9.32	8.27		
Cañal, Iñaki (ESP) (1997)	time	11.11	21.35	32.75	45.83	45.83	7 / 3								
reaction time 0.151	interval		10.24	11.40	13.08	PB	# of strides	11.11	10.24	11.40	13.08	21.35	24.48	3.13	
	velocity	9.00	9.77	8.77	7.65	8.73		9.00	9.77	8.77	7.65	9.37	8.17		
Sanders, Manuel (GER) (19	time	11.54	22.11	33.60	46.21	46.21	4 / 4								
reaction time 0.185	interval		10.57	11.49	12.61		# of strides	11.54	10.57	11.49	12.61	22.11	24.10	1.99	
	velocity	8.67	9.46	8.70	7.93	8.66		8.67	9.46	8.70	7.93	9.05	8.30		
Benati, Lorenzo (ITA) (200	time	11.64	22.18	33.58	46.26	46.26	5 / 5								
reaction time 0.229	interval		10.54	11.40	12.68		# of strides	11.64	10.54	11.40	12.68	22.18	24.08	1.90	
	velocity	8.59	9.49	8.77	7.89	8.65		8.59	9.49	8.77	7.89	9.02	8.31		
Danylenko, Danylo (UKR) (	time	11.71	22.27	33.76	46.39	46.39	3 / 6								
reaction time 0.258	interval		10.56	11.49	12.63		# of strides	11.71	10.56	11.49	12.63	22.27	24.12	1.85	
	velocity	8.54	9.47	8.70	7.92	8.62		8.54	9.47	8.70	7.92	8.98	8.29		

2022 Commonwealth Games (Birmingham, GBR)

FINAL

date 07-Aug-22

Longines Timing (2022) - commonwealth games race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Samukonga, Muzala (ZAM)	time	6.3	11.3	16.5	21.9	27.3	32.9	38.5	44.66	44.66	8 / 1							
reaction time 0.195	interval		5.00	5.20	5.40	5.40	5.60	5.60	6.16	NR PB	# of strides	11.30	10.60	11.00	11.76	21.90	22.76	0.86
	velocity	7.94	10.00	9.62	9.26	9.26	8.93	8.93	8.12	8.96	172.7	8.85	9.43	9.09	8.50	9.13	8.79	
Hudson-Smith, Matthew (C	time	6.0	10.8	15.8	20.9	26.4	32.2	38.2	44.81	44.81	7 / 2							
reaction time 0.157	interval		4.80	5.00	5.10	5.50	5.80	6.00	6.61		# of strides	10.80	10.10	11.30	12.61	20.90	23.91	3.01
	velocity	8.33	10.42	10.00	9.80	9.09	8.62	8.33	7.56	8.93	168.0	9.26	9.90	8.85	7.93	9.57	8.36	
Jones, Jonathan (BAR) (19	time	6.2	11.1	16.1	21.3	26.8	32.5	38.4	44.89	44.89	5 / 3							
reaction time 0.160	interval		4.90	5.00	5.20	5.50	5.70	5.90	6.49		# of strides	11.10	10.20	11.20	12.39	21.30	23.59	2.29
	velocity	8.06	10.20	10.00	9.62	9.09	8.77	8.47	7.70	8.91	174.5	9.01	9.80	8.93	8.07	9.39	8.48	
Mweresa, Boniface (KEN) (	time	6.0	10.8	15.8	21.0	26.5	32.3	38.4	44.96	44.96	6 / 4							
reaction time 0.178	interval		4.80	5.00	5.20	5.50	5.80	6.10	6.56	PB	# of strides	10.80	10.20	11.30	12.66	21.00	23.96	2.96
	velocity	8.33	10.42	10.00	9.62	9.09	8.62	8.20	7.62	8.90	178.7	9.26	9.80	8.85	7.90	9.52	8.35	
Adoli, Aaron (UGA) (1994)	time	6.4	11.4	16.5	21.7	27.2	33.0	38.8	45.62	45.62	4 / 5							
reaction time 0.234	interval		5.00	5.10	5.20	5.50	5.80	5.80	6.82	PB	# of strides	11.40	10.30	11.30	12.62	21.70	23.92	2.22
	velocity	7.81	10.00	9.80	9.62	9.09	8.62	8.62	7.33	8.77		8.77	9.71	8.85	7.92	9.22	8.36	
Cox, Anthony (JAM) (2000	time	6.5	11.6	16.9	22.3	28.0	33.8	39.7	46.17	46.17	2 / 6							
reaction time 0.216	interval		5.10	5.30	5.40	5.70	5.80	5.90	6.47		# of strides	11.60	10.70	11.50	12.37	22.30	23.87	1.57
	velocity	7.69	9.80	9.43	9.26	8.77	8.62	8.47	7.73	8.66		8.62	9.35	8.70	8.08	8.97	8.38	
Solomon, Steven (AUS) (1	time	6.4	11.5	16.8	22.3	28.0	33.8	39.7	46.22	46.22	3 / 7							
reaction time 0.173	interval		5.10	5.30	5.50	5.70	5.80	5.90	6.52		# of strides	11.50	10.80	11.50	12.42	22.30	23.92	1.62
	velocity	7.81	9.80	9.43	9.09	8.77	8.62	8.47	7.67	8.65		8.70	9.26	8.70	8.05	8.97	8.36	
Allen, Nathon (JAM) (1995)	time	6.5	11.8	17.0	22.6	28.3	34.3	40.6	48.00	48.00	9 / 8							
reaction time 0.165	interval		5.30	5.20	5.60	5.70	6.00	6.30	7.40		# of strides	11.80	10.80	11.70	13.70	22.60	25.40	2.80
	velocity	7.69	9.43	9.62	8.93	8.77	8.33	7.94	6.76	8.33		8.47	9.26	8.55	7.30	8.85	7.87	

Semi-Final 3

date 05-Aug-22

Longines Timing (2022) - commonwealth games race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hudson-Smith, Matthew (C	time	6.1	11.0	16.2	21.5	27.0	32.9	39.0	45.77	45.77	6 / 1							
reaction time 0.146	interval		4.90	5.20	5.30	5.50	5.90	6.10	6.77		# of strides	11.00	10.50	11.40	12.87	21.50	24.27	2.77
	velocity	8.20	10.20	9.62	9.43	9.09	8.47	8.20	7.39	8.74	168.7	9.09	9.52	8.77	7.77	9.30	8.24	
Allen, Nathon (JAM) (1995)	time	6.1	11.0	16.3	21.7	27.2	33.2	39.3	45.99	45.99	5 / 2							
reaction time 0.155	interval		4.90	5.30	5.40	5.50	6.00	6.10	6.69		# of strides	11.00	10.70	11.50	12.79	21.70	24.29	2.59
	velocity	8.20	10.20	9.43	9.26	9.09	8.33	8.20	7.47	8.70	169.0	9.09	9.35	8.70	7.82	9.22	8.23	
Scotch, Leungo (BOT) (19	time	6.0	10.9	16.1	21.4	27.0	33.1	39.3	46.33	46.33	7 / 3							
reaction time 0.170	interval		4.90	5.20	5.30	5.60	6.10	6.20	7.03		# of strides	10.90	10.50	11.70	13.23	21.40	24.93	3.53
	velocity	8.33	10.20	9.62	9.43	8.93	8.20	8.06	7.11	8.63	181.0	9.17	9.52	8.55	7.56	9.35	8.02	
Russell, Alonzo (BAH) (19	time	6.1	11.0	16.2	21.6	27.4	33.4	39.6	46.40	46.40	9 / 4							
reaction time 0.227	interval		4.90	5.20	5.40	5.80	6.00	6.20	6.80		# of strides	11.00	10.60	11.80	13.00	21.60	24.80	3.20
	velocity	8.20	10.20	9.62	9.26	8.62	8.33	8.06	7.35	8.62	180.0	9.09	9.43	8.47	7.69	9.26	8.06	
Guevara, Asa (TTO) (1995)	time	6.0	10.8	15.8	21.1	26.7	32.8	39.2	46.46	46.46	8 / 5							
reaction time 0.132	interval		4.80	5.00	5.30	5.60	6.10	6.40	7.26		# of strides	10.80	10.30	11.70	13.66	21.10	25.36	4.26
	velocity	8.33	10.42	10.00	9.43	8.93	8.20	7.81	6.89	8.61	175.2	9.26	9.71	8.55	7.32	9.48	7.89	
Nathaniel, Samson O. (NGF	time	6.1	11.1	16.4	22.0	27.8	34.1	40.3	47.00	47.00	4 / 6							
reaction time 0.169	interval		5.00	5.30	5.60	5.80	6.30	6.20	6.70		# of strides	11.10	10.90	12.10	12.90	22.00	25.00	3.00

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
	velocity	8.20	10.00	9.43	8.93	8.62	7.94	8.06	7.46	8.51	184.0	9.01	9.17	8.26	7.75	9.09	8.00	
Kumarage, H.K. Kalinga (Sl	time	6.2	11.2	16.4	21.9	27.7	33.9	40.2	47.00	47.00	2 / 7							
reaction time 0.152	interval		5.00	5.20	5.50	5.80	6.20	6.30	6.80		# of strides	11.20	10.70	12.00	13.10	21.90	25.10	3.20
	velocity	8.06	10.00	9.62	9.09	8.62	8.06	7.94	7.35	8.51	194.0	8.93	9.35	8.33	7.63	9.13	7.97	
Luchembe, Kennedy (ZAM	time	6.1	11.1	16.4	22.0	27.9	34.0	40.3	47.22	47.22	3 / 8							
reaction time 0.147	interval		5.00	5.30	5.60	5.90	6.10	6.30	6.92		# of strides	11.10	10.90	12.00	13.22	22.00	25.22	3.22
	velocity	8.20	10.00	9.43	8.93	8.47	8.20	7.94	7.23	8.47	176.2	9.01	9.17	8.33	7.56	9.09	7.93	

Semi-Final 2

date 05-Aug-22

Longines Timing (2022) - commonwealth games race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Jones, Jonathan (BAR) (19	time	6.2	11.3	16.7	22.1	27.7	33.6	39.5	45.82	45.82	7 / 1							
reaction time 0.157	interval		5.10	5.40	5.40	5.60	5.90	5.90	6.32		# of strides	11.30	10.80	11.50	12.22	22.10	23.72	1.62
	velocity	8.06	9.80	9.26	9.26	8.93	8.47	8.47	7.91	8.73	175.0	8.85	9.26	8.70	8.18	9.05	8.43	
Samukonga, Muzala (ZAM)	time	6.3	11.4	16.9	22.6	28.3	34.1	39.8	46.06	46.06	6 / 2							
reaction time 0.244	interval		5.10	5.50	5.70	5.70	5.80	5.70	6.26		# of strides	11.40	11.20	11.50	11.96	22.60	23.46	0.86
	velocity	7.94	9.80	9.09	8.77	8.77	8.62	8.77	7.99	8.68	176.0	8.77	8.93	8.70	8.36	8.85	8.53	
Powell, Jevaughn (JAM) (2(	time	6.3	11.3	16.6	22.2	27.8	33.7	39.7	46.40	46.40	4 / 3							
reaction time 0.158	interval		5.00	5.30	5.60	5.60	5.90	6.00	6.70		# of strides	11.30	10.90	11.50	12.70	22.20	24.20	2.00
	velocity	7.94	10.00	9.43	8.93	8.93	8.47	8.33	7.46	8.62	178.0	8.85	9.17	8.70	7.87	9.01	8.26	
Geldenhuys, Ivan Danny (N	time	6.2	11.1	16.4	22.0	27.8	33.8	39.9	46.68	46.68	8 / 4							
reaction time 0.213	interval		4.90	5.30	5.60	5.80	6.00	6.10	6.78		# of strides	11.10	10.90	11.80	12.88	22.00	24.68	2.68
	velocity	8.06	10.20	9.43	8.93	8.62	8.33	8.20	7.37	8.57	185.0	9.01	9.17	8.47	7.76	9.09	8.10	
Ngozi, Zibani (BOT) (1992)	time	6.1	11.1	16.5	22.1	28.0	34.0	40.1	47.06	47.06	5 / 5							
reaction time 0.194	interval		5.00	5.40	5.60	5.90	6.00	6.10	6.96		# of strides	11.10	11.00	11.90	13.06	22.10	24.96	2.86
	velocity	8.20	10.00	9.26	8.93	8.47	8.33	8.20	7.18	8.50	177.2	9.01	9.09	8.40	7.66	9.05	8.01	
Adeyemi, Sikiru (NGR) (199	time	6.2	11.2	16.4	22.0	27.7	33.8	40.2	47.40	47.40	2 / 6							
reaction time 0.217	interval		5.00	5.20	5.60	5.70	6.10	6.40	7.20		# of strides	11.20	10.80	11.80	13.60	22.00	25.40	3.40
	velocity	8.06	10.00	9.62	8.93	8.77	8.20	7.81	6.94	8.44	177.0	8.93	9.26	8.47	7.35	9.09	7.87	
Francois, Michael (GRN) (1	time	6.5	11.7	17.0	22.5	28.2	34.2	40.6	47.45	47.45	9 / 7							
reaction time 0.180	interval		5.20	5.30	5.50	5.70	6.00	6.40	6.85		# of strides	11.70	10.80	11.70	13.25	22.50	24.95	2.45
	velocity	7.69	9.62	9.43	9.09	8.77	8.33	7.81	7.30	8.43	177.0	8.55	9.26	8.55	7.55	8.89	8.02	
Brier, Joseph (GBR) (1999)	time	6.1	11.1	16.4	22.0	27.7	33.9	40.2	47.50	47.50	3 / 8							
reaction time 0.180	interval		5.00	5.30	5.60	5.70	6.20	6.30	7.30		# of strides	11.10	10.90	11.90	13.60	22.00	25.50	3.50
	velocity	8.20	10.00	9.43	8.93	8.77	8.06	7.94	6.85	8.42	185.0	9.01	9.17	8.40	7.35	9.09	7.84	

Semi-Final 1

date 05-Aug-22

Longines Timing (2022) - commonwealth games race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Adoli, Aaron (UGA) (1994)	time	6.3	11.4	16.7	22.2	27.9	33.7	39.5	45.80	45.80	7 / 1							
reaction time 0.240	interval		5.10	5.30	5.50	5.70	5.80	5.80	6.30	PB	# of strides	11.40	10.80	11.50	12.10	22.20	23.60	1.40
	velocity	7.94	9.80	9.43	9.09	8.77	8.62	8.62	7.94	8.73	167.0	8.77	9.26	8.70	8.26	9.01	8.47	
Mweresa, Boniface (KEN) (	time	6.0	11.0	16.3	21.8	27.5	33.4	39.4	45.85	45.85	4 / 2							
reaction time 0.181	interval		5.00	5.30	5.50	5.70	5.90	6.00	6.45		# of strides	11.00	10.80	11.60	12.45	21.80	24.05	2.25
	velocity	8.33	10.00	9.43	9.09	8.77	8.47	8.33	7.75	8.72	181.0	9.09	9.26	8.62	8.03	9.17	8.32	
Cox, Anthony (JAM) (2000	time	6.4	11.4	16.7	22.2	27.8	33.6	39.6	45.98	45.98	5 / 3							
reaction time 0.202	interval		5.00	5.30	5.50	5.60	5.80	6.00	6.38		# of strides	11.40	10.80	11.40	12.38	22.20	23.78	1.58
	velocity	7.81	10.00	9.43	9.09	8.93	8.62	8.33	7.84	8.70	176.5	8.77	9.26	8.77	8.08	9.01	8.41	
Solomon, Steven (AUS) (1!	time	6.3	11.3	16.6	22.2	27.7	33.5	39.6	46.30	46.30	6 / 4							
reaction time 0.168	interval		5.00	5.30	5.60	5.50	5.80	6.10	6.70		# of strides	11.30	10.90	11.30	12.80	22.20	24.10	1.90
	velocity	7.94	10.00	9.43	8.93	9.09	8.62	8.20	7.46	8.64	178.0	8.85	9.17	8.85	7.81	9.01	8.30	
Gale, Kyle (BAR) (2002)	time	6.2	11.3	16.6	22.1	27.8	33.8	40.0	46.78	46.78	2 / 5							
reaction time 0.189	interval		5.10	5.30	5.50	5.70	6.00	6.20	6.78		# of strides	11.30	10.80	11.70	12.98	22.10	24.68	2.58
	velocity	8.06	9.80	9.43	9.09	8.77	8.33	8.06	7.37	8.55	78.7	8.85	9.26	8.55	7.70	9.05	8.10	
Joseph, Michael (LCA) (20(	time	6.1	11.1	16.3	21.8	27.6	33.7	40.0	47.03	47.03	3 / 6							
reaction time 0.156	interval		5.00	5.20	5.50	5.80	6.10	6.30	7.03		# of strides	11.10	10.70	11.90	13.33	21.80	25.23	3.43
	velocity	8.20	10.00	9.62	9.09	8.62	8.20	7.94	7.11	8.51	182.0	9.01	9.35	8.40	7.50	9.17	7.93	
Pesela, Anthony (BOT) (20(	time	6.1	11.1	16.6	22.2	28.0	34.1	40.3	47.63	47.63	8 / 7							
reaction time 0.147	interval		5.00	5.50	5.60	5.80	6.10	6.20	7.33		# of strides	11.10	11.10	11.90	13.53	22.20	25.43	3.23
	velocity	8.20	10.00	9.09	8.93	8.62	8.20	8.06	6.82	8.40	186.0	9.01	9.01	8.40	7.39	9.01	7.86	
Amene, Dubem (NGR) (200	time	6.4	11.5	17.0	22.8	28.8				dnf	9 / --							
reaction time 0.189	interval		5.10	5.50	5.80	6.00					# of strides	11.50	11.30			22.80		
	velocity	7.81	9.80	9.09	8.62	8.33						8.70	8.85			8.77		

2022 Silesia Kamila Skolimowska Memorial (Chorzów, POL)

FINAL

date 06-Aug-22

Omega Timing (2022) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Norman, Michael (USA) (19	time	5.96	10.89	15.92	21.20	26.64	32.23	38.01	44.11	44.11	5 / 1							
reaction time 0.145	interval		4.93	5.03	5.28	5.44	5.59	5.78	6.10		# of strides	10.89	10.31	11.03	11.88	21.20	22.91	1.71

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

	velocity	8.39	10.14	9.94	9.47	9.19	8.94	8.65	8.20	9.07	172.7	9.18	9.70	9.07	8.42	9.43	8.73	
James, Kirani (GRN) (1992)	time	6.10	11.04	16.19	21.46	26.88	32.51	38.41	44.55	44.55	6 / 2							
reaction time 0.152	interval		4.94	5.15	5.27	5.42	5.63	5.90	6.14		# of strides	11.04	10.42	11.05	12.04	21.46	23.09	1.63
	velocity	8.20	10.12	9.71	9.49	9.23	8.88	8.47	8.14	8.98	159.2	9.06	9.60	9.05	8.31	9.32	8.66	
Deadmon, Bryce (USA) (19	time	6.28	11.29	16.37	21.60	27.08	32.72	38.50	44.68	44.68	2 / 3							
reaction time 0.164	interval		5.01	5.08	5.23	5.48	5.64	5.78	6.18		# of strides	11.29	10.31	11.12	11.96	21.60	23.08	1.48
	velocity	7.96	9.98	9.84	9.56	9.12	8.87	8.65	8.09	8.95	157.0	8.86	9.70	8.99	8.36	9.26	8.67	
Norwood, Vernon (USA) (1	time	6.22	11.25	16.47	21.84	27.29	32.92	38.76	45.20	45.20	3 / 4							
reaction time 0.157	interval		5.03	5.22	5.37	5.45	5.63	5.84	6.44		# of strides	11.25	10.59	11.08	12.28	21.84	23.36	1.52
	velocity	8.04	9.94	9.58	9.31	9.17	8.88	8.56	7.76	8.85	179.5	8.89	9.44	9.03	8.14	9.16	8.56	
Allison, Champion (USA) (	time	6.13	11.09	16.20	21.45	27.00	32.77	38.81	45.35	45.35	4 / 5							
reaction time 0.150	interval		4.96	5.11	5.25	5.55	5.77	6.04	6.54		# of strides	11.09	10.36	11.32	12.58	21.45	23.90	2.45
	velocity	8.16	10.08	9.78	9.52	9.01	8.67	8.28	7.65	8.82	171.0	9.02	9.65	8.83	7.95	9.32	8.37	
Makwala, Isaac (BOT) (1986	time	6.23	11.24	16.39	21.70	27.19	32.82	38.80	45.42	45.42	9 / 6							
reaction time 0.207	interval		5.01	5.15	5.31	5.49	5.63	5.98	6.62		# of strides	11.24	10.46	11.12	12.60	21.70	23.72	2.02
	velocity	8.03	9.98	9.71	9.42	9.11	8.88	8.36	7.55	8.81	183.0	8.90	9.56	8.99	7.94	9.22	8.43	
Cherry, Michael (USA) (199	time	6.14	11.11	16.24	21.55	27.09	32.88	38.95	45.45	45.45	7 / 7							
reaction time 0.171	interval		4.97	5.13	5.31	5.54	5.79	6.07	6.50		# of strides	11.11	10.44	11.33	12.57	21.55	23.90	2.35
	velocity	8.14	10.06	9.75	9.42	9.03	8.64	8.24	7.69	8.80	162.2	9.00	9.58	8.83	7.96	9.28	8.37	
Bonevacia, Liemarvin (NED	time	6.24	11.19	16.24	21.43	26.90	32.70	38.82	45.50	45.50	1 / 8							
reaction time 0.151	interval		4.95	5.05	5.19	5.47	5.80	6.12	6.68		# of strides	11.19	10.24	11.27	12.80	21.43	24.07	2.64
	velocity	8.01	10.10	9.90	9.63	9.14	8.62	8.17	7.49	8.79		8.94	9.77	8.87	7.81	9.33	8.31	
Duszynski, Kajetan (POL) (	time	6.20	11.21	16.35	21.62	27.19	33.07	39.33	46.08	46.08	8 / 9							
reaction time 0.151	interval		5.01	5.14	5.27	5.57	5.88	6.26	6.75		# of strides	11.21	10.41	11.45	13.01	21.62	24.46	2.84
	velocity	8.06	9.98	9.73	9.49	8.98	8.50	7.99	7.41	8.68		8.92	9.61	8.73	7.69	9.25	8.18	

2022 Japanese National High School Championships (Naruto, JPN)

FINAL date 03-Aug-22

Kishima (2022) - national high school championships biomechanics data collection

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Tominaga, Yuhei (JPN) (20	time		11.68		22.90		34.60		47.01	47.01	6 / 1							
reaction time 0.185	interval				11.22		11.70		12.41	PB	# of strides	11.68	11.22	11.70	12.41	22.90	24.11	1.21
	velocity		8.56		8.91		8.55		8.06	8.51	188.0	8.56	8.91	8.55	8.06	8.73	8.30	
Hayashi, Shinya (JPN) (200	time		11.78		22.73		34.55		47.23	47.23	4 / 2							
reaction time 0.187	interval				10.95		11.82		12.68	PB	# of strides	11.78	10.95	11.82	12.68	22.73	24.50	1.77
	velocity		8.49		9.13		8.46		7.89	8.47	182.5	8.49	9.13	8.46	7.89	8.80	8.16	
Harada, Masato (JPN) (200	time		11.72		22.60		34.62		47.97	47.97	8 / 3							
reaction time 0.175	interval				10.88		12.02		13.35		# of strides	11.72	10.88	12.02	13.35	22.60	25.37	2.77
	velocity		8.53		9.19		8.32		7.49	8.34	187.2	8.53	9.19	8.32	7.49	8.85	7.88	
Nakamichi, Daiki (JPN) (200	time		11.92		23.19		35.51		48.01	48.01	7 / 4							
reaction time 0.164	interval				11.27		12.32		12.50		# of strides	11.92	11.27	12.32	12.50	23.19	24.82	1.63
	velocity		8.39		8.87		8.12		8.00	8.33	180.0	8.39	8.87	8.12	8.00	8.62	8.06	
Maruyama, Tomoyo (JPN) (	time		12.12		23.44		35.67		48.39	48.39	3 / 5							
reaction time 0.195	interval				11.32		12.23		12.72		# of strides	12.12	11.32	12.23	12.72	23.44	24.95	1.51
	velocity		8.25		8.83		8.18		7.86	8.27	176.0	8.25	8.83	8.18	7.86	8.53	8.02	
Nagayoshi, Haruto (JPN) (2	time		11.78		22.80		35.07		48.53	48.53	9 / 6							
reaction time 0.167	interval				11.02		12.27		13.46		# of strides	11.78	11.02	12.27	13.46	22.80	25.73	2.93
	velocity		8.49		9.07		8.15		7.43	8.24	192.0	8.49	9.07	8.15	7.43	8.77	7.77	
Kojima, Sota (JPN) (2004)	time		11.95		23.45		35.80		48.68	48.68	2 / 7							
reaction time 0.162	interval				11.50		12.35		12.88		# of strides	11.95	11.50	12.35	12.88	23.45	25.23	1.78
	velocity		8.37		8.70		8.10		7.76	8.22	186.0	8.37	8.70	8.10	7.76	8.53	7.93	
Shimato, Shin (JPN) (2004)	time		11.67		23.09		36.04		50.14	50.14	5 / 8							
reaction time 0.196	interval				11.42		12.95		14.10		# of strides	11.67	11.42	12.95	14.10	23.09	27.05	3.96
	velocity		8.57		8.76		7.72		7.09	7.98		8.57	8.76	7.72	7.09	8.66	7.39	

2022 World Athletics Championships (Eugene, OR)

Decathlon - Heat date 23-Jul-22

Timing by Seiko (2022) - world athletics championships race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Owens-Delerme, Ayden (PU	time		11.04		21.29		32.67		45.07	45.07	7 / 1							
reaction time 0.189	interval				10.25		11.38		12.40	NR PB	# of strides	11.04	10.25	11.38	12.40	21.29	23.78	2.49
	velocity		9.06		9.76		8.79		8.06	8.88	173.7	9.06	9.76	8.79	8.06	9.39	8.41	
Lepage, Pierce (CAN) (1996	time		11.44		22.60		34.36		46.84	46.84	4 / 2							
reaction time 0.194	interval				11.16		11.76		12.48	PB	# of strides	11.44	11.16	11.76	12.48	22.60	24.24	1.64
	velocity		8.74		8.96		8.50		8.01	8.54	159.0	8.74	8.96	8.50	8.01	8.85	8.25	
Moloney, Ashley (AUS) (20	time		11.02		21.75		33.77		46.88	46.88	3 / 3							
reaction time 0.142	interval				10.73		12.02		13.11		# of strides	11.02	10.73	12.02	13.11	21.75	25.13	3.38
	velocity		9.07		9.32		8.32		7.63	8.53	169.0	9.07	9.32	8.32	7.63	9.20	7.96	

Erm, Johannes (EST) (1998	time	11.26	21.94	33.84	47.02	47.02	8 / 4							
reaction time 0.169	interval		10.68	11.90	13.18	PB	# of strides	11.26	10.68	11.90	13.18	21.94	25.08	3.14
	velocity	8.88	9.36	8.40	7.59	8.51		8.88	9.36	8.40	7.59	9.12	7.97	
Dubler, Cedric (AUS) (1995	0.127	no information available				47.71	5 / 5						# of strides	
Bastien, Steven (USA) (199	time	11.60	22.94	35.42	47.95	47.95	2 / 6							
reaction time 0.148	interval		11.34	12.48	12.53		# of strides	11.60	11.34	12.48	12.53	22.94	25.01	2.07
	velocity	8.62	8.82	8.01	7.98	8.34		8.62	8.82	8.01	7.98	8.72	8.00	
Neugebauer, Leo (GER) (2(	time	11.78	22.77	34.84	48.34	48.34	6 / 7							
reaction time 0.151	interval		10.99	12.07	13.50		# of strides	11.78	10.99	12.07	13.50	22.77	25.57	2.80
	velocity	8.49	9.10	8.29	7.41	8.27		8.49	9.10	8.29	7.41	8.78	7.82	
Warner, Damian (CAN) (19	time	11.15				dnf	1 / --							
reaction time 0.139	interval						# of strides	11.15						
	velocity	8.97						8.97						

Decathlon - Heat

date 23-Jul-22

Timing by Seiko (2022) - world athletics championships race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kaul, Niklas (GER) (1998)	time		11.89		23.48		35.47		48.39	48.39	4 / 1							
reaction time 0.158	interval				11.59		11.99		12.92		# of strides	11.89	11.59	11.99	12.92	23.48	24.91	1.43
	velocity		8.41		8.63		8.34		7.74	8.27	166.5	8.41	8.63	8.34	7.74	8.52	8.03	
Victor, Lindon (GRN) (1993	time		11.70		23.50		35.68		49.27	49.27	3 / 2							
reaction time 0.141	interval				11.80		12.18		13.59		# of strides	11.70	11.80	12.18	13.59	23.50	25.77	2.27
	velocity		8.55		8.47		8.21		7.36	8.12	180.0	8.55	8.47	8.21	7.36	8.51	7.76	
Sýkora, Jiří (CZE) (1995)	time		12.13		23.72		35.97		49.29	49.29	1 / 3							
reaction time 0.145	interval				11.59		12.25		13.32		# of strides	12.13	11.59	12.25	13.32	23.72	25.57	1.85
	velocity		8.24		8.63		8.16		7.51	8.12		8.24	8.63	8.16	7.51	8.43	7.82	
Kazmirek, Kai (GER) (1991)	time		11.60		22.68		35.14		49.33	49.33	7 / 4							
reaction time 0.145	interval				11.08		12.46		14.19		# of strides	11.60	11.08	12.46	14.19	22.68	26.65	3.97
	velocity		8.62		9.03		8.03		7.05	8.11	174.2	8.62	9.03	8.03	7.05	8.82	7.50	
Mayer, Kevin (FRA) (1992)	time		12.07		23.74		36.09		49.40	49.40	6 / 5							
reaction time 0.164	interval				11.67		12.35		13.31		# of strides	12.07	11.67	12.35	13.31	23.74	25.66	1.92
	velocity		8.29		8.57		8.10		7.51	8.10	168.5	8.29	8.57	8.10	7.51	8.42	7.79	
Golubovic, Daniel (AUS) (1	time		12.05		23.73		36.08		49.44	49.44	2 / 6							
reaction time 0.149	interval				11.68		12.35		13.36		# of strides	12.05	11.68	12.35	13.36	23.73	25.71	1.98
	velocity		8.30		8.56		8.10		7.49	8.09		8.30	8.56	8.10	7.49	8.43	7.78	
Garland, Kyle (USA) (2000)	time		11.71		23.58		36.07		49.64	49.64	5 / 7							
reaction time 0.152	interval				11.87		12.49		13.57		# of strides	11.71	11.87	12.49	13.57	23.58	26.06	2.48
	velocity		8.54		8.42		8.01		7.37	8.06	179.0	8.54	8.42	8.01	7.37	8.48	7.67	
Skotheim, Sander (NOR) (2	time		11.95		23.40		35.89		49.80	49.80	8 / 8							
reaction time 0.154	interval				11.45		12.49		13.91		# of strides	11.95	11.45	12.49	13.91	23.40	26.40	3.00
	velocity		8.37		8.73		8.01		7.19	8.03	181.0	8.37	8.73	8.01	7.19	8.55	7.58	

Decathlon - Heat

date 23-Jul-22

Timing by Seiko (2022) - world athletics championships race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Õiglane, Janek (EST) (1994)	time		11.59		22.76		35.11		49.16	49.16	8 / 1							
reaction time 0.148	interval				11.17		12.35		14.05		# of strides	11.59	11.17	12.35	14.05	22.76	26.40	3.64
	velocity		8.63		8.95		8.10		7.12	8.14	175.5	8.63	8.95	8.10	7.12	8.79	7.58	
Mullings, Ken (BAH) (1997	time		11.87		23.64		36.13		49.25	49.25	5 / 2							
reaction time 0.137	interval				11.77		12.49		13.12		# of strides	11.87	11.77	12.49	13.12	23.64	25.61	1.97
	velocity		8.42		8.50		8.01		7.62	8.12	181.0	8.42	8.50	8.01	7.62	8.46	7.81	
Ziemek, Zachery (USA) (19	time		11.58		22.98		35.45		49.56	49.56	4 / 3							
reaction time 0.185	interval				11.40		12.47		14.11		# of strides	11.58	11.40	12.47	14.11	22.98	26.58	3.60
	velocity		8.64		8.77		8.02		7.09	8.07	167.2	8.64	8.77	8.02	7.09	8.70	7.52	
Uibo, Maicel (EST) (1992)	time		11.94		23.55		36.29		50.38	50.38	7 / 4							
reaction time 0.197	interval				11.61		12.74		14.09		# of strides	11.94	11.61	12.74	14.09	23.55	26.83	3.28
	velocity		8.38		8.61		7.85		7.10	7.94	177.0	8.38	8.61	7.85	7.10	8.49	7.45	
Nowak, Tim (GER) (1995)	time		11.86		23.17		36.03		50.94	50.94	2 / 5							
reaction time 0.161	interval				11.31		12.86		14.91		# of strides	11.86	11.31	12.86	14.91	23.17	27.77	4.60
	velocity		8.43		8.84		7.78		6.71	7.85	186.0	8.43	8.84	7.78	6.71	8.63	7.20	

FINAL

date 22-Jul-22

Timing by Seiko (2022) - world athletics championships race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Norman, Michael (USA) (19	time		10.83		21.12		32.04		44.29	44.29	4 / 1							
reaction time 0.140	interval				10.29		10.92		12.25		# of strides	10.83	10.29	10.92	12.25	21.12	23.17	2.05
	velocity		9.23		9.72		9.16		8.16	9.03	175.2	9.23	9.72	9.16	8.16	9.47	8.63	
James, Kirani (GRN) (1992)	time		10.81		20.95		31.98		44.48	44.48	3 / 2							
reaction time 0.140	interval				10.14		11.03		12.50		# of strides	10.81	10.14	11.03	12.50	20.95	23.53	2.58

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
	velocity		9.25		9.86		9.07		8.00	8.99	162.5	9.25	9.86	9.07	8.00	9.55	8.50	
Hudson-Smith, Matthew (G	time		10.98		21.14		32.13		44.66	44.66	5 / 3							
reaction time 0.169	interval				10.16		10.99		12.53		# of strides	10.98	10.16	10.99	12.53	21.14	23.52	2.38
	velocity		9.11		9.84		9.10		7.98	8.96	165.5	9.11	9.84	9.10	7.98	9.46	8.50	
Allison, Champion (USA) (	time		11.22		21.57		32.76		44.77	44.77	6 / 4							
reaction time 0.148	interval				10.35		11.19		12.01		# of strides	11.22	10.35	11.19	12.01	21.57	23.20	1.63
	velocity		8.91		9.66		8.94		8.33	8.93	169.0	8.91	9.66	8.94	8.33	9.27	8.62	
van Niekerk, Wayde (RSA)	time		10.98		21.33		32.21		44.97	44.97	7 / 5							
reaction time 0.248	interval				10.35		10.88		12.76		# of strides	10.98	10.35	10.88	12.76	21.33	23.64	2.31
	velocity		9.11		9.66		9.19		7.84	8.89	166.0	9.11	9.66	9.19	7.84	9.38	8.46	
Ndori, Bayapo (BOT) (1999	time		11.05		21.45		32.62		45.29	45.29	8 / 6							
reaction time 0.137	interval				10.40		11.17		12.67		# of strides	11.05	10.40	11.17	12.67	21.45	23.84	2.39
	velocity		9.05		9.62		8.95		7.89	8.83	178.0	9.05	9.62	8.95	7.89	9.32	8.39	
Taylor, Christopher (JAM)	time		10.91		21.43		32.81		45.30	45.30	1 / 7							
reaction time 0.169	interval				10.52		11.38		12.49		# of strides	10.91	10.52	11.38	12.49	21.43	23.87	2.44
	velocity		9.17		9.51		8.79		8.01	8.83		9.17	9.51	8.79	8.01	9.33	8.38	
Jones, Jonathan (BAR) (19	time		11.07		21.46		32.86		46.13	46.13	2 / 8							
reaction time 0.155	interval				10.39		11.40		13.27		# of strides	11.07	10.39	11.40	13.27	21.46	24.67	3.21
	velocity		9.03		9.62		8.77		7.54	8.67		9.03	9.62	8.77	7.54	9.32	8.11	

Semi-Final 3

date 20-Jul-22

Timing by Seiko (2022) - world athletics championships race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Allison, Champion (USA) (	time		11.34		21.72		32.86		44.71	44.71	6 / 1							
reaction time 0.155	interval				10.38		11.14		11.85		# of strides	11.34	10.38	11.14	11.85	21.72	22.99	1.27
	velocity		8.82		9.63		8.98		8.44	8.95	168.0	8.82	9.63	8.98	8.44	9.21	8.70	
van Niekerk, Wayde (RSA)	time		10.84		20.97		32.35		44.75	44.75	4 / 2							
reaction time 0.168	interval				10.13		11.38		12.40		# of strides	10.84	10.13	11.38	12.40	20.97	23.78	2.81
	velocity		9.23		9.87		8.79		8.06	8.94	164.5	9.23	9.87	8.79	8.06	9.54	8.41	
Jones, Jonathan (BAR) (19	time		11.27		21.49		32.57		44.78	44.78	3 / 3							
reaction time 0.149	interval				10.22		11.08		12.21		# of strides	11.27	10.22	11.08	12.21	21.49	23.29	1.80
	velocity		8.87		9.78		9.03		8.19	8.93	173.2	8.87	9.78	9.03	8.19	9.31	8.59	
Haydock-Wilson, Alex (GB	time		11.46		21.88		32.90		45.08	45.08	8 / 4							
reaction time 0.141	interval				10.42		11.02		12.18	PB	# of strides	11.46	10.42	11.02	12.18	21.88	23.20	1.32
	velocity		8.73		9.60		9.07		8.21	8.87	168.2	8.73	9.60	9.07	8.21	9.14	8.62	
Borlée, Kevin (BEL) (1988)	time		11.39		21.81		33.00		45.26	45.26	2 / 5							
reaction time 0.139	interval				10.42		11.19		12.26		# of strides	11.39	10.42	11.19	12.26	21.81	23.45	1.64
	velocity		8.78		9.60		8.94		8.16	8.84		8.78	9.60	8.94	8.16	9.17	8.53	
Bonevacia, Liemarvin (NED	time		11.54		21.77		32.86		45.50	45.50	5 / 6							
reaction time 0.159	interval				10.23		11.09		12.64		# of strides	11.54	10.23	11.09	12.64	21.77	23.73	1.96
	velocity		8.67		9.78		9.02		7.91	8.79	180.2	8.67	9.78	9.02	7.91	9.19	8.43	
Litvin, Mikhail (KAZ) (1996)	time		11.37		21.67		33.04		45.63	45.63	1 / 7							
reaction time 0.189	interval				10.30		11.37		12.59		# of strides	11.37	10.30	11.37	12.59	21.67	23.96	2.29
	velocity		8.80		9.71		8.80		7.94	8.77		8.80	9.71	8.80	7.94	9.23	8.35	
Makwala, Isaac (BOT) (1985	time		11.40		21.89		32.87		46.04	46.04	7 / 8							
reaction time 0.158	interval				10.49		10.98		13.17		# of strides	11.40	10.49	10.98	13.17	21.89	24.15	2.26
	velocity		8.77		9.53		9.11		7.59	8.69	174.0	8.77	9.53	9.11	7.59	9.14	8.28	

Semi-Final 2

date 20-Jul-22

Timing by Seiko (2022) - world athletics championships race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
James, Kirani (GRN) (1992)	time		10.99		21.35		32.64		44.74	44.74	3 / 1							
reaction time 0.148	interval				10.36		11.29		12.10		# of strides	10.99	10.36	11.29	12.10	21.35	23.39	2.04
	velocity		9.10		9.65		8.86		8.26	8.94	160.0	9.10	9.65	8.86	8.26	9.37	8.55	
Ndori, Bayapo (BOT) (1999	time		11.28		21.73		32.77		44.94	44.94	4 / 2							
reaction time 0.141	interval				10.45		11.04		12.17		# of strides	11.28	10.45	11.04	12.17	21.73	23.21	1.48
	velocity		8.87		9.57		9.06		8.22	8.90	174.5	8.87	9.57	9.06	8.22	9.20	8.62	
Samukonga, Muzala (ZAM)	time		11.45		22.03		33.15		45.02	45.02	6 / 3							
reaction time 0.196	interval				10.58		11.12		11.87	PB	# of strides	11.45	10.58	11.12	11.87	22.03	22.99	0.96
	velocity		8.73		9.45		8.99		8.42	8.88	175.0	8.73	9.45	8.99	8.42	9.08	8.70	
Cherry, Michael (USA) (199	time		11.23		21.85		32.92		45.28	45.28	5 / 4							
reaction time 0.143	interval				10.62		11.07		12.36		# of strides	11.23	10.62	11.07	12.36	21.85	23.43	1.58
	velocity		8.90		9.42		9.03		8.09	8.83	159.7	8.90	9.42	9.03	8.09	9.15	8.54	
Sato, Fuga (JPN) (1996)	time		11.45		22.21		33.42		45.71	45.71	1 / 5							
reaction time 0.175	interval				10.76		11.21		12.29		# of strides	11.45	10.76	11.21	12.29	22.21	23.50	1.29
	velocity		8.73		9.29		8.92		8.14	8.75	175.0	8.73	9.29	8.92	8.14	9.00	8.51	
Doom, Alexander (BEL) (1	time		11.50		21.78		33.25		45.80	45.80	7 / 6							

reaction time 0.170	interval		10.28	11.47	12.55		# of strides	11.50	10.28	11.47	12.55	21.78	24.02	2.24
	velocity	8.70	9.73	8.72	7.97	8.73	182.0	8.70	9.73	8.72	7.97	9.18	8.33	
O'Donnell, Christopher (IR	time	11.54	22.20	33.52	46.01	46.01	2 / 7							
reaction time 0.162	interval		10.66	11.32	12.49		# of strides	11.54	10.66	11.32	12.49	22.20	23.81	1.61
	velocity	8.67	9.38	8.83	8.01	8.69	180.0	8.67	9.38	8.83	8.01	9.01	8.40	

Semi-Final 1

date 20-Jul-22

Timing by Seiko (2022) - world athletics championships race analysis

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Norman, Michael (USA) (19	time	10.85		21.16		32.19		44.30	44.30	6 / 1							
reaction time 0.127	interval			10.31		11.03		12.11		# of strides	10.85	10.31	11.03	12.11	21.16	23.14	1.98
	velocity	9.22		9.70		9.07		8.26	9.03	173.0	9.22	9.70	9.07	8.26	9.45	8.64	
Hudson-Smith, Matthew (C	time	10.95		21.06		32.02		44.38	44.38	5 / 2							
reaction time 0.160	interval			10.11		10.96		12.36		# of strides	10.95	10.11	10.96	12.36	21.06	23.32	2.26
	velocity	9.13		9.89		9.12		8.09	9.01	166.0	9.13	9.89	9.12	8.09	9.50	8.58	
Taylor, Christopher (JAM)	time	11.16		21.66		32.89		44.97	44.97	3 / 3							
reaction time 0.173	interval			10.50		11.23		12.08		# of strides	11.16	10.50	11.23	12.08	21.66	23.31	1.65
	velocity	8.96		9.52		8.90		8.28	8.89	182.0	8.96	9.52	8.90	8.28	9.23	8.58	
Nene, Zakhiti (RSA) (1998)	time	10.92		21.28		32.68		45.24	45.24	7 / 4							
reaction time 0.121	interval			10.36		11.40		12.56		# of strides	10.92	10.36	11.40	12.56	21.28	23.96	2.68
	velocity	9.16		9.65		8.77		7.96	8.84	178.0	9.16	9.65	8.77	7.96	9.40	8.35	
Borlée, Dylan (BEL) (1992)	time	11.33		21.82		33.01		45.41	45.41	4 / 5							
reaction time 0.163	interval			10.49		11.19		12.40		# of strides	11.33	10.49	11.19	12.40	21.82	23.59	1.77
	velocity	8.83		9.53		8.94		8.06	8.81	174.0	8.83	9.53	8.94	8.06	9.17	8.48	
Walsh, Julian Jrummi (JPN	time	11.03		21.46		32.72		45.75	45.75	1 / 6							
reaction time 0.134	interval			10.43		11.26		13.03		# of strides	11.03	10.43	11.26	13.03	21.46	24.29	2.83
	velocity	9.07		9.59		8.88		7.67	8.74	175.5	9.07	9.59	8.88	7.67	9.32	8.23	
Feliz, Lidio Andres (DOM) (	time	11.04		21.38		32.96		46.19	46.19	8 / 7							
reaction time 0.192	interval			10.34		11.58		13.23		# of strides	11.04	10.34	11.58	13.23	21.38	24.81	3.43
	velocity	9.06		9.67		8.64		7.56	8.66		9.06	9.67	8.64	7.56	9.35	8.06	
Beck, Alex (AUS) (1992)	time	11.26		22.06		33.43		46.21	46.21	2 / 8							
reaction time 0.140	interval			10.80		11.37		12.78		# of strides	11.26	10.80	11.37	12.78	22.06	24.15	2.09
	velocity	8.88		9.26		8.80		7.82	8.66	172.0	8.88	9.26	8.80	7.82	9.07	8.28	

Heat 6

date 17-Jul-22

Timing by Seiko (2022) - world athletics championships race analysis

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hudson-Smith, Matthew (C	time	11.13		21.47		32.74		45.49	45.49	2 / 1							
reaction time 0.160	interval			10.34		11.27		12.75		# of strides	11.13	10.34	11.27	12.75	21.47	24.02	2.55
	velocity	8.98		9.67		8.87		7.84	8.79	166.0	8.98	9.67	8.87	7.84	9.32	8.33	
Bonevacia, Liemarvin (NED	time	11.65		22.33		33.76		45.82	45.82	6 / 2							
reaction time 0.158	interval			10.68		11.43		12.06		# of strides	11.65	10.68	11.43	12.06	22.33	23.49	1.16
	velocity	8.58		9.36		8.75		8.29	8.73	180.5	8.58	9.36	8.75	8.29	8.96	8.51	
Feliz, Lidio Andres (DOM) (	time	11.58		22.24		33.78		45.87	45.87	5 / 3							
reaction time 0.257	interval			10.66		11.54		12.09		# of strides	11.58	10.66	11.54	12.09	22.24	23.63	1.39
	velocity	8.64		9.38		8.67		8.27	8.72	174.7	8.64	9.38	8.67	8.27	8.99	8.46	
O'Donnell, Christopher (IR	time	11.60		22.48		33.81		46.01	46.01	8 / 4							
reaction time 0.133	interval			10.88		11.33		12.20		# of strides	11.60	10.88	11.33	12.20	22.48	23.53	1.05
	velocity	8.62		9.19		8.83		8.20	8.69	178.0	8.62	9.19	8.83	8.20	8.90	8.50	
Kawabata, Kaito (JPN) (199	time	11.14		21.79		33.37		46.34	46.34	4 / 5							
reaction time 0.128	interval			10.65		11.58		12.97		# of strides	11.14	10.65	11.58	12.97	21.79	24.55	2.76
	velocity	8.98		9.39		8.64		7.71	8.63	187.7	8.98	9.39	8.64	7.71	9.18	8.15	
Carvalho, Lucas (BRA) (19	time	11.59		22.60		34.11		47.53	47.53	7 / 6							
reaction time 0.162	interval			11.01		11.51		13.42		# of strides	11.59	11.01	11.51	13.42	22.60	24.93	2.33
	velocity	8.63		9.08		8.69		7.45	8.42	187.5	8.63	9.08	8.69	7.45	8.85	8.02	
Hazzard, Aiden (AIA) (1998	time	11.75		23.40		36.39		51.44	51.44	3 / 7							
reaction time 0.128	interval			11.65		12.99		15.05		# of strides	11.75	11.65	12.99	15.05	23.40	28.04	4.64
	velocity	8.51		8.58		7.70		6.64	7.78		8.51	8.58	7.70	6.64	8.55	7.13	

Heat 5

date 17-Jul-22

Timing by Seiko (2022) - world athletics championships race analysis

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ndori, Bayapo (BOT) (1999	time	11.17		21.46		32.55		44.87	44.87	8 / 1							
reaction time 0.140	interval			10.29		11.09		12.32		# of strides	11.17	10.29	11.09	12.32	21.46	23.41	1.95
	velocity	8.95		9.72		9.02		8.12	8.91	174.2	8.95	9.72	9.02	8.12	9.32	8.54	
James, Kirani (GRN) (1992)	time	11.42		21.96		33.12		45.29	45.29	4 / 2							
reaction time 0.152	interval			10.54		11.16		12.17		# of strides	11.42	10.54	11.16	12.17	21.96	23.33	1.37
	velocity	8.76		9.49		8.96		8.22	8.83	160.2	8.76	9.49	8.96	8.22	9.11	8.57	
Allen, Nathon (JAM) (1995)	time	11.48		22.13		33.45		45.61	45.61	3 / 3							
reaction time 0.142	interval			10.65		11.32		12.16		# of strides	11.48	10.65	11.32	12.16	22.13	23.48	1.35

	velocity	8.71	9.39	8.83	8.22	8.77	166.2	8.71	9.39	8.83	8.22	9.04	8.52	
Sato, Fuga (JPN) (1996)	time	11.25	21.72	33.19	45.88	45.88	5 / 4							
reaction time 0.178	interval		10.47	11.47	12.69		# of strides	11.25	10.47	11.47	12.69	21.72	24.16	2.44
	velocity	8.89	9.55	8.72	7.88	8.72	177.0	8.89	9.55	8.72	7.88	9.21	8.28	
Beck, Alex (AUS) (1992)	time	11.24	21.77	33.30	45.99	45.99	6 / 5							
reaction time 0.170	interval		10.53	11.53	12.69		# of strides	11.24	10.53	11.53	12.69	21.77	24.22	2.45
	velocity	8.90	9.50	8.67	7.88	8.70	175.0	8.90	9.50	8.67	7.88	9.19	8.26	
Scotti, Edoardo (ITA) (2000	time	11.58	22.07	33.65	46.46	46.46	7 / 6							
reaction time 0.170	interval		10.49	11.58	12.81		# of strides	11.58	10.49	11.58	12.81	22.07	24.39	2.32
	velocity	8.64	9.53	8.64	7.81	8.61	176.0	8.64	9.53	8.64	7.81	9.06	8.20	
Mayorga, Dexter (NCA) (19	time	12.05	23.29	35.41	48.40	48.40	2 / 7							
reaction time 0.232	interval		11.24	12.12	12.99		# of strides	12.05	11.24	12.12	12.99	23.29	25.11	1.82
	velocity	8.30	8.90	8.25	7.70	8.26	191.7	8.30	8.90	8.25	7.70	8.59	7.96	

Heat 4

date 17-Jul-22

Timing by Seiko (2022) - world athletics championships race analysis

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Allison, Champion (USA) (	time	11.51		21.91		33.32		45.56	45.56	3 / 1							
reaction time 0.146	interval			10.40		11.41		12.24		# of strides	11.51	10.40	11.41	12.24	21.91	23.65	1.74
	velocity	8.69		9.62		8.76		8.17	8.78	168.0	8.69	9.62	8.76	8.17	9.13	8.46	
Borlée, Dylan (BEL) (1992)	time	11.47		21.79		33.26		45.70	45.70	7 / 2							
reaction time 0.148	interval			10.32		11.47		12.44		# of strides	11.47	10.32	11.47	12.44	21.79	23.91	2.12
	velocity	8.72		9.69		8.72		8.04	8.75	176.0	8.72	9.69	8.72	8.04	9.18	8.36	
Makwala, Isaac (BOT) (1985	time	11.24		21.58		33.00		45.93	45.93	2 / 3							
reaction time 0.193	interval			10.34		11.42		12.93		# of strides	11.24	10.34	11.42	12.93	21.58	24.35	2.77
	velocity	8.90		9.67		8.76		7.73	8.71	183.2	8.90	9.67	8.76	7.73	9.27	8.21	
Litvin, Mikhail (KAZ) (1996)	time	11.33		21.49		33.27		46.00	46.00	8 / 4							
reaction time 0.206	interval			10.16		11.78		12.73		# of strides	11.33	10.16	11.78	12.73	21.49	24.51	3.02
	velocity	8.83		9.84		8.49		7.86	8.70	169.0	8.83	9.84	8.49	7.86	9.31	8.16	
Re, Davide (ITA) (1993)	time	11.72		22.33		33.91		46.49	46.49	4 / 5							
reaction time 0.148	interval			10.61		11.58		12.58		# of strides	11.72	10.61	11.58	12.58	22.33	24.16	1.83
	velocity	8.53		9.43		8.64		7.95	8.60	176.0	8.53	9.43	8.64	7.95	8.96	8.28	
St. Hillaire, Dwight (TTO) (1	time	11.49		22.25		33.96		46.60	46.60	5 / 6							
reaction time 0.166	interval			10.76		11.71		12.64		# of strides	11.49	10.76	11.71	12.64	22.25	24.35	2.10
	velocity	8.70		9.29		8.54		7.91	8.58	180.7	8.70	9.29	8.54	7.91	8.99	8.21	
Kijanović, Boško (SRB) (20	time	11.87		22.49		34.03		46.85	46.85	6 / 7							
reaction time 0.131	interval			10.62		11.54		12.82		# of strides	11.87	10.62	11.54	12.82	22.49	24.36	1.87
	velocity	8.42		9.42		8.67		7.80	8.54	171.5	8.42	9.42	8.67	7.80	8.89	8.21	

Heat 3

date 17-Jul-22

Timing by Seiko (2022) - world athletics championships race analysis

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Cherry, Michael (USA) (199	time	11.16		21.84		33.16		45.81	45.81	3 / 1							
reaction time 0.137	interval			10.68		11.32		12.65		# of strides	11.16	10.68	11.32	12.65	21.84	23.97	2.13
	velocity	8.96		9.36		8.83		7.91	8.73	162.0	8.96	9.36	8.83	7.91	9.16	8.34	
Samukonga, Muzala (ZAM)	time	11.27		21.83		33.33		45.82	45.82	7 / 2							
reaction time 0.180	interval			10.56		11.50		12.49		# of strides	11.27	10.56	11.50	12.49	21.83	23.99	2.16
	velocity	8.87		9.47		8.70		8.01	8.73	180.0	8.87	9.47	8.70	8.01	9.16	8.34	
Doom, Alexander (BEL) (19	time	11.52		22.15		33.66		46.18	46.18	8 / 3							
reaction time 0.153	interval			10.63		11.51		12.52		# of strides	11.52	10.63	11.51	12.52	22.15	24.03	1.88
	velocity	8.68		9.41		8.69		7.99	8.66	186.0	8.68	9.41	8.69	7.99	9.03	8.32	
Powell, Jevaughn (JAM) (2(	time	11.26		21.99		33.53		46.42	46.42	6 / 4							
reaction time 0.142	interval			10.73		11.54		12.89		# of strides	11.26	10.73	11.54	12.89	21.99	24.43	2.44
	velocity	8.88		9.32		8.67		7.76	8.62	180.0	8.88	9.32	8.67	7.76	9.10	8.19	
Petrucciani, Ricky (SUI) (20	time	11.26		22.13		33.55		46.60	46.60	5 / 5							
reaction time 0.165	interval			10.87		11.42		13.05		# of strides	11.26	10.87	11.42	13.05	22.13	24.47	2.34
	velocity	8.88		9.20		8.76		7.66	8.58	180.2	8.88	9.20	8.76	7.66	9.04	8.17	
Pesela, Anthony (BOT) (20(	time	11.49		22.86		34.51		47.36	47.36	2 / 6							
reaction time 0.135	interval			11.37		11.65		12.85		# of strides	11.49	11.37	11.65	12.85	22.86	24.50	1.64
	velocity	8.70		8.80		8.58		7.78	8.45	187.0	8.70	8.80	8.58	7.78	8.75	8.16	
Timbaci, Obediah (VAN) (2(	time	12.30		24.49		37.87		53.32	53.32	4 / 7							
reaction time 0.209	interval			12.19		13.38		15.45		# of strides	12.30	12.19	13.38	15.45	24.49	28.83	4.34
	velocity	8.13		8.20		7.47		6.47	7.50		8.13	8.20	7.47	6.47	8.17	6.94	

Heat 2

date 17-Jul-22

Timing by Seiko (2022) - world athletics championships race analysis

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Norman, Michael (USA) (19	time	11.25		22.05		33.23		45.37	45.37	3 / 1							
reaction time 0.140	interval			10.80		11.18		12.14		# of strides	11.25	10.80	11.18	12.14	22.05	23.32	1.27
	velocity	8.89		9.26		8.94		8.24	8.82	174.2	8.89	9.26	8.94	8.24	9.07	8.58	

Taylor, Christopher (JAM)	time	11.32	22.16	33.51	45.68	45.68	4 / 2								
reaction time 0.167	interval		10.84	11.35	12.17		# of strides	11.32	10.84	11.35	12.17	22.16	23.52	1.36	
	velocity	8.83	9.23	8.81	8.22	8.76	184.0	8.83	9.23	8.81	8.22	9.03	8.50		
Nene, Zakhiti (RSA) (1998)	time	11.29	22.18	33.42	45.69	45.69	7 / 3								
reaction time 0.123	interval		10.89	11.24	12.27		# of strides	11.29	10.89	11.24	12.27	22.18	23.51	1.33	
	velocity	8.86	9.18	8.90	8.15	8.75	176.0	8.86	9.18	8.90	8.15	9.02	8.51		
Borlée, Kevin (BEL) (1988)	time	11.72	22.56	33.77	45.72	45.72	8 / 4								
reaction time 0.132	interval		10.84	11.21	11.95		# of strides	11.72	10.84	11.21	11.95	22.56	23.16	0.60	
	velocity	8.53	9.23	8.92	8.37	8.75		8.53	9.23	8.92	8.37	8.87	8.64		
Vedel, Benjamin Lobo (DEI	time	11.33	22.08	33.55	46.27	46.27	5 / 5								
reaction time 0.134	interval		10.75	11.47	12.72		# of strides	11.33	10.75	11.47	12.72	22.08	24.19	2.11	
	velocity	8.83	9.30	8.72	7.86	8.64	173.0	8.83	9.30	8.72	7.86	9.06	8.27		
Avilés, Luis (MEX) (2002)	time	11.41	22.56	34.24	46.47	46.47	2 / 6								
reaction time 0.140	interval		11.15	11.68	12.23		# of strides	11.41	11.15	11.68	12.23	22.56	23.91	1.35	
	velocity	8.76	8.97	8.56	8.18	8.61		8.76	8.97	8.56	8.18	8.87	8.36		
Duszyński, Kajetan (POL) (	time	11.29	22.11	33.60	46.57	46.57	6 / 7								
reaction time 0.132	interval		10.82	11.49	12.97		# of strides	11.29	10.82	11.49	12.97	22.11	24.46	2.35	
	velocity	8.86	9.24	8.70	7.71	8.59		8.86	9.24	8.70	7.71	9.05	8.18		

Heat 1

date 17-Jul-22

Timing by Seiko (2022) - world athletics championships race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
van Niekerk, Wayde (RSA) (	time		10.96		21.39		32.73		45.18	45.18	6 / 1							
reaction time 0.200	interval				10.43		11.34		12.45		# of strides	10.96	10.43	11.34	12.45	21.39	23.79	2.40
	velocity		9.12		9.59		8.82		8.03	8.85	164.0	9.12	9.59	8.82	8.03	9.35	8.41	
Jones, Jonathan (BAR) (19	time		11.34		21.93		33.02		45.46	45.46	3 / 2							
reaction time 0.169	interval				10.59		11.09		12.44		# of strides	11.34	10.59	11.09	12.44	21.93	23.53	1.60
	velocity		8.82		9.44		9.02		8.04	8.80	174.0	8.82	9.44	9.02	8.04	9.12	8.50	
Haydock-Wilson, Alex (GB	time		11.45		22.19		33.25		45.62	45.62	7 / 3							
reaction time 0.156	interval				10.74		11.06		12.37		# of strides	11.45	10.74	11.06	12.37	22.19	23.43	1.24
	velocity		8.73		9.31		9.04		8.08	8.77		8.73	9.31	9.04	8.08	9.01	8.54	
Walsh, Julian Jrummi (JPN	time		11.07		21.63		32.96		45.90	45.90	2 / 4							
reaction time 0.126	interval				10.56		11.33		12.94		# of strides	11.07	10.56	11.33	12.94	21.63	24.27	2.64
	velocity		9.03		9.47		8.83		7.73	8.71	176.7	9.03	9.47	8.83	7.73	9.25	8.24	
Šorm, Patrik (CZE) (1993)	time		11.42		22.15		33.45		46.07	46.07	4 / 5							
reaction time 0.174	interval				10.73		11.30		12.62		# of strides	11.42	10.73	11.30	12.62	22.15	23.92	1.77
	velocity		8.76		9.32		8.85		7.92	8.68		8.76	9.32	8.85	7.92	9.03	8.36	
Solomon, Steven (AUS) (1	time		11.71		22.50		33.65		46.87	46.87	5 / 6							
reaction time 0.152	interval				10.79		11.15		13.22		# of strides	11.71	10.79	11.15	13.22	22.50	24.37	1.87
	velocity		8.54		9.27		8.97		7.56	8.53		8.54	9.27	8.97	7.56	8.89	8.21	

2022 Meeting de Paris (Paris, FRA)

FINAL

date 18-Jun-22

Omega Timing (2022) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Gardiner, Steven (BAH) (19	time	6.25	11.17	16.19	21.33	26.55	32.07	37.94	44.21	44.21	5 / 1							
reaction time 0.160	interval		4.92	5.02	5.14	5.22	5.52	5.87	6.27		# of strides	11.17	10.16	10.74	12.14	21.33	22.88	1.55
	velocity	8.00	10.16	9.96	9.73	9.58	9.06	8.52	7.97	9.05	158.2	8.95	9.84	9.31	8.24	9.38	8.74	
Feliz, Lidio Andres (DOM) (	time	6.20	11.07	16.01	21.15	26.60	32.40	38.40	44.92	44.92	4 / 2							
reaction time 0.187	interval		4.87	4.94	5.14	5.45	5.80	6.00	6.52		# of strides	11.07	10.08	11.25	12.52	21.15	23.77	2.62
	velocity	8.06	10.27	10.12	9.73	9.17	8.62	8.33	7.67	8.90	173.0	9.03	9.92	8.89	7.99	9.46	8.41	
Nene, Zakhiti (RSA) (1998)	time	6.07	11.04	16.16	21.43	26.93	32.69	38.60	44.99	44.99	7 / 3							
reaction time 0.142	interval		4.97	5.12	5.27	5.50	5.76	5.91	6.39		# of strides	11.04	10.39	11.26	12.30	21.43	23.56	2.13
	velocity	8.24	10.06	9.77	9.49	9.09	8.68	8.46	7.82	8.89	177.2	9.06	9.62	8.88	8.13	9.33	8.49	
Stewart, Trevor (USA) (199	time	6.32	11.41	16.68	22.12	27.67	33.33	39.11	45.18	45.18	2 / 4							
reaction time 0.158	interval		5.09	5.27	5.44	5.55	5.66	5.78	6.07		# of strides	11.41	10.71	11.21	11.85	22.12	23.06	0.94
	velocity	7.91	9.82	9.49	9.19	9.01	8.83	8.65	8.24	8.85	178.0	8.76	9.34	8.92	8.44	9.04	8.67	
Bonevacia, Liemarvin (NED	time	6.29	11.24	16.28	21.61	27.16	33.00	39.11	45.75	45.75	8 / 5							
reaction time 0.188	interval		4.95	5.04	5.33	5.55	5.84	6.11	6.64		# of strides	11.24	10.37	11.39	12.75	21.61	24.14	2.53
	velocity	7.95	10.10	9.92	9.38	9.01	8.56	8.18	7.53	8.74	185.5	8.90	9.64	8.78	7.84	9.25	8.29	
Prevot, Loïc (FRA) (1998)	time	6.05	10.99	16.18	21.55	27.21	33.12	39.24	45.94	45.94	3 / 6							
reaction time 0.152	interval		4.94	5.19	5.37	5.66	5.91	6.12	6.70		# of strides	10.99	10.56	11.57	12.82	21.55	24.39	2.84
	velocity	8.26	10.12	9.63	9.31	8.83	8.46	8.17	7.46	8.71	171.0	9.10	9.47	8.64	7.80	9.28	8.20	
Borlée, Kevin (BEL) (1988)	time	6.43	11.68	17.05	22.48	28.10	33.91	39.96	46.64	46.64	1 / 7							
reaction time 0.154	interval		5.25	5.37	5.43	5.62	5.81	6.05	6.68		# of strides	11.68	10.80	11.43	12.73	22.48	24.16	1.68
	velocity	7.78	9.52	9.31	9.21	8.90	8.61	8.26	7.49	8.58	176.0	8.56	9.26	8.75	7.86	8.90	8.28	

2022 USATF National Championships (Eugene, OR)

FINAL date 25-Jun-22

Track Newsletter (2022) - USATF championships men

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Norman, Michael (USA) (19	time		10.87		21.12		32.12		43.56	43.56	/ 1							
reaction time	interval				10.25		11.00		11.44		# of strides	10.87	10.25	11.00	11.44	21.12	22.44	1.32
	velocity		9.20		9.76		9.09		8.74	9.18		9.20	9.76	9.09	8.74	9.47	8.91	
Allison, Champion (USA) (	time		11.08		21.16		32.18		43.70	43.70	/ 2							
reaction time	interval				10.08		11.02		11.52	PB	# of strides	11.08	10.08	11.02	11.52	21.16	22.54	1.38
	velocity		9.03		9.92		9.07		8.68	9.15		9.03	9.92	9.07	8.68	9.45	8.87	
Ross, Randolph (USA) (20	time		10.94		21.29		32.29		44.17	44.17	/ ~~3~~							
reaction time	interval				10.35		11.00		11.88	DV	# of strides	10.94	10.35	11.00	11.88	21.29	22.88	1.59
	velocity		9.14		9.66		9.09		8.42	9.06		9.14	9.66	9.09	8.42	9.39	8.74	
Godwin, Elija (USA) (1999)	time		10.83		21.33		32.31		44.34	44.34	/ ~~4~~ 3							
reaction time	interval				10.50		10.98		12.03	PB	# of strides	10.83	10.50	10.98	12.03	21.33	23.01	1.68
	velocity		9.23		9.52		9.11		8.31	9.02		9.23	9.52	9.11	8.31	9.38	8.69	
Norwood, Vernon (USA) (1	time		11.01		21.46		32.44		44.35	44.35	/ ~~5~~ 4							
reaction time	interval				10.45		10.98		11.91	PB	# of strides	11.01	10.45	10.98	11.91	21.46	22.89	1.43
	velocity		9.08		9.57		9.11		8.40	9.02		9.08	9.57	9.11	8.40	9.32	8.74	
Deadmon, Bryce (USA) (19	time		10.97		21.29		32.48		44.54	44.54	/ ~~6~~ 5							
reaction time	interval				10.32		11.19		12.06		# of strides	10.97	10.32	11.19	12.06	21.29	23.25	1.96
	velocity		9.12		9.69		8.94		8.29	8.98		9.12	9.69	8.94	8.29	9.39	8.60	
Williams, Noah (USA) (199	time		11.01		21.51		32.75		45.04	45.04	/ ~~7~~ 6							
reaction time	interval				10.50		11.24		12.29		# of strides	11.01	10.50	11.24	12.29	21.51	23.53	2.02
	velocity		9.08		9.52		8.90		8.14	8.88		9.08	9.52	8.90	8.14	9.30	8.50	
Turner, Ismail (USA) (2001)	time		10.75		21.32		32.83		45.56	45.56	/ ~~8~~ 7							
reaction time	interval				10.57		11.51		12.73		# of strides	10.75	10.57	11.51	12.73	21.32	24.24	2.92
	velocity		9.30		9.46		8.69		7.86	8.78		9.30	9.46	8.69	7.86	9.38	8.25	

2022 Bislett Games (Oslo, NOR)

FINAL date 16-Jun-22

Omega Timing (2022) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
James, Kirani (GRN) (1992)	time	6.10	11.05	16.18	21.43	26.87	32.66	38.59	44.78	44.78	6 / 1							
reaction time 0.142	interval		4.95	5.13	5.25	5.44	5.79	5.93	6.19		# of strides	11.05	10.38	11.23	12.12	21.43	23.35	1.92
	velocity	8.20	10.10	9.75	9.52	9.19	8.64	8.43	8.08	8.93	160.0	9.05	9.63	8.90	8.25	9.33	8.57	
Makwala, Isaac (BOT) (1986	time	6.24	11.33	16.57	21.92	27.32	32.91	38.83	45.45	45.45	7 / 2							
reaction time 0.201	interval		5.09	5.24	5.35	5.40	5.59	5.92	6.62		# of strides	11.33	10.59	10.99	12.54	21.92	23.53	1.61
	velocity	8.01	9.82	9.54	9.35	9.26	8.94	8.45	7.55	8.80	183.0	8.83	9.44	9.10	7.97	9.12	8.50	
Taylor, Christopher (JAM)	time	6.08	10.96	16.07	21.42	26.99	32.81	38.88	45.52	45.52	4 / 3							
reaction time 0.182	interval		4.88	5.11	5.35	5.57	5.82	6.07	6.64		# of strides	10.96	10.46	11.39	12.71	21.42	24.10	2.68
	velocity	8.22	10.25	9.78	9.35	8.98	8.59	8.24	7.53	8.79	185.0	9.12	9.56	8.78	7.87	9.34	8.30	
Nene, Zakhiti (RSA) (1998)	time	6.11	11.06	16.24	21.58	27.06	32.77	38.82	45.73	45.73	3 / 4							
reaction time 0.140	interval		4.95	5.18	5.34	5.48	5.71	6.05	6.91		# of strides	11.06	10.52	11.19	12.96	21.58	24.15	2.57
	velocity	8.18	10.10	9.65	9.36	9.12	8.76	8.26	7.24	8.75	180.0	9.04	9.51	8.94	7.72	9.27	8.28	
Bonevacia, Liemarvin (NED	time	6.30	11.31	16.42	21.73	27.28	33.15	39.23	45.77	45.77	5 / 5							
reaction time 0.146	interval		5.01	5.11	5.31	5.55	5.87	6.08	6.54		# of strides	11.31	10.42	11.42	12.62	21.73	24.04	2.31
	velocity	7.94	9.98	9.78	9.42	9.01	8.52	8.22	7.65	8.74	184.0	8.84	9.60	8.76	7.92	9.20	8.32	
Vedel, Benjamin Lobo (DEI	time	6.28	11.33	16.52	21.83	27.38	33.21	39.29	45.79	45.79	2 / 6							
reaction time 0.163	interval		5.05	5.19	5.31	5.55	5.83	6.08	6.50		# of strides	11.33	10.50	11.38	12.58	21.83	23.96	2.13
	velocity	7.96	9.90	9.63	9.42	9.01	8.58	8.22	7.69	8.74	172.0	8.83	9.52	8.79	7.95	9.16	8.35	
Santos, Luquelin (DOM) (1	time	6.39	11.43	16.53	21.73	27.23	33.14	39.32	45.92	45.92	1 / 7							
reaction time 0.174	interval		5.04	5.10	5.20	5.50	5.91	6.18	6.60		# of strides	11.43	10.30	11.41	12.78	21.73	24.19	2.46
	velocity	7.82	9.92	9.80	9.62	9.09	8.46	8.09	7.58	8.71	190.0	8.75	9.71	8.76	7.82	9.20	8.27	
Ingvalsen, Håvard Bentdal	time	6.42	11.54	16.76	22.15	27.77	33.73	39.91	46.60	46.60	8 / 8							
reaction time 0.175	interval		5.12	5.22	5.39	5.62	5.96	6.18	6.69		# of strides	11.54	10.61	11.58	12.87	22.15	24.45	2.30
	velocity	7.79	9.77	9.58	9.28	8.90	8.39	8.09	7.47	8.58	185.5	8.67	9.43	8.64	7.77	9.03	8.18	

2022 NCAA Championships (Eugene, OR)

FINAL date 10-Jun-22

Track Newsletter (2022) - NCAA championships men

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ross, Randolph (USA) (20	time				21.0		31.9		44.1	44.13	/ 1							
reaction time	interval						10.90		12.20		# of strides			10.90	12.20	21.00	23.10	2.10
	velocity				9.52		9.17		8.20	9.06				9.17	8.20	9.52	8.66	

2022 Golden Gala Pietro Mennea (Rome, ITA)

FINAL date 09-Jun-22

Omega Timing (2022) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
James, Kirani (GRN) (1992)	time	6.19	11.13	16.24	21.49	26.88	32.54	38.41	44.54	44.54	5 / 1							
reaction time 0.151	interval		4.94	5.11	5.25	5.39	5.66	5.87	6.13		# of strides	11.13	10.36	11.05	12.00	21.49	23.05	1.56
	velocity	8.08	10.12	9.78	9.52	9.28	8.83	8.52	8.16	8.98		8.98	9.65	9.05	8.33	9.31	8.68	

Norwood, Vernon (USA) (1	time	6.14	11.13	16.35	21.63	27.05	32.68	38.46	44.81	44.81	6 / 2							
reaction time 0.168	interval		4.99	5.22	5.28	5.42	5.63	5.78	6.35		# of strides	11.13	10.50	11.05	12.13	21.63	23.18	1.55
	velocity	8.14	10.02	9.58	9.47	9.23	8.88	8.65	7.87	8.93		8.98	9.52	9.05	8.24	9.25	8.63	
Cherry, Michael (USA) (199	time	6.05	11.05	16.20	21.48	26.93	32.62	38.60	45.24	45.24	4 / 3							
reaction time 0.178	interval		5.00	5.15	5.28	5.45	5.69	5.98	6.64		# of strides	11.05	10.43	11.14	12.62	21.48	23.76	2.28
	velocity	8.26	10.00	9.71	9.47	9.17	8.79	8.36	7.53	8.84		9.05	9.59	8.98	7.92	9.31	8.42	
Feliz, Lidio Andres (DOM)	time	6.31	11.32	16.43	21.73	27.34	33.14	39.01	45.46	45.46	8 / 4							
reaction time 0.195	interval		5.01	5.11	5.30	5.61	5.80	5.87	6.45		# of strides	11.32	10.41	11.41	12.32	21.73	23.73	2.00
	velocity	7.92	9.98	9.78	9.43	8.91	8.62	8.52	7.75	8.80	175.7	8.83	9.61	8.76	8.12	9.20	8.43	
Taylor, Christopher (JAM)	time	6.03	11.01	16.22	21.59	27.14	32.93	38.95	45.47	45.47	2 / 5							
reaction time 0.148	interval		4.98	5.21	5.37	5.55	5.79	6.02	6.52		# of strides	11.01	10.58	11.34	12.54	21.59	23.88	2.29
	velocity	8.29	10.04	9.60	9.31	9.01	8.64	8.31	7.67	8.80		9.08	9.45	8.82	7.97	9.26	8.38	
Bonevacia, Liemarvin (NED	time	6.32	11.45	16.69	22.08	27.53	33.28	39.25	45.79	45.79	3 / 6							
reaction time 0.166	interval		5.13	5.24	5.39	5.45	5.75	5.97	6.54		# of strides	11.45	10.63	11.20	12.51	22.08	23.71	1.63
	velocity	7.91	9.75	9.54	9.28	9.17	8.70	8.38	7.65	8.74		8.73	9.41	8.93	7.99	9.06	8.44	
Scotti, Edoardo (ITA) (2000	time	6.27	11.35	16.49	21.83	27.45	33.27	39.30	45.89	45.89	9 / 7							
reaction time 0.185	interval		5.08	5.14	5.34	5.62	5.82	6.03	6.59		# of strides	11.35	10.48	11.44	12.62	21.83	24.06	2.23
	velocity	7.97	9.84	9.73	9.36	8.90	8.59	8.29	7.59	8.72	171.5	8.81	9.54	8.74	7.92	9.16	8.31	
Makwala, Isaac (BOT) (1986	time	6.21	11.18	16.28	21.55	27.06	32.81	38.98	45.90	45.90	7 / 8							
reaction time 0.185	interval		4.97	5.10	5.27	5.51	5.75	6.17	6.92		# of strides	11.18	10.37	11.26	13.09	21.55	24.35	2.80
	velocity	8.05	10.06	9.80	9.49	9.07	8.70	8.10	7.23	8.71	184.0	8.94	9.64	8.88	7.64	9.28	8.21	
Petrucciani, Ricky (SUI) (20	time	6.18	11.24	16.49	21.95	27.54	33.33	39.49	46.16	46.16	1 / 9							
reaction time 0.150	interval		5.06	5.25	5.46	5.59	5.79	6.16	6.67		# of strides	11.24	10.71	11.38	12.83	21.95	24.21	2.26
	velocity	8.09	9.88	9.52	9.16	8.94	8.64	8.12	7.50	8.67		8.90	9.34	8.79	7.79	9.11	8.26	

2022 FBK Games (Hengelo, NED)

FINAL date 06-Jun-22

Omega Timing (2022) - continental tour race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Norwood, Vernon (USA) (1	time	6.1	11.2	16.4	22.0	27.6	33.3	39.0	45.28	45.28	6 / 1							
reaction time 0.158	interval		5.10	5.20	5.60	5.60	5.70	5.70	6.28		# of strides	11.20	10.80	11.30	11.98	22.00	23.28	1.28
	velocity	8.20	9.80	9.62	8.93	8.93	8.77	8.77	7.96	8.83	176.5	8.93	9.26	8.85	8.35	9.09	8.59	
Taylor, Christopher (JAM)	time	6.0	11.0	15.9	21.5	27.2	33.1	39.0	45.45	45.45	7 / 2							
reaction time 0.155	interval		5.00	4.90	5.60	5.70	5.90	5.90	6.45		# of strides	11.00	10.50	11.60	12.35	21.50	23.95	2.45
	velocity	8.33	10.00	10.20	8.93	8.77	8.47	8.47	7.75	8.80	182.0	9.09	9.52	8.62	8.10	9.30	8.35	
Stewart, Trevor (USA) (199	time	6.2	11.3	16.5	21.9	27.6	33.4	39.4	45.93	45.93	4 / 3							
reaction time 0.148	interval		5.10	5.20	5.40	5.70	5.80	6.00	6.53		# of strides	11.30	10.60	11.50	12.53	21.90	24.03	2.13
	velocity	8.06	9.80	9.62	9.26	8.77	8.62	8.33	7.66	8.71		8.85	9.43	8.70	7.98	9.13	8.32	
Bonevacia, Liemarvin (NED	time	6.2	11.2	16.3	21.7	27.3	33.2	39.3	46.11	46.11	5 / 4							
reaction time 0.148	interval		5.00	5.10	5.40	5.60	5.90	6.10	6.81		# of strides	11.20	10.50	11.50	12.91	21.70	24.41	2.71
	velocity	8.06	10.00	9.80	9.26	8.93	8.47	8.20	7.34	8.67	184.0	8.93	9.52	8.70	7.75	9.22	8.19	
Šorm, Patrik (CZE) (1993)	time	6.3	11.3	16.6	21.9	27.6	33.5	39.7	46.30	46.30	2 / 5							
reaction time 0.146	interval		5.00	5.30	5.30	5.70	5.90	6.20	6.60		# of strides	11.30	10.60	11.60	12.80	21.90	24.40	2.50
	velocity	7.94	10.00	9.43	9.43	8.77	8.47	8.06	7.58	8.64		8.85	9.43	8.62	7.81	9.13	8.20	
Boers, Isayah (NED) (1999)	time	6.0	10.9	15.9	21.3	26.9	33.0	39.5	46.69	46.69	2 / 6							
reaction time 0.159	interval		4.90	5.00	5.40	5.60	6.10	6.50	7.19		# of strides	10.90	10.40	11.70	13.69	21.30	25.39	4.09
	velocity	8.33	10.20	10.00	9.26	8.93	8.20	7.69	6.95	8.57		9.17	9.62	8.55	7.30	9.39	7.88	
Dobber, Jochem (NED) (19	time	6.3	11.4	16.6	22.0	27.7	33.8	40.2	47.16	47.16	8 / 7							
reaction time 0.167	interval		5.10	5.20	5.40	5.70	6.10	6.40	6.96		# of strides	11.40	10.60	11.80	13.36	22.00	25.16	3.16
	velocity	7.94	9.80	9.62	9.26	8.77	8.20	7.81	7.18	8.48		8.77	9.43	8.47	7.49	9.09	7.95	
Agard, Terrence (NED) (19	time	6.3	11.3	16.5	21.9	27.5	33.5	40.0	47.21	47.21	3 / 8							
reaction time 0.195	interval		5.00	5.20	5.40	5.60	6.00	6.50	7.21		# of strides	11.30	10.60	11.60	13.71	21.90	25.31	3.41
	velocity	7.94	10.00	9.62	9.26	8.93	8.33	7.69	6.93	8.47		8.85	9.43	8.62	7.29	9.13	7.90	

2022 Meeting International Mohammed VI d'Athlétime (Rabat, MAR)

National FINAL date 05-Jun-22

Omega Timing (2022) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Dair, Hamza (MAR) (2002)	time	6.38	11.59	17.00	22.47	28.33	34.28	40.16	46.38	46.38	4 / 1							
reaction time 0.176	interval		5.21	5.41	5.47	5.86	5.95	5.88	6.22	PB	# of strides	11.59	10.88	11.81	12.10	22.47	23.91	1.44
	velocity	7.84	9.60	9.24	9.14	8.53	8.40	8.50	8.04	8.62		8.63	9.19	8.47	8.26	8.90	8.36	
Haddaoui, Aymane (MAR)	time	6.24	11.39	16.76	22.32	28.13	34.13	40.28	47.02	47.02	5 / 2							
reaction time 0.194	interval		5.15	5.37	5.56	5.81	6.00	6.15	6.74	PB	# of strides	11.39	10.93	11.81	12.89	22.32	24.70	2.38
	velocity	8.01	9.71	9.31	8.99	8.61	8.33	8.13	7.42	8.51		8.78	9.15	8.47	7.76	8.96	8.10	
Mhamdi, Rachid (MAR) (20	time	6.57	12.01	17.68	22.41	29.25	35.05	40.93	47.23	47.23	3 / 3							
reaction time 0.179	interval		5.44	5.67	4.73	6.84	5.80	5.88	6.30	PB	# of strides	12.01	10.40	12.64	12.18	22.41	24.82	2.41
	velocity	7.61	9.19	8.82	10.57	7.31	8.62	8.50	7.94	8.47		8.33	9.62	7.91	8.21	8.92	8.06	
Hammi, Oussama (MAR) (2	time	6.52	11.80	17.30	22.92	28.96	35.41	41.74	48.22	48.22	2 / 4							

reaction time 0.242	interval		5.28	5.50	5.62	6.04	6.45	6.33	6.48	PB	# of strides	11.80	11.12	12.49	12.81	22.92	25.30	2.38
	velocity	7.67	9.47	9.09	8.90	8.28	7.75	7.90	7.72	8.30		8.47	8.99	8.01	7.81	8.73	7.91	
Nazih, Yahya (MAR) (2000)	time	6.44	11.78	17.38	23.13	29.27	35.55	41.91	48.89	48.89	8 / 5							
reaction time 0.164	interval		5.34	5.60	5.75	6.14	6.28	6.36	6.98		# of strides	11.78	11.35	12.42	13.34	23.13	25.76	2.63
	velocity	7.76	9.36	8.93	8.70	8.14	7.96	7.86	7.16	8.18		8.49	8.81	8.05	7.50	8.65	7.76	
Ouyamna, Abdelaali (MAR)	time	6.56	12.04	17.73	23.53	29.73	36.20	42.57	49.29	49.29	7 / 6							
reaction time 0.205	interval		5.48	5.69	5.80	6.20	6.47	6.37	6.72		# of strides	12.04	11.49	12.67	13.09	23.53	25.76	2.23
	velocity	7.62	9.12	8.79	8.62	8.06	7.73	7.85	7.44	8.12		8.31	8.70	7.89	7.64	8.50	7.76	
Hasnaoui, Farid (MAR) (20	time	6.72	12.35	18.27	24.40	30.75	37.27	43.80	50.49	50.59	1 / 7							
reaction time 0.144	interval		5.63	5.92	6.13	6.35	6.52	6.53	6.69		# of strides	12.35	12.05	12.87	13.22	24.40	26.09	1.69
	velocity	7.44	8.88	8.45	8.16	7.87	7.67	7.66	7.47	7.91		8.10	8.30	7.77	7.56	8.20	7.67	

2022 Japanese Multi-Event National Championsips (Akita, JPN)

Decathlon - FINA

date 04-Jun-22

Takefu (2023) - performance analyisis of decathlon athletes in the 2022 season

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Okuda, Keisuke (JPN) (199	time	6.34	11.55	16.92	22.63	28.67	34.94	41.50	48.28	48.28	7 / 1							
reaction time	interval		5.21	5.37	5.71	6.04	6.27	6.56	6.78		# of strides	11.55	11.08	12.31	13.34	22.63	25.65	3.02
	velocity	7.89	9.60	9.31	8.76	8.28	7.97	7.62	7.37	8.29		8.66	9.03	8.12	7.50	8.84	7.80	
Katayama, Kazuya (JPN) (1	time	6.56	11.94	17.50	23.44	29.70	36.16	42.89	50.15	50.15	2 / 4							
reaction time	interval		5.38	5.56	5.94	6.26	6.46	6.73	7.26		# of strides	11.94	11.50	12.72	13.99	23.44	26.71	3.27
	velocity	7.62	9.29	8.99	8.42	7.99	7.74	7.43	6.89	7.98		8.38	8.70	7.86	7.15	8.53	7.49	
Nakamura, Akihiko (JPN) (1	time	6.37	11.78	17.33	23.26	29.55	36.19	43.17	50.94	50.94	4 / 7							
reaction time	interval		5.41	5.55	5.93	6.29	6.64	6.98	7.77		# of strides	11.78	11.48	12.93	14.75	23.26	27.68	4.42
	velocity	7.85	9.24	9.01	8.43	7.95	7.53	7.16	6.44	7.85		8.49	8.71	7.73	6.78	8.60	7.23	
Ushiro, Keisuke (JPN) (198	time	6.69	12.21	17.97	24.07	30.54	37.37	44.64	52.57	52.57	3 / 9							
reaction time	interval		5.52	5.76	6.10	6.47	6.83	7.27	7.93		# of strides	12.21	11.86	13.30	15.20	24.07	28.50	4.43
	velocity	7.47	9.06	8.68	8.20	7.73	7.32	6.88	6.31	7.61		8.19	8.43	7.52	6.58	8.31	7.02	

2022 Prefontaine Classic (Eugene, OR)

FINAL

date 28-May-22

Omega Timing (2022) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Norman, Michael (USA) (19	time	6.02	11.00	16.00	21.33	26.67	32.09	37.67	43.60	43.60	4 / 1							
reaction time 0.130	interval		4.98	5.00	5.33	5.34	5.42	5.58	5.93		# of strides	11.00	10.33	10.76	11.51	21.33	22.27	0.94
	velocity	8.31	10.04	10.00	9.38	9.36	9.23	8.96	8.43	9.17	172.5	9.09	9.68	9.29	8.69	9.38	8.98	
James, Kirani (GRN) (1992)	time	6.09	10.95	16.00	21.24	26.62	32.17	37.89	44.02	44.02	5 / 2							
reaction time 0.145	interval		4.86	5.05	5.24	5.38	5.55	5.72	6.13		# of strides	10.95	10.29	10.93	11.85	21.24	22.78	1.54
	velocity	8.21	10.29	9.90	9.54	9.29	9.01	8.74	8.16	9.09	161.0	9.13	9.72	9.15	8.44	9.42	8.78	
Hudson-Smith, Matthew (	time	6.08	11.00	16.16	21.46	26.80	32.19	38.05	44.35	44.35	8 / 3							
reaction time 0.138	interval		4.92	5.16	5.30	5.34	5.39	5.86	6.30	NR PB	# of strides	11.00	10.46	10.73	12.16	21.46	22.89	1.43
	velocity	8.22	10.16	9.69	9.43	9.36	9.28	8.53	7.94	9.02	164.0	9.09	9.56	9.32	8.22	9.32	8.74	
Norwood, Vernon (USA) (1	time	6.12	11.09	16.26	21.67	27.14	32.71	38.44	44.66	44.66	2 / 4							
reaction time 0.177	interval		4.97	5.17	5.41	5.47	5.57	5.73	6.22		# of strides	11.09	10.58	11.04	11.95	21.67	22.99	1.32
	velocity	8.17	10.06	9.67	9.24	9.14	8.98	8.73	8.04	8.96	173.2	9.02	9.45	9.06	8.37	9.23	8.70	
Richards, Jereem (TTO) (19	time	5.98	10.72	15.76	21.07	26.58	32.28	38.26	44.79	44.79	7 / 5							
reaction time 0.159	interval		4.74	5.04	5.31	5.51	5.70	5.98	6.53	PB	# of strides	10.72	10.35	11.21	12.51	21.07	23.72	2.65
	velocity	8.36	10.55	9.92	9.42	9.07	8.77	8.36	7.66	8.93	175.5	9.33	9.66	8.92	7.99	9.49	8.43	
Cherry, Michael (USA) (199	time	6.09	11.07	16.23	21.57	26.99	32.59	38.52	45.04	45.04	6 / 6							
reaction time 0.179	interval		4.98	5.16	5.34	5.42	5.60	5.93	6.52		# of strides	11.07	10.50	11.02	12.45	21.57	23.47	1.90
	velocity	8.21	10.04	9.69	9.36	9.23	8.93	8.43	7.67	8.88	158.5	9.03	9.52	9.07	8.03	9.27	8.52	
Makwala, Isaac (BOT) (1986	time	6.33	11.38	16.54	21.77	27.14	32.71	38.71	45.35	45.35	9 / 7							
reaction time 0.198	interval		5.05	5.16	5.23	5.37	5.57	6.00	6.64		# of strides	11.38	10.39	10.94	12.64	21.77	23.58	1.81
	velocity	7.90	9.90	9.69	9.56	9.31	8.98	8.33	7.53	8.82	185.7	8.79	9.62	9.14	7.91	9.19	8.48	
Deadmon, Bryce (USA) (19	time	6.19	11.32	16.44	21.79	27.28	32.91	38.84	45.35	45.35	3 / 8							
reaction time 0.149	interval		5.13	5.12	5.35	5.49	5.63	5.93	6.51		# of strides	11.32	10.47	11.12	12.44	21.79	23.56	1.77
	velocity	8.08	9.75	9.77	9.35	9.11	8.88	8.43	7.68	8.82	173.0	8.83	9.55	8.99	8.04	9.18	8.49	
Montgomery, Kahmari (US	time	6.01	10.99	16.15	21.66	27.27	33.05	39.22	46.04	46.04	1 / 9							
reaction time 0.135	interval		4.98	5.16	5.51	5.61	5.78	6.17	6.82		# of strides	10.99	10.67	11.39	12.99	21.66	24.38	2.72
	velocity	8.32	10.04	9.69	9.07	8.91	8.65	8.10	7.33	8.69	178.2	9.10	9.37	8.78	7.70	9.23	8.20	

2022 Shimane High School Championships (Izumo, JPN)

FINAL

date 26-May-22

Shimizu (2022) - shimane high school championships 2022 - biomechanics data analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Arai, Iori (JPN)	time		12.18		24.05		36.61		49.99	49.99	8 / 1							
reaction time	interval				11.87		12.56		13.38		# of strides	12.18	11.87	12.56	13.38	24.05	25.94	1.89
	velocity		8.21		8.42		7.96		7.47	8.00		8.21	8.42	7.96	7.47	8.32	7.71	
Mishima, Sota (JPN)	time		12.12		24.00		26.56		50.03	50.03	4 / 2							
reaction time	interval				11.88		2.56		23.47		# of strides	12.12	11.88	2.56	23.47	24.00	26.03	2.03
	velocity		8.25		8.42		39.06		4.26	8.00		8.25	8.42	39.06	4.26	8.33	7.68	

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

Arai, Yuta (JPN)	time	12.28	23.93	36.68	50.54	50.54	5 / 3								
reaction time	interval		11.65	12.75	13.86		# of strides	12.28	11.65	12.75	13.86	23.93	26.61	2.68	
	velocity	8.14	8.58	7.84	7.22	7.91		8.14	8.58	7.84	7.22	8.36	7.52		
Miyazaki, Yumeta (JPN)	time	12.43	24.33	37.48	51.85	51.85	9 / 4								
reaction time	interval		11.90	13.15	14.37		# of strides	12.43	11.90	13.15	14.37	24.33	27.52	3.19	
	velocity	8.05	8.40	7.60	6.96	7.71		8.05	8.40	7.60	6.96	8.22	7.27		
Tenkawa, Ten (JPN)	time	12.97	25.43	38.28	51.99	51.99	7 / 5								
reaction time	interval		12.46	12.85	13.71		# of strides	12.97	12.46	12.85	13.71	25.43	26.56	1.13	
	velocity	7.71	8.03	7.78	7.29	7.69		7.71	8.03	7.78	7.29	7.86	7.53		
Fujimoto, Takashi (JPN)	time	12.65	24.70	38.16	52.16	52.16	2 / 6								
reaction time	interval		12.05	13.46	14.00		# of strides	12.65	12.05	13.46	14.00	24.70	27.46	2.76	
	velocity	7.91	8.30	7.43	7.14	7.67		7.91	8.30	7.43	7.14	8.10	7.28		
Nishikori, Yushin (JPN)	time	12.65	25.30	39.29	54.68	54.68	3 / 7								
reaction time	interval		12.65	13.99	15.39		# of strides	12.65	12.65	13.99	15.39	25.30	29.38	4.08	
	velocity	7.91	7.91	7.15	6.50	7.32		7.91	7.91	7.15	6.50	7.91	6.81		
Hashiwata, Hibiki (JPN)	time	12.40	24.72	39.39	56.79	56.79	6 / 8								
reaction time	interval		12.32	14.67	17.40		# of strides	12.40	12.32	14.67	17.40	24.72	32.07	7.35	
	velocity	8.06	8.12	6.82	5.75	7.04		8.06	8.12	6.82	5.75	8.09	6.24		

2022 Müller Birmingham Diamond League (Birmingham, GBR)

FINAL

date 21-May-22

Omega Timing (2022) - diamond league race analysis

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hudson-Smith, Matthew (G time	6.06	11.00	16.18	21.56	27.07	32.48	38.80	45.32	45.32	6 / 1							
reaction time 0.144 interval		4.94	5.18	5.38	5.51	5.41	6.32	6.52		# of strides	11.00	10.56	10.92	12.84	21.56	23.76	2.20
velocity	8.25	10.12	9.65	9.29	9.07	9.24	7.91	7.67	8.83	164.2	9.09	9.47	9.16	7.79	9.28	8.42	
Deadmon, Bryce (USA) (19 time	6.18	11.29	16.50	21.89	27.51	33.26	39.16	45.51	45.51	4 / 2							
reaction time 0.151 interval		5.11	5.21	5.39	5.62	5.75	5.90	6.35		# of strides	11.29	10.60	11.37	12.25	21.89	23.62	1.73
velocity	8.09	9.78	9.60	9.28	8.90	8.70	8.47	7.87	8.79	173.0	8.86	9.43	8.80	8.16	9.14	8.47	
Montgomery, Kahmari (US time	6.00	10.99	16.15	21.55	27.23	33.02	39.01	45.52	45.52	8 / 3							
reaction time 0.134 interval		4.99	5.16	5.40	5.68	5.79	5.99	6.51		# of strides	10.99	10.56	11.47	12.50	21.55	23.97	2.42
velocity	8.33	10.02	9.69	9.26	8.80	8.64	8.35	7.68	8.79	176.5	9.10	9.47	8.72	8.00	9.28	8.34	
Norwood, Vernon (USA) (1 time	6.12	11.09	16.29	21.70	27.13	32.76	38.81	45.53	45.53	5 / 4							
reaction time 0.171 interval		4.97	5.20	5.41	5.43	5.63	6.05	6.72		# of strides	11.09	10.61	11.06	12.77	21.70	23.83	2.13
velocity	8.17	10.06	9.62	9.24	9.21	8.88	8.26	7.44	8.79	177.7	9.02	9.43	9.04	7.83	9.22	8.39	
Makwala, Isaac (BOT) (1986 time	6.23	11.29	16.50	21.91	27.46	33.19	39.23	45.98	45.98	7 / 5							
reaction time 0.187 interval		5.06	5.21	5.41	5.55	5.73	6.04	6.75		# of strides	11.29	10.62	11.28	12.79	21.91	24.07	2.16
velocity	8.03	9.88	9.60	9.24	9.01	8.73	8.28	7.41	8.70	181.7	8.86	9.42	8.87	7.82	9.13	8.31	
Bonevacia, Liemarvin (NED time	6.37	11.41	16.53	21.83	27.39	33.36	39.61	46.37	46.37	3 / 6							
reaction time 0.159 interval		5.04	5.12	5.30	5.56	5.97	6.25	6.76		# of strides	11.41	10.42	11.53	13.01	21.83	24.54	2.71
velocity	7.85	9.92	9.77	9.43	8.99	8.38	8.00	7.40	8.63	185.7	8.76	9.60	8.67	7.69	9.16	8.15	
Haydock-Wilson, Alex (GBI time	6.26	11.40	16.82	22.37	28.01	33.87	39.99	46.49	46.49	2 / 7							
reaction time 0.137 interval		5.14	5.42	5.55	5.64	5.86	6.12	6.50		# of strides	11.40	10.97	11.50	12.62	22.37	24.12	1.75
velocity	7.99	9.73	9.23	9.01	8.87	8.53	8.17	7.69	8.60		8.77	9.12	8.70	7.92	8.94	8.29	
London, Wilbert (USA) (19 time	6.27	11.39	16.77	22.27	27.95	33.90	40.11	46.89	46.89	1 / 8							
reaction time 0.168 interval		5.12	5.38	5.50	5.68	5.95	6.21	6.78		# of strides	11.39	10.88	11.63	12.99	22.27	24.62	2.35
velocity	7.97	9.77	9.29	9.09	8.80	8.40	8.05	7.37	8.53		8.78	9.19	8.60	7.70	8.98	8.12	
Dobber, Jochem (NED) (19 time	6.38	11.39	16.53	21.93	27.61	33.71	40.31	47.61	47.61	9 / 9							
reaction time 0.212 interval		5.01	5.14	5.40	5.68	6.10	6.60	7.30		# of strides	11.39	10.54	11.78	13.90	21.93	25.68	3.75
velocity	7.84	9.98	9.73	9.26	8.80	8.20	7.58	6.85	8.40		8.78	9.49	8.49	7.19	9.12	7.79	

B FINAL

date 21-May-22

Omega Timing (2022) - diamond league race analysis

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Brier, Joseph (GBR) (1999) time	6.2	11.2	16.4	21.7	27.4	33.5	39.6	46.21	46.21	5 / 1							
reaction time 0.164 interval		5.00	5.20	5.30	5.70	6.10	6.10	6.61		# of strides	11.20	10.50	11.80	12.71	21.70	24.51	2.81
velocity	8.06	10.00	9.62	9.43	8.77	8.20	8.20	7.56	8.66	181.0	8.93	9.52	8.47	7.87	9.22	8.16	
Metzger, Kevin (GBR) (199 time	6.3	11.4	16.7	22.2	28.0	34.1	40.1	46.55	46.55	4 / 2							
reaction time 0.157 interval		5.10	5.30	5.50	5.80	6.10	6.00	6.45		# of strides	11.40	10.80	11.90	12.45	22.20	24.35	2.15
velocity	7.94	9.80	9.43	9.09	8.62	8.20	8.33	7.75	8.59	180.5	8.77	9.26	8.40	8.03	9.01	8.21	
Higgins, Ben (GBR) (2000) time	6.3	11.4	16.6	22.0	27.7	33.8	40.0	46.59	46.59	3 / 3							
reaction time 0.134 interval		5.10	5.20	5.40	5.70	6.10	6.20	6.59		# of strides	11.40	10.60	11.80	12.79	22.00	24.59	2.59
velocity	7.94	9.80	9.62	9.26	8.77	8.20	8.06	7.59	8.59	194.0	8.77	9.43	8.47	7.82	9.09	8.13	
Chalmers, Cameron (GBR) time	6.2	11.2	16.4	21.7	27.5	33.6	39.9	46.69	46.69	6 / 5							
reaction time 0.199 interval		5.00	5.20	5.30	5.80	6.10	6.30	6.79		# of strides	11.20	10.50	11.90	13.09	21.70	24.99	3.29
velocity	8.06	10.00	9.62	9.43	8.62	8.20	7.94	7.36	8.57	173.0	8.93	9.52	8.40	7.64	9.22	8.00	
Rhoden-Stevens, Jamal (GI time	6.1	11.1	16.5	22.0	27.8	33.9	40.1	47.28	47.28	7 / ~~6~~							

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

reaction time 0.152	interval		5.04	5.40	5.50	5.80	6.10	6.20	7.18	DQ	# of strides	11.10	10.90	11.90	13.38	22.00	25.28	3.28
	velocity	8.25	9.92	9.26	9.09	8.62	8.20	8.06	6.96	8.46	186.7	9.01	9.17	8.40	7.47	9.09	7.91	
Yousif, Rabah (GBR) (1986	time	6.3	11.4	16.6	22.1	28.0	34.2	40.6	47.62	47.62	9 / 7							
reaction time 0.180	interval		5.10	5.20	5.50	5.90	6.20	6.40	7.02		# of strides	11.40	10.70	12.10	13.42	22.10	25.52	3.42
	velocity	7.94	9.80	9.62	9.09	8.47	8.06	7.81	7.12	8.40	166.0	8.77	9.35	8.26	7.45	9.05	7.84	
Thompson, Lee (GBR) (19	time	6.3	11.3	16.5	22.0	27.8	34.0	40.5	47.65	47.65	8 / 8							
reaction time 0.207	interval		5.00	5.20	5.50	5.80	6.20	6.50	7.15		# of strides	11.30	10.70	12.00	13.65	22.00	25.65	3.65
	velocity	7.94	10.00	9.62	9.09	8.62	8.06	7.69	6.99	8.39	175.0	8.85	9.35	8.33	7.33	9.09	7.80	
Okoro, Efekemo (GBR) (19	time	6.3	11.4	16.7	22.1	27.9	34.2	40.8	48.04	48.04	1 / 9							
reaction time 0.146	interval		5.10	5.30	5.40	5.80	6.30	6.60	7.24		# of strides	11.40	10.70	12.10	13.84	22.10	25.94	3.84
	velocity	7.94	9.80	9.43	9.26	8.62	7.94	7.58	6.91	8.33		8.77	9.35	8.26	7.23	9.05	7.71	

2022 Michitaka Kinami Memorial (Osaka, JPN)

Decathlon - Heat

date 30-Apr-22

Takefu (2023) - performance analyisis of decathlon athletes in the 2022 season

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Okuda, Keisuke (JPN) (199	time	6.32	11.65	17.08	22.79	28.73	34.97	41.67	49.18	49.18	3 / 1							
reaction time 0.157	interval		5.33	5.43	5.71	5.94	6.24	6.70	7.51		# of strides	11.65	11.14	12.18	14.21	22.79	26.39	3.60
	velocity	7.91	9.38	9.21	8.76	8.42	8.01	7.46	6.66	8.13		8.58	8.98	8.21	7.04	8.78	7.58	
Taue, Shun (JPN) (1997)	time	6.58	11.88	17.33	23.11	29.21	35.65	42.43	49.74	49.74	8 / 2							
reaction time 0.138	interval		5.30	5.45	5.78	6.10	6.44	6.78	7.31		# of strides	11.88	11.23	12.54	14.09	23.11	26.63	3.52
	velocity	7.60	9.43	9.17	8.65	8.20	7.76	7.37	6.84	8.04		8.42	8.90	7.97	7.10	8.65	7.51	
Nakamura, Akihiko (JPN) (1	time	6.58	12.16	17.78	23.69	29.84	36.29	43.05	50.26	50.26	4 / 4							
reaction time 0.139	interval		5.58	5.62	5.91	6.15	6.45	6.76	7.21		# of strides	12.16	11.53	12.60	13.97	23.69	26.57	2.88
	velocity	7.60	8.96	8.90	8.46	8.13	7.75	7.40	6.93	7.96		8.22	8.67	7.94	7.16	8.44	7.53	

Decathlon - Heat

date 30-Apr-22

Takefu (2023) - performance analyisis of decathlon athletes in the 2022 season

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Maruyama, Yuma (JPN) (19	time	6.52	11.94	17.42	23.15	29.08	35.30	41.88	48.96	48.96	4 / 2							
reaction time 0.151	interval		5.42	5.48	5.73	5.93	6.22	6.58	7.08		# of strides	11.94	11.21	12.15	13.66	23.15	25.81	2.66
	velocity	7.67	9.23	9.12	8.73	8.43	8.04	7.60	7.06	8.17		8.38	8.92	8.23	7.32	8.64	7.75	
Ushiro, Keisuke (JPN) (198	time	6.75	12.37	18.11	24.23	30.62	37.43	44.83	52.93	52.93	5 / 5							
reaction time 0.174	interval		5.62	5.74	6.12	6.39	6.81	7.40	8.10		# of strides	12.37	11.86	13.20	15.50	24.23	28.70	4.47
	velocity	7.41	8.90	8.71	8.17	7.82	7.34	6.76	6.17	7.56		8.08	8.43	7.58	6.45	8.25	6.97	

2021 Japanese U18 National Championships (Matsuyama, JPN) (300m)

Final

date 23-Oct-21

Yamanaka (2021) - race analysis of men's and women's 400m and 300m races in 2021 competition

		50m	100m	150m	200m	250m	300m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hirakawa, Kira (JPN) (2005)	time	6.23	11.23	16.42	21.80	27.47	33.56	33.56	3 / 1							
reaction time 0.204	interval		5.00	5.19	5.38	5.67	6.09	PB	# of strides	11.23	10.57	11.76		21.80		
	velocity	8.03	10.00	9.63	9.29	8.82	8.21	8.94	138.0	8.90	9.46	8.50		9.17		
Takasu, Fuuto (JPN) (2004)	time	6.06	11.03	16.31	21.83	27.56	33.64	33.64	9 / 2							
reaction time 0.165	interval		4.97	5.28	5.52	5.73	6.08		# of strides	11.03	10.80	11.81		21.83		
	velocity	8.25	10.06	9.47	9.06	8.73	8.22	8.92	132.2	9.07	9.26	8.47		9.16		
Yamamoto, Reishin (JPN) (	time	6.23	11.30	16.53	21.90	27.56	33.68	33.68	6 / 3							
reaction time 0.180	interval		5.07	5.23	5.37	5.66	6.12		# of strides	11.30	10.60	11.78		21.90		
	velocity	8.03	9.86	9.56	9.31	8.83	8.17	8.91	129.2	8.85	9.43	8.49		9.13		
Shimizu, Tkeru (JPN) (2004	time	6.27	11.31	16.67	22.21	27.86	33.87	33.87	2 / 4							
reaction time 0.205	interval		5.04	5.36	5.54	5.65	6.01	PB	# of strides	11.31	10.90	11.66		22.21		
	velocity	7.97	9.92	9.33	9.03	8.85	8.32	8.86	135.0	8.84	9.17	8.58		9.00		
Shibutani, Hiroya (JPN) (20	time	6.13	11.09	16.32	21.81	27.61	34.02	34.02	7 / 5							
reaction time 0.198	interval		4.96	5.23	5.49	5.80	6.41		# of strides	11.09	10.72	12.21		21.81		
	velocity	8.16	10.08	9.56	9.11	8.62	7.80	8.82	137.0	9.02	9.33	8.19		9.17		
Morikawa, Hazuki (JPN) (20	time	6.36	11.48	16.87	22.52	28.28	34.28	34.28	5 / 6							
reaction time 0.222	interval		5.12	5.39	5.65	5.76	6.00		# of strides	11.48	11.04	11.76		22.52		
	velocity	7.86	9.77	9.28	8.85	8.68	8.33	8.75	146.7	8.71	9.06	8.50		8.88		

2021 All Japan Corporate Championships (Osaka, JPN)

FINAL

date 25-Sep-21

@ohnishigundan (2021) - https://twitter.com/ohnishigundan/status/1441633743874117633

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Sato, Fuga (JPN) (1996)	time		11.09		21.80		33.42		45.73	45.84	7 / 1							
reaction time 0.192	interval				10.71		11.62		12.31		# of strides	11.09	10.71	11.62	12.31	21.80	23.93	2.13
	velocity		9.02		9.34		8.61		8.12	8.73		9.02	9.34	8.61	8.12	9.17	8.36	
Kawauchi, Mitsuki (JPN) (1	time		11.39		22.26		33.62		46.05	46.17	8 / 2							
reaction time 0.193	interval				10.87		11.36		12.43		# of strides	11.39	10.87	11.36	12.43	22.26	23.79	1.53
	velocity		8.78		9.20		8.80		8.05	8.66		8.78	9.20	8.80	8.05	8.98	8.41	
Ikeda, Kohsuke (JPN) (1995	time		11.44		22.16		33.58		46.08	46.20	6 / 3							
reaction time 0.223	interval				10.72		11.42		12.50		# of strides	11.44	10.72	11.42	12.50	22.16	23.92	1.76
	velocity		8.74		9.33		8.76		8.00	8.66		8.74	9.33	8.76	8.00	9.03	8.36	
Yoshizu, Takuho (JPN) (19	time		11.58		22.49		33.78		46.18	46.29	5 / 4							

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

reaction time 0.204	interval		10.91	11.29	12.40		# of strides	11.58	10.91	11.29	12.40	22.49	23.69	1.20
	velocity	8.64	9.17	8.86	8.06	8.64		8.64	9.17	8.86	8.06	8.89	8.44	
Itahana, Kohei (JPN) (1994)	time	11.54	22.41	34.02	46.86	46.96	2 / 5							
reaction time 0.216	interval		10.87	11.61	12.84		# of strides	11.54	10.87	11.61	12.84	22.41	24.45	2.04
	velocity	8.67	9.20	8.61	7.79	8.52		8.67	9.20	8.61	7.79	8.92	8.18	
Katayama, Yuto (JPN) (199	time	11.64	22.67	34.30	47.01	47.22	9 / 6							
reaction time 0.191	interval		11.03	11.63	12.71		# of strides	11.64	11.03	11.63	12.71	22.67	24.34	1.67
	velocity	8.59	9.07	8.60	7.87	8.47		8.59	9.07	8.60	7.87	8.82	8.22	
Obuchi, Mizuki (JPN) (1997	time	11.38	22.26	33.75	48.21	48.34	4 / 7							
reaction time 0.188	interval		10.88	11.49	14.46		# of strides	11.38	10.88	11.49	14.46	22.26	25.95	3.69
	velocity	8.79	9.19	8.70	6.92	8.27		8.79	9.19	8.70	6.92	8.98	7.71	

Heat 3

date 25-Sep-21

@ohnishigundan (2021) - https://twitter.com/ohnishigundan/status/1441598727207063561

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Sato, Fuga (JPN) (1996)	time		10.99		21.52		33.23		46.21	46.38	5 / 1							
reaction time 0.202	interval				10.53		11.71		12.98		# of strides	10.99	10.53	11.71	12.98	21.52	24.69	3.17
	velocity		9.10		9.50		8.54		7.70	8.62		9.10	9.50	8.54	7.70	9.29	8.10	
Yoshizu, Takuho (JPN) (19	time		11.28		22.31		34.13		46.84	46.99	8 / 2							
reaction time 0.200	interval				11.03		11.82		12.71		# of strides	11.28	11.03	11.82	12.71	22.31	24.53	2.22
	velocity		8.87		9.07		8.46		7.87	8.51		8.87	9.07	8.46	7.87	8.96	8.15	
Tkahashi, Yuma (JPN) (199	time		11.56		22.79		34.22		46.88	47.04	7 / 3							
reaction time 0.166	interval				11.23		11.43		12.66		# of strides	11.56	11.23	11.43	12.66	22.79	24.09	1.30
	velocity		8.65		8.90		8.75		7.90	8.50		8.65	8.90	8.75	7.90	8.78	8.30	
Itahana, Kohei (JPN) (1994)	time		11.41		22.49		34.33		46.89	47.06	9 / 4							
reaction time 0.194	interval				11.08		11.84		12.56		# of strides	11.41	11.08	11.84	12.56	22.49	24.40	1.91
	velocity		8.76		9.03		8.45		7.96	8.50		8.76	9.03	8.45	7.96	8.89	8.20	

Heat 2

date 25-Sep-21

@ohnishigundan (2021) - https://twitter.com/ohnishigundan/status/1441598727207063561

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Obuchi, Mizuki (JPN) (1997	time		11.36		22.14		33.75		46.85	46.87	7 / 1							
reaction time 0.183	interval				10.78		11.61		13.10		# of strides	11.36	10.78	11.61	13.10	22.14	24.71	2.57
	velocity		8.80		9.28		8.61		7.63	8.53		8.80	9.28	8.61	7.63	9.03	8.09	
Kawauchi, Mitsuki (JPN) (1	time		1.34		21.99		33.82		47.01	47.05	8 / 2							
reaction time 0.183	interval				20.65		11.83		13.19		# of strides	1.34	20.65	11.83	13.19	21.99	25.02	3.03
	velocity		74.63		4.84		8.45		7.58	8.50		74.63	4.84	8.45	7.58	9.10	7.99	

Heat 1

date 25-Sep-21

@ohnishigundan (2021) - https://twitter.com/ohnishigundan/status/1441598727207063561

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ikeda, Kohsuke (JPN) (1995	time		11.55		22.37		33.93		46.81	46.94	2 / 1							
reaction time 0.216	interval				10.82		11.56		12.88		# of strides	11.55	10.82	11.56	12.88	22.37	24.44	2.07
	velocity		8.66		9.24		8.65		7.76	8.52		8.66	9.24	8.65	7.76	8.94	8.18	
Katayama, Yuto (JPN) (199	time		11.33		22.24		33.91		47.06	47.19	3 / 2							
reaction time 0.172	interval				10.91		11.67		13.15		# of strides	11.33	10.91	11.67	13.15	22.24	24.82	2.58
	velocity		8.83		9.17		8.57		7.60	8.48		8.83	9.17	8.57	7.60	8.99	8.06	

2021 Weltklasse (Zürich, SUI)

FINAL

date 09-Sep-21

Omega Timing (2021) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Cherry, Michael (USA) (199	time	6.0	10.8	15.9	21.1	26.5	32.1	38.0	44.41	44.41	4 / 1							
reaction time 0.179	interval		4.80	5.10	5.20	5.40	5.60	5.90	6.41		# of strides	10.80	10.30	11.00	12.31	21.10	23.31	2.21
	velocity	8.33	10.42	9.80	9.62	9.26	8.93	8.47	7.80	9.01	158.0	9.26	9.71	9.09	8.12	9.48	8.58	
James, Kirani (GRN) (1992)	time	6.1	10.8	15.8	20.9	26.4	32.1	38.1	44.42	44.42	5 / 2							
reaction time 0.154	interval		4.70	5.00	5.10	5.50	5.70	6.00	6.32		# of strides	10.80	10.10	11.20	12.32	20.90	23.52	2.62
	velocity	8.20	10.64	10.00	9.80	9.09	8.77	8.33	7.91	9.00	161.2	9.26	9.90	8.93	8.12	9.57	8.50	
Lendore, Deon (TTO) (1992	time	6.2	11.1	16.1	21.3	26.6	32.3	38.3	44.81	44.81	6 / 3							
reaction time 0.187	interval		4.90	5.00	5.20	5.30	5.70	6.00	6.51		# of strides	11.10	10.20	11.00	12.51	21.30	23.51	2.21
	velocity	8.06	10.20	10.00	9.62	9.43	8.77	8.33	7.68	8.93	168.5	9.01	9.80	9.09	7.99	9.39	8.51	
Norwood, Vernon (USA) (1	time	6.1	11.0	16.1	21.4	26.9	32.6	38.5	44.84	44.84	8 / 4							
reaction time 0.166	interval		4.90	5.10	5.30	5.50	5.70	5.90	6.34		# of strides	11.00	10.40	11.20	12.24	21.40	23.44	2.04
	velocity	8.20	10.20	9.80	9.43	9.09	8.77	8.47	7.89	8.92		9.09	9.62	8.93	8.17	9.35	8.53	
Bonevacia, Liemarvin (NED	time	6.4	11.3	16.4	21.6	27.1	32.8	38.9	45.35	45.35	3 / 5							
reaction time 0.156	interval		4.90	5.10	5.20	5.50	5.70	6.10	6.45		# of strides	11.30	10.30	11.20	12.55	21.60	23.75	2.15
	velocity	7.81	10.20	9.80	9.62	9.09	8.77	8.20	7.75	8.82		8.85	9.71	8.93	7.97	9.26	8.42	
Makwala, Isaac (BOT) (1985	time	6.2	11.2	16.2	21.4	26.7	32.3	38.4	45.41	45.41	7 / 6							
reaction time 0.198	interval		5.00	5.00	5.20	5.30	5.60	6.10	7.01		# of strides	11.20	10.20	10.90	13.11	21.40	24.01	2.61
	velocity	8.06	10.00	10.00	9.62	9.43	8.93	8.20	7.13	8.81	180.0	8.93	9.80	9.17	7.63	9.35	8.33	
Petrucciani, Ricky (SUI) (20	time	7.3	11.3	16.4	21.8	27.4	33.3	39.6	46.38	46.38	2 / 7							
reaction time 0.165	interval		4.00	5.10	5.40	5.60	5.90	6.30	6.78		# of strides	11.30	10.50	11.50	13.08	21.80	24.58	2.78
	velocity	6.85	12.50	9.80	9.26	8.93	8.47	7.94	7.37	8.62		8.85	9.52	8.70	7.65	9.17	8.14	

Re, Davide (ITA) (1993)	time	6.4	11.7	17.1	22.6	28.2	34.1	40.3	46.64	46.64	1 / 8							
reaction time 0.146	interval		5.30	5.40	5.50	5.60	5.90	6.20	6.34		# of strides	11.70	10.90	11.50	12.54	22.60	24.04	1.44
	velocity	7.81	9.43	9.26	9.09	8.93	8.47	8.06	7.89	8.58		8.55	9.17	8.70	7.97	8.85	8.32	

2021 Memorial van Damme (Brussels, BEL)

FINAL

date 03-Sep-21

Omega Timing (2021) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Cherry, Michael (USA) (199	time	6.1	11.1	16.2	21.3	26.7	32.2	37.9	44.03	44.03	5 / 1							
reaction time 0.202	interval		5.00	5.10	5.10	5.40	5.50	5.70	6.13	PB	# of strides	11.10	10.20	10.90	11.83	21.30	22.73	1.43
	velocity	8.20	10.00	9.80	9.80	9.26	9.09	8.77	8.16	9.08	158.5	9.01	9.80	9.17	8.45	9.39	8.80	
James, Kirani (GRN) (1992)	time	6.2	11.0	16.0	21.1	26.5	32.2	38.2	44.51	44.51	4 / 2							
reaction time 0.159	interval		4.80	5.00	5.10	5.40	5.70	6.00	6.31		# of strides	11.00	10.10	11.10	12.31	21.10	23.41	2.31
	velocity	8.06	10.42	10.00	9.80	9.26	8.77	8.33	7.92	8.99	161.0	9.09	9.90	9.01	8.12	9.48	8.54	
Makwala, Isaac (BOT) (1985	time	6.2	11.2	16.3	21.6	27.1	32.6	38.4	44.83	44.83	8 / 3							
reaction time 0.200	interval		5.00	5.10	5.30	5.50	5.50	5.80	6.43		# of strides	11.20	10.40	11.00	12.23	21.60	23.23	1.63
	velocity	8.06	10.00	9.80	9.43	9.09	9.09	8.62	7.78	8.92		8.93	9.62	9.09	8.18	9.26	8.61	
Bonevacia, Liemarvin (NED	time	6.3	11.3	16.3	21.5	26.9	32.6	38.6	45.00	45.00	6 / 4							
reaction time 0.135	interval		5.00	5.00	5.20	5.40	5.70	6.00	6.40		# of strides	11.30	10.20	11.10	12.40	21.50	23.50	2.00
	velocity	7.94	10.00	10.00	9.62	9.26	8.77	8.33	7.81	8.89	184.0	8.85	9.80	9.01	8.06	9.30	8.51	
Lendore, Deon (TTO) (1992	time	6.2	11.0	16.0	21.2	26.6	32.3	38.4	45.06	45.06	3 / 5							
reaction time 0.205	interval		4.80	5.00	5.20	5.40	5.70	6.10	6.66		# of strides	11.00	10.20	11.10	12.76	21.20	23.86	2.66
	velocity	8.06	10.42	10.00	9.62	9.26	8.77	8.20	7.51	8.88		9.09	9.80	9.01	7.84	9.43	8.38	
Doom, Alexander (BEL) (19	time	6.4	11.3	16.4	21.8	27.4	33.3	39.5	45.84	45.84	7 / 6							
reaction time 0.154	interval		4.90	5.10	5.40	5.60	5.90	6.20	6.34		# of strides	11.30	10.50	11.50	12.54	21.80	24.04	2.24
	velocity	7.81	10.20	9.80	9.26	8.93	8.47	8.06	7.89	8.73		8.85	9.52	8.70	7.97	9.17	8.32	
Taylor, Christopher (JAM)	time	6.3	11.3	16.5	22.0	27.5	33.2	39.3	45.88	45.88	2 / 7							
reaction time 0.170	interval		5.00	5.20	5.50	5.50	5.70	6.10	6.58		# of strides	11.30	10.70	11.20	12.68	22.00	23.88	1.88
	velocity	7.94	10.00	9.62	9.09	9.09	8.77	8.20	7.60	8.72		8.85	9.35	8.93	7.89	9.09	8.38	
Sacoor, Jonathan (BEL) (19	time	6.3	11.3	16.5	21.9	27.4	33.3	39.6	46.66	46.66	1 / 8							
reaction time 0.127	interval		5.00	5.20	5.40	5.50	5.90	6.30	7.06		# of strides	11.30	10.60	11.40	13.36	21.90	24.76	2.86
	velocity	7.94	10.00	9.62	9.26	9.09	8.47	7.94	7.08	8.57		8.85	9.43	8.77	7.49	9.13	8.08	

2021 Athletissima (Lausanne, SUI)

FINAL

date 26-Aug-21

Omega Timing (2021) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
London, Wil (USA) (1997)	time	6.1	11.1	16.4	21.8	27.3	33.0	38.9	45.17	45.17	8 / 1							
reaction time 0.136	interval		5.00	5.30	5.40	5.50	5.70	5.90	6.27		# of strides	11.10	10.70	11.20	12.17	21.80	23.37	1.57
	velocity	8.20	10.00	9.43	9.26	9.09	8.77	8.47	7.97	8.86	181.0	9.01	9.35	8.93	8.22	9.17	8.56	
Makwala, Isaac (BOT) (1985	time	6.2	11.3	16.5	21.9	27.4	32.9	38.8	45.20	45.20	6 / 2							
reaction time 0.182	interval		5.10	5.20	5.40	5.50	5.50	5.90	6.40		# of strides	11.30	10.60	11.00	12.30	21.90	23.30	1.40
	velocity	8.06	9.80	9.62	9.26	9.09	9.09	8.47	7.81	8.85		8.85	9.43	9.09	8.13	9.13	8.58	
Bonevacia, Liemarvin (NED	time	6.3	11.5	16.7	22.0	27.5	33.1	39.1	45.41	45.41	5 / 3							
reaction time 0.142	interval		5.20	5.20	5.30	5.50	5.60	6.00	6.31		# of strides	11.50	10.50	11.10	12.31	22.00	23.41	1.41
	velocity	7.94	9.62	9.62	9.43	9.09	8.93	8.33	7.92	8.81		8.70	9.52	9.01	8.12	9.09	8.54	
Warholm, Karsten (NOR) (	time	6.1	11.1	16.2	21.5	27.1	32.9	39.0	45.51	45.51	7 / 4							
reaction time 0.136	interval		5.00	5.10	5.30	5.60	5.80	6.10	6.51		# of strides	11.10	10.40	11.40	12.61	21.50	24.01	2.51
	velocity	8.20	10.00	9.80	9.43	8.93	8.62	8.20	7.68	8.79	170.2	9.01	9.62	8.77	7.93	9.30	8.33	
Norwood, Vernon (USA) (1	time	6.1	11.1	16.3	21.7	27.2	32.9	39.0	45.59	45.59	4 / 5							
reaction time 0.167	interval		5.00	5.20	5.40	5.50	5.70	6.10	6.59		# of strides	11.10	10.60	11.20	12.69	21.70	23.89	2.19
	velocity	8.20	10.00	9.62	9.26	9.09	8.77	8.20	7.59	8.77		9.01	9.43	8.93	7.88	9.22	8.37	
Dobber, Jochem (NED) (19	time	6.3	11.4	16.6	21.9	27.5	33.3	39.4	45.75	45.75	2 / 6							
reaction time 0.195	interval		5.10	5.20	5.30	5.60	5.80	6.10	6.35		# of strides	11.40	10.50	11.40	12.45	21.90	23.85	1.95
	velocity	7.94	9.80	9.62	9.43	8.93	8.62	8.20	7.87	8.74		8.77	9.52	8.77	8.03	9.13	8.39	
Petrucciani, Ricky (SUI) (20	time	6.3	11.4	16.7	22.3	27.8	33.5	39.6	46.42	46.42	3 / 7							
reaction time 0.141	interval		5.10	5.30	5.60	5.50	5.70	6.10	6.82		# of strides	11.40	10.90	11.20	12.92	22.30	24.12	1.82
	velocity	7.94	9.80	9.43	8.93	9.09	8.77	8.20	7.33	8.62		8.77	9.17	8.93	7.74	8.97	8.29	
Devantay, Charles (SUI) (19	time	6.3	11.4	16.7	22.3	28.0	34.0	40.2	46.93	46.93	1 / 8							
reaction time 0.132	interval		5.10	5.30	5.60	5.70	6.00	6.20	6.73		# of strides	11.40	10.90	11.70	12.93	22.30	24.63	2.33
	velocity	7.94	9.80	9.43	8.93	8.77	8.33	8.06	7.43	8.52		8.77	9.17	8.55	7.73	8.97	8.12	

B Race

date 26-Aug-21

Omega Timing (2021) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Spitz, Lionel (SUI) (2001)	time	6.4	11.6	17.0	22.6	28.4	34.3	40.3	46.65	46.65	5 / 1							
reaction time 0.153	interval		5.20	5.40	5.60	5.80	5.90	6.00	6.35		# of strides	11.60	11.00	11.70	12.35	22.60	24.05	1.45
	velocity	7.81	9.62	9.26	8.93	8.62	8.47	8.33	7.87	8.57		8.62	9.09	8.55	8.10	8.85	8.32	
Gyger, Nathan (SUI) (1992)	time	6.5	11.8	17.2	22.7	28.2	34.1	40.3	46.67	46.67	4 / 2							
reaction time 0.161	interval		5.30	5.40	5.50	5.50	5.90	6.20	6.37		# of strides	11.80	10.90	11.40	12.57	22.70	23.97	1.27

	velocity	7.69	9.43	9.26	9.09	9.09	8.47	8.06	7.85	8.57		8.47	9.17	8.77	7.96	8.81	8.34	
Flück, Luca (SUI) (1996)	time	6.5	11.9	17.5	23.3	29.3	35.5	41.8	48.64	48.64	3 / 3							
reaction time 0.167	interval		5.40	5.60	5.80	6.00	6.20	6.30	6.84		# of strides	11.90	11.40	12.20	13.14	23.30	25.34	2.04
	velocity	7.69	9.26	8.93	8.62	8.33	8.06	7.94	7.31	8.22		8.40	8.77	8.20	7.61	8.58	7.89	
Mfomkpa, Alain-Hervé (SUI	time	6.5	12.0	17.6	23.5	29.5	35.7	42.2	49.27	49.27	6 / 4							
reaction time 0.149	interval		5.50	5.60	5.90	6.00	6.20	6.50	7.07		# of strides	12.00	11.50	12.20	13.57	23.50	25.77	2.27
	velocity	7.69	9.09	8.93	8.47	8.33	8.06	7.69	7.07	8.12		8.33	8.70	8.20	7.37	8.51	7.76	
Dieterle, Cédric (SUI) (2000	time	6.4	11.8	17.5	23.4	29.5	35.7	42.3	49.36	49.36	1 / 5							
reaction time 0.165	interval		5.40	5.70	5.90	6.10	6.20	6.60	7.06		# of strides	11.80	11.60	12.30	13.66	23.40	25.96	2.56
	velocity	7.81	9.26	8.77	8.47	8.20	8.06	7.58	7.08	8.10		8.47	8.62	8.13	7.32	8.55	7.70	
Amherd, Fabian (SUI) (200	time	6.6	12.1	17.7	23.7	29.7	36.1	42.6	49.49	49.49	7 / 6							
reaction time 0.150	interval		5.50	5.60	6.00	6.00	6.40	6.50	6.89		# of strides	12.10	11.60	12.40	13.39	23.70	25.79	2.09
	velocity	7.58	9.09	8.93	8.33	8.33	7.81	7.69	7.26	8.08		8.26	8.62	8.06	7.47	8.44	7.75	
Gendre, Vincent (SUI) (200	time	6.7	12.3	17.9	23.8	30.0	36.4	42.9	49.81	49.81	8 / 7							
reaction time 0.166	interval		5.60	5.60	5.90	6.20	6.40	6.50	6.91		# of strides	12.30	11.50	12.60	13.41	23.80	26.01	2.21
	velocity	7.46	8.93	8.93	8.47	8.06	7.81	7.69	7.24	8.03		8.13	8.70	7.94	7.46	8.40	7.69	
Steinmann, Matthias (SUI)	time	6.7	12.1	17.9	23.8	29.8	36.3	43.1	50.73	50.73	2 / 8							
reaction time 0.144	interval		5.40	5.80	5.90	6.00	6.50	6.80	7.63		# of strides	12.10	11.70	12.50	14.43	23.80	26.93	3.13
	velocity	7.46	9.26	8.62	8.47	8.33	7.69	7.35	6.55	7.88		8.26	8.55	8.00	6.93	8.40	7.43	

2020 Olympic Games (Tokyo, JPN)

FINAL date 05-Aug-21

Omega Timing (2022) - Tokyo 2020 - race analysis - men's 400m final

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Gardiner, Steven (BAH) (19	time	6.33	11.15	15.96	21.00	26.30	31.83	37.62	43.85	43.85	7 / 1							
reaction time 0.179	interval		4.82	4.81	5.04	5.30	5.53	5.79	6.23		# of strides	11.15	9.85	10.83	12.02	21.00	22.85	1.85
	velocity	7.90	10.37	10.40	9.92	9.43	9.04	8.64	8.03	9.12	157.0	8.97	10.15	9.23	8.32	9.52	8.75	
Zambrano, Anthony (COL)	time	6.12	11.08	16.06	21.21	26.52	32.07	37.86	44.08	44.08	5 / 2							
reaction time 0.166	interval		4.96	4.98	5.15	5.31	5.55	5.79	6.22		# of strides	11.08	10.13	10.86	12.01	21.21	22.87	1.66
	velocity	8.17	10.08	10.04	9.71	9.42	9.01	8.64	8.04	9.07	182.7	9.03	9.87	9.21	8.33	9.43	8.75	
James, Kirani (GRN) (1992)	time	6.01	10.74	15.63	20.72	26.07	31.78	37.80	44.19	44.19	4 / 3							
reaction time 0.157	interval		4.73	4.89	5.09	5.35	5.71	6.02	6.39		# of strides	10.74	9.98	11.06	12.41	20.72	23.47	2.75
	velocity	8.32	10.57	10.22	9.82	9.35	8.76	8.31	7.82	9.05	161.2	9.31	10.02	9.04	8.06	9.65	8.52	
Cherry, Michael (USA) (199	time	6.03	10.92	16.02	21.23	26.59	32.18	37.97	44.21	44.21	6 / 4							
reaction time 0.179	interval		4.89	5.10	5.21	5.36	5.59	5.79	6.24	**PB**	# of strides	10.92	10.31	10.95	12.03	21.23	22.98	1.75
	velocity	8.29	10.22	9.80	9.60	9.33	8.94	8.64	8.01	9.05	157.5	9.16	9.70	9.13	8.31	9.42	8.70	
Norman, Michael (USA) (19	time	5.92	10.68	15.59	20.81	26.27	31.95	37.89	44.31	44.31	8 / 5							
reaction time 0.148	interval		4.76	4.91	5.22	5.46	5.68	5.94	6.42		# of strides	10.68	10.13	11.14	12.36	20.81	23.50	2.69
	velocity	8.45	10.50	10.18	9.58	9.16	8.80	8.42	7.79	9.03	171.2	9.36	9.87	8.98	8.09	9.61	8.51	
Taylor, Christopher (JAM)	time	6.14	10.98	15.99	21.28	26.77	32.47	38.42	44.79	44.79	9 / 6							
reaction time 0.158	interval		4.84	5.01	5.29	5.49	5.70	5.95	6.37	**PB**	# of strides	10.98	10.30	11.19	12.32	21.28	23.51	2.23
	velocity	8.14	10.33	9.98	9.45	9.11	8.77	8.40	7.85	8.93	181.0	9.11	9.71	8.94	8.12	9.40	8.51	
Makwala, Isaac (BOT) (1985	time	6.05	10.90	15.89	21.02	26.33	32.00	38.16	44.94	44.94	2 / 7							
reaction time 0.167	interval		4.85	4.99	5.13	5.31	5.67	6.16	6.78		# of strides	10.90	10.12	10.98	12.94	21.02	23.92	2.90
	velocity	8.26	10.31	10.02	9.75	9.42	8.82	8.12	7.37	8.90	177.7	9.17	9.88	9.11	7.73	9.51	8.36	
Bonevacia, Liemarvin (NED	time	6.26	11.16	16.06	21.14	26.49	32.21	38.30	45.07	45.07	3 / 8							
reaction time 0.168	interval		4.90	4.90	5.08	5.35	5.72	6.09	6.77		# of strides	11.16	9.98	11.07	12.86	21.14	23.93	2.79
	velocity	7.99	10.20	10.20	9.84	9.35	8.74	8.21	7.39	8.88	182.7	8.96	10.02	9.03	7.78	9.46	8.36	

2021 Japanese High School National Championships (Fukui, JPN)

FINAL date 28-Jul-21

Shibayama (2021) - national high school and U20 national championhsips

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Suzuki, Osuke (JPN) (2003)	time	6.38	11.80	17.40	23.10	28.85	34.75	40.87	47.33	47.33	5 / 1							
reaction time 0.167	interval		5.42	5.60	5.70	5.75	5.90	6.12	6.46		# of strides	11.80	11.30	11.65	12.58	23.10	24.23	1.13
	velocity	7.84	9.23	8.93	8.77	8.70	8.47	8.17	7.74	8.45		8.47	8.85	8.58	7.95	8.66	8.25	
Koyama, Ren (JPN) (2003)	time	6.62	11.97	17.42	23.05	28.90	34.97	41.15	47.71	47.71	3 / 2							
reaction time 0.196	interval		5.35	5.45	5.63	5.85	6.07	6.18	6.56		# of strides	11.97	11.08	11.92	12.74	23.05	24.66	1.61
	velocity	7.55	9.35	9.17	8.88	8.55	8.24	8.09	7.62	8.38		8.35	9.03	8.39	7.85	8.68	8.11	
Hirakawa, Kira (JPN) (2005)	time	6.44	11.67	17.10	22.73	28.47	34.42	40.82	47.96	47.96	2 / 3							
reaction time 0.189	interval		5.23	5.43	5.63	5.74	5.95	6.40	7.14		# of strides	11.67	11.06	11.69	13.54	22.73	25.23	2.50
	velocity	7.76	9.56	9.21	8.88	8.71	8.40	7.81	7.00	8.34		8.57	9.04	8.55	7.39	8.80	7.93	
Tominaga, Yuhei (JPN) (20	time	6.42	11.78	17.40	23.25	29.11	35.17	41.42	47.97	47.97	4 / 4							
reaction time 0.164	interval		5.36	5.62	5.85	5.86	6.06	6.25	6.55		# of strides	11.78	11.47	11.92	12.80	23.25	24.72	1.47
	velocity	7.79	9.33	8.90	8.55	8.53	8.25	8.00	7.63	8.34		8.49	8.72	8.39	7.81	8.60	8.09	
Satake, Yuzuki (JPN) (2003)	time	6.61	11.97	17.42	23.12	29.09	35.36	41.66	48.28	48.28	1 / 5							
reaction time 0.146	interval		5.36	5.45	5.70	5.97	6.27	6.30	6.62		# of strides	11.97	11.15	12.24	12.92	23.12	25.16	2.04
	velocity	7.56	9.33	9.17	8.77	8.38	7.97	7.94	7.55	8.29		8.35	8.97	8.17	7.74	8.65	7.95	

Machida, Reo (JPN) (2003)	time	6.89	12.57	18.37	24.37	30.36	36.34	42.34	48.55	48.55	8 / 6							
reaction time 0.227	interval		5.68	5.80	6.00	5.99	5.98	6.00	6.21		# of strides	12.57	11.80	11.97	12.21	24.37	24.18	-0.19
	velocity	7.26	8.80	8.62	8.33	8.35	8.36	8.33	8.05	8.24		7.96	8.47	8.35	8.19	8.21	8.27	
Asano, Daichi (JPN) (2004)	time	6.73	12.16	17.75	23.45	29.31	35.46	41.86	48.63	48.63	6 / 7							
reaction time 0.171	interval		5.43	5.59	5.70	5.86	6.15	6.40	6.77		# of strides	12.16	11.29	12.01	13.17	23.45	25.18	1.73
	velocity	7.43	9.21	8.94	8.77	8.53	8.13	7.81	7.39	8.23		8.22	8.86	8.33	7.59	8.53	7.94	
Kawauchi, Shogo (JPN) (2(	time	6.70	12.42	18.30	24.31	30.40	36.61	42.90	49.61	49.61	7 / 8							
reaction time 0.183	interval		5.72	5.88	6.01	6.09	6.21	6.29	6.71		# of strides	12.42	11.89	12.30	13.00	24.31	25.30	0.99
	velocity	7.46	8.74	8.50	8.32	8.21	8.05	7.95	7.45	8.06		8.05	8.41	8.13	7.69	8.23	7.91	

2021 European Athletics U20 Championships (Tallin, EST)

FINAL

date 16-Jul-21

European Athletics (2021) - european athletics U20 championships results book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Faulds, Edward (GBR) (200	time		11.74		22.43		33.77		45.72	45.72	3 / 1							
reaction time 0.223	interval				10.69		11.34		11.95	PB	# of strides	11.74	10.69	11.34	11.95	22.43	23.29	0.86
	velocity		8.52		9.35		8.82		8.37	8.75		8.52	9.35	8.82	8.37	8.92	8.59	
Benati, Lorenzo (ITA) (200	time		11.61		22.14		33.43		46.27	46.27	4 / 2							
reaction time 0.247	interval				10.53		11.29		12.84	PB	# of strides	11.61	10.53	11.29	12.84	22.14	24.13	1.99
	velocity		8.61		9.50		8.86		7.79	8.64		8.61	9.50	8.86	7.79	9.03	8.29	
Ingvaldsen, Håvard Bentda	time		11.59		22.46		34.15		46.70	46.70	8 / 3							
reaction time 0.205	interval				10.87		11.69		12.55	PB	# of strides	11.59	10.87	11.69	12.55	22.46	24.24	1.78
	velocity		8.63		9.20		8.55		7.97	8.57		8.63	9.20	8.55	7.97	8.90	8.25	
Carvell, Charlie (GBR) (200	time		11.56		22.61		34.47		46.84	46.84	5 / 4							
reaction time 0.218	interval				11.05		11.86		12.37		# of strides	11.56	11.05	11.86	12.37	22.61	24.23	1.62
	velocity		8.65		9.05		8.43		8.08	8.54		8.65	9.05	8.43	8.08	8.85	8.25	
Nadj, Levente (HUN) (2003)	time		11.54		22.39		34.18		46.98	46.98	1 / 5							
reaction time 0.163	interval				10.85		11.79		12.80		# of strides	11.54	10.85	11.79	12.80	22.39	24.59	2.20
	velocity		8.67		9.22		8.48		7.81	8.51		8.67	9.22	8.48	7.81	8.93	8.13	
Niculita, Remus Andrei (RC	time		11.43		22.24		34.00		47.09	47.09	6 / 6							
reaction time 0.166	interval				10.81		11.76		13.09	PB	# of strides	11.43	10.81	11.76	13.09	22.24	24.85	2.61
	velocity		8.75		9.25		8.50		7.64	8.49		8.75	9.25	8.50	7.64	8.99	8.05	
Grzegorzewic, Patryk (POL	time		11.55		22.32		34.06		47.10	47.10	7 / 7							
reaction time 0.244	interval				10.77		11.74		13.04		# of strides	11.55	10.77	11.74	13.04	22.32	24.78	2.46
	velocity		8.66		9.29		8.52		7.67	8.49		8.66	9.29	8.52	7.67	8.96	8.07	
Plaček, Tadeáš (CZE) (2003	time		11.64		22.56		34.26		47.35	47.35	2 / 8							
reaction time 0.216	interval				10.92		11.70		13.09		# of strides	11.64	10.92	11.70	13.09	22.56	24.79	2.23
	velocity		8.59		9.16		8.55		7.64	8.45		8.59	9.16	8.55	7.64	8.87	8.07	

Semi-Final 2

date 15-Jul-21

European Athletics (2021) - european athletics U20 championships results book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Carvell, Charlie (GBR) (200	time		11.92		23.33		35.32		47.04	47.04	6 / 1							
reaction time 0.169	interval				11.41		11.99		11.72		# of strides	11.92	11.41	11.99	11.72	23.33	23.71	0.38
	velocity		8.39		8.76		8.34		8.53	8.50		8.39	8.76	8.34	8.53	8.57	8.44	
Niculita, Remus Andrei (RC	time		11.84		22.92		34.78		47.14	47.14	3 / 2							
reaction time 0.155	interval				11.08		11.86		12.36	PB	# of strides	11.84	11.08	11.86	12.36	22.92	24.22	1.30
	velocity		8.45		9.03		8.43		8.09	8.49		8.45	9.03	8.43	8.09	8.73	8.26	
Grzegorzewic, Patryk (POL	time		11.87		22.92		34.75		47.17	47.17	5 / 3							
reaction time 0.201	interval				11.05		11.83		12.42		# of strides	11.87	11.05	11.83	12.42	22.92	24.25	1.33
	velocity		8.42		9.05		8.45		8.05	8.48		8.42	9.05	8.45	8.05	8.73	8.25	
Molnár, Attila (HUN) (2002)	time		11.94		22.93		34.91		47.28	47.28	8 / 4							
reaction time 0.185	interval				10.99		11.98		12.37		# of strides	11.94	10.99	11.98	12.37	22.93	24.35	1.42
	velocity		8.38		9.10		8.35		8.08	8.46		8.38	9.10	8.35	8.08	8.72	8.21	
Johansson, Emil (SWE) (20	time		12.04		23.19		35.07		47.40	47.40	7 / 5							
reaction time 0.245	interval				11.15		11.88		12.33		# of strides	12.04	11.15	11.88	12.33	23.19	24.21	1.02
	velocity		8.31		8.97		8.42		8.11	8.44		8.31	8.97	8.42	8.11	8.62	8.26	
Bondoc, Marian Adrian (R(	time		12.07		23.28		35.35		48.30	48.30	7 / 6							
reaction time 0.213	interval				11.21		12.07		12.95		# of strides	12.07	11.21	12.07	12.95	23.28	25.02	1.74
	velocity		8.29		8.92		8.29		7.72	8.28		8.29	8.92	8.29	7.72	8.59	7.99	
Steigerwald, Ernö (HUN) (2	time		12.26		23.71		35.84		49.00	49.00	2 / 7							
reaction time 0.203	interval				11.45		12.13		13.16		# of strides	12.26	11.45	12.13	13.16	23.71	25.29	1.58
	velocity		8.16		8.73		8.24		7.60	8.16		8.16	8.73	8.24	7.60	8.44	7.91	
Grimerud, Andreas (NOR) (	time		12.40		24.11		36.68		49.01	49.01	1 / 8							
reaction time 0.190	interval				11.71		12.57		12.33		# of strides	12.40	11.71	12.57	12.33	24.11	24.90	0.79
	velocity		8.06		8.54		7.96		8.11	8.16		8.06	8.54	7.96	8.11	8.30	8.03	

Semi-Final 1

date 15-Jul-21

European Athletics (2021) - european athletics U20 championships results book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Faulds, Edward (GBR) (200	time		11.79		22.82		34.21		45.95	45.95	8 / 1							
reaction time 0.205	interval				11.03		11.39		11.74	PB	# of strides	11.79	11.03	11.39	11.74	22.82	23.13	0.31
	velocity		8.48		9.07		8.78		8.52	8.71		8.48	9.07	8.78	8.52	8.76	8.65	
Benati, Lorenzo (ITA) (200	time		12.01		22.88		34.37		46.39	46.39	6 / 2							
reaction time 0.204	interval				10.87		11.49		12.02		# of strides	12.01	10.87	11.49	12.02	22.88	23.51	0.63
	velocity		8.33		9.20		8.70		8.32	8.62		8.33	9.20	8.70	8.32	8.74	8.51	
Ingvaldsen, Håvard Bentda	time		12.13		23.07		34.58		46.80	46.80	4 / 3							
reaction time 0.181	interval				10.94		11.51		12.22	PB	# of strides	12.13	10.94	11.51	12.22	23.07	23.73	0.66
	velocity		8.24		9.14		8.69		8.18	8.55		8.24	9.14	8.69	8.18	8.67	8.43	
Nadj, Levente (HUN) (2003)	time		11.93		23.20		34.65		46.90	46.90	3 / 4							
reaction time 0.169	interval				11.27		11.45		12.25	PB	# of strides	11.93	11.27	11.45	12.25	23.20	23.70	0.50
	velocity		8.38		8.87		8.73		8.16	8.53		8.38	8.87	8.73	8.16	8.62	8.44	
Plaček, Tadeáš (CZE) (2003	time		12.09		23.31		35.03		47.22	47.22	5 / 5							
reaction time 0.199	interval				11.22		11.72		12.19	PB	# of strides	12.09	11.22	11.72	12.19	23.31	23.91	0.60
	velocity		8.27		8.91		8.53		8.20	8.47		8.27	8.91	8.53	8.20	8.58	8.36	
Young, Brodie (GBR) (200	time		12.13		23.70		35.93		48.37	48.37	7 / 6							
reaction time 0.159	interval				11.57		12.23		12.44		# of strides	12.13	11.57	12.23	12.44	23.70	24.67	0.97
	velocity		8.24		8.64		8.18		8.04	8.27		8.24	8.64	8.18	8.04	8.44	8.11	
Pozo, Gerson (ESP) (2003)	time		11.83		22.87		34.93		48.39	48.39	1 / 7							
reaction time 0.164	interval				11.04		12.06		13.46		# of strides	11.83	11.04	12.06	13.46	22.87	25.52	2.65
	velocity		8.45		9.06		8.29		7.43	8.27		8.45	9.06	8.29	7.43	8.75	7.84	
Toma, Denis Simon (ROU)	time		12.32		23.97		36.14		48.67	48.67	2 / 8							
reaction time 0.198	interval				11.65		12.17		12.53		# of strides	12.32	11.65	12.17	12.53	23.97	24.70	0.73
	velocity		8.12		8.58		8.22		7.98	8.22		8.12	8.58	8.22	7.98	8.34	8.10	

2021 Müller British Grand Prix (Gateshead, GBR)

FINAL date 13-Jul-21

Omega Timing (2021) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Baker, Nicklas (GBR) (1994	time	6.2	11.3	16.4	21.8	27.5	33.5	39.6	46.24	46.24	4 / 1							
reaction time 0.144	interval		5.10	5.10	5.40	5.70	6.00	6.10	6.64		# of strides	11.30	10.50	11.70	12.74	21.80	24.44	2.64
	velocity	8.06	9.80	9.80	9.26	8.77	8.33	8.20	7.53	8.65		8.85	9.52	8.55	7.85	9.17	8.18	
Brier, Joseph (GBR) (1999)	time	6.3	11.4	16.7	22.1	27.6	33.3	39.5	46.34	46.34	2 / 2							
reaction time 0.178	interval		5.10	5.30	5.40	5.50	5.70	6.20	6.84		# of strides	11.40	10.70	11.20	13.04	22.10	24.24	2.14
	velocity	7.94	9.80	9.43	9.26	9.09	8.77	8.06	7.31	8.63		8.77	9.35	8.93	7.67	9.05	8.25	
Thompson, Lee (GBR) (19	time	6.4	11.5	16.8	22.4	27.9	33.7	39.9	46.46	46.46	7 / 3							
reaction time 0.161	interval		5.10	5.30	5.60	5.50	5.80	6.20	6.56		# of strides	11.50	10.90	11.30	12.76	22.40	24.06	1.66
	velocity	7.81	9.80	9.43	8.93	9.09	8.62	8.06	7.62	8.61		8.70	9.17	8.85	7.84	8.93	8.31	
Haydock-Wilson, Alex (GB	time	6.4	11.4	16.8	22.3	27.9	33.8	39.9	46.63	46.63	8 / 4							
reaction time 0.200	interval		5.00	5.40	5.50	5.60	5.90	6.10	6.73		# of strides	11.40	10.90	11.50	12.83	22.30	24.33	2.03
	velocity	7.81	10.00	9.26	9.09	8.93	8.47	8.20	7.43	8.58		8.77	9.17	8.70	7.79	8.97	8.22	
Ohioze, Michael (GBR) (19	time	6.3	11.4	16.8	22.4	28.2	34.1	40.3	46.91	46.91	5 / 5							
reaction time 0.170	interval		5.10	5.40	5.60	5.80	5.90	6.20	6.61		# of strides	11.40	11.00	11.70	12.81	22.40	24.51	2.11
	velocity	7.94	9.80	9.26	8.93	8.62	8.47	8.06	7.56	8.53		8.77	9.09	8.55	7.81	8.93	8.16	
Smith, Owen (GBR) (1994)	time	6.5	11.8	17.4	23.0	28.8	34.7	40.7	47.11	47.11	1 / 6							
reaction time 0.146	interval		5.30	5.60	5.60	5.80	5.90	6.00	6.41		# of strides	11.80	11.20	11.70	12.41	23.00	24.11	1.11
	velocity	7.69	9.43	8.93	8.93	8.62	8.47	8.33	7.80	8.49		8.47	8.93	8.55	8.06	8.70	8.30	
Rooney, Martyn (GBR) (19	time	6.4	11.6	17.0	22.6	28.3	34.3	40.7	47.74	47.74	3 / 7							
reaction time 0.146	interval		5.20	5.40	5.60	5.70	6.00	6.40	7.04		# of strides	11.60	11.00	11.70	13.44	22.60	25.14	2.54
	velocity	7.81	9.62	9.26	8.93	8.77	8.33	7.81	7.10	8.38		8.62	9.09	8.55	7.44	8.85	7.96	
Hudson-Smith, Matthew (C	time	6.3	11.4	16.7	22.3	28.2	34.3	41.0	48.29	48.29	6 / 8							
reaction time 0.149	interval		5.10	5.30	5.60	5.90	6.10	6.70	7.29		# of strides	11.40	10.90	12.00	13.99	22.30	25.99	3.69
	velocity	7.94	9.80	9.43	8.93	8.47	8.20	7.46	6.86	8.28		8.77	9.17	8.33	7.15	8.97	7.70	

2021 Bauhaus Galan (Stockholm, SWE)

FINAL date 04-Jul-21

Omega Timing (2021) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
James, Kirani (GRN) (1992)	time	6.1	10.9	15.9	21.0	26.4	32.2	38.2	44.63	44.63	5 / 1							
reaction time 0.158	interval		4.80	5.00	5.10	5.40	5.80	6.00	6.43		# of strides	10.90	10.10	11.20	12.43	21.00	23.63	2.63
	velocity	8.20	10.42	10.00	9.80	9.26	8.62	8.33	7.78	8.96	161.0	9.17	9.90	8.93	8.05	9.52	8.46	
Lendore, Deon (TTO) (1992	time	6.3	11.3	16.2	21.2	26.6	32.2	38.2	44.73	44.73	8 / 2							
reaction time 0.204	interval		5.00	4.90	5.00	5.40	5.60	6.00	6.53		# of strides	11.30	9.90	11.00	12.53	21.20	23.53	2.33
	velocity	7.94	10.00	10.20	10.00	9.26	8.93	8.33	7.66	8.94		8.85	10.10	9.09	7.98	9.43	8.50	
Bonevacia, Liemarvin (NED	time	6.5	11.5	16.4	21.5	26.8	32.5	38.4	44.80	44.80	3 / 3							
reaction time 0.202	interval		5.00	4.90	5.10	5.30	5.70	5.90	6.40		# of strides	11.50	10.00	11.00	12.30	21.50	23.30	1.80
	velocity	7.69	10.00	10.20	9.80	9.43	8.77	8.47	7.81	8.93		8.70	10.00	9.09	8.13	9.30	8.58	

Norwood, Vernon (USA) (1	time	6.2	11.2	16.3	21.5	26.9	32.5	38.4	44.83	44.83	4 / 4							
reaction time 0.196	interval		5.00	5.10	5.20	5.40	5.60	5.90	6.43		# of strides	11.20	10.30	11.00	12.33	21.50	23.33	1.83
	velocity	8.06	10.00	9.80	9.62	9.26	8.93	8.47	7.78	8.92		8.93	9.71	9.09	8.11	9.30	8.57	
London, Wil (USA) (1997)	time	6.2	11.3	16.4	21.7	27.3	32.9	38.7	44.86	44.86	7 / 5							
reaction time 0.165	interval		5.10	5.10	5.30	5.60	5.60	5.80	6.16		# of strides	11.30	10.40	11.20	11.96	21.70	23.16	1.46
	velocity	8.06	9.80	9.80	9.43	8.93	8.93	8.62	8.12	8.92	176.5	8.85	9.62	8.93	8.36	9.22	8.64	
Makwala, Isaac (BOT) (1986	time	6.3	11.3	16.3	21.4	26.6	32.2	38.3	45.03	45.03	6 / 6							
reaction time 0.207	interval		5.00	5.00	5.10	5.20	5.60	6.10	6.73		# of strides	11.30	10.10	10.80	12.83	21.40	23.63	2.23
	velocity	7.94	10.00	10.00	9.80	9.62	8.93	8.20	7.43	8.88	180.7	8.85	9.90	9.26	7.79	9.35	8.46	
Ogando, Alexander (DOM)	time	6.4	11.6	17.0	22.4	28.1	34.0	40.2	46.87	46.87	2 / 7							
reaction time 0.137	interval		5.20	5.40	5.40	5.70	5.90	6.20	6.67		# of strides	11.60	10.80	11.60	12.87	22.40	24.47	2.07
	velocity	7.81	9.62	9.26	9.26	8.77	8.47	8.06	7.50	8.53		8.62	9.26	8.62	7.77	8.93	8.17	
Johansson, Emil (SWE) (20	time	6.5	11.7	17.0	22.4	28.2	34.4	40.7	47.36	47.36	1 / 8							
reaction time 0.157	interval		5.20	5.30	5.40	5.80	6.20	6.30	6.66		# of strides	11.70	10.70	12.00	12.96	22.40	24.96	2.56
	velocity	7.69	9.62	9.43	9.26	8.62	8.06	7.94	7.51	8.45		8.55	9.35	8.33	7.72	8.93	8.01	

2021 Japanese National Championships (Osaka, JPN)

Final date 25-Jun-21

Yamanaka (2021) - race analysis of men's and women's 400m and 300m races in 2021 competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kawabata, Kaito (JPN) (199	time	6.34	11.55	16.80	22.26	27.92	33.66	39.50	45.75	45.75	6 / 1							
reaction time 0.204	interval		5.21	5.25	5.46	5.66	5.74	5.84	6.25	PB	# of strides	11.55	10.71	11.40	12.09	22.26	23.49	1.23
	velocity	7.89	9.60	9.52	9.16	8.83	8.71	8.56	8.00	8.74		8.66	9.34	8.77	8.27	8.98	8.51	
Sato, Kentaro (JPN) (1994)	time	6.18	11.18	16.33	21.77	27.46	33.45	39.57	46.08	46.06	4 / 2							
reaction time 0.217	interval		5.00	5.15	5.44	5.69	5.99	6.12	6.51		# of strides	11.18	10.59	11.68	12.63	21.77	24.31	2.54
	velocity	8.09	10.00	9.71	9.19	8.79	8.35	8.17	7.68	8.68		8.94	9.44	8.56	7.92	9.19	8.23	
Suzuki, Aoto (JPN) (2001)	time	6.15	11.32	16.57	22.07	27.78	33.78	39.93	46.48	46.48	2 / 3							
reaction time 0.163	interval		5.17	5.25	5.50	5.71	6.00	6.15	6.55		# of strides	11.32	10.75	11.71	12.70	22.07	24.41	2.34
	velocity	8.13	9.67	9.52	9.09	8.76	8.33	8.13	7.63	8.61		8.83	9.30	8.54	7.87	9.06	8.19	
Ito, Rikiya (JPN) (1998)	time	6.28	11.36	16.60	22.11	27.91	33.90	40.00	46.58	46.59	7 / 4							
reaction time 0.174	interval		5.08	5.24	5.51	5.80	5.99	6.10	6.58		# of strides	11.36	10.75	11.79	12.68	22.11	24.47	2.36
	velocity	7.96	9.84	9.54	9.07	8.62	8.35	8.20	7.60	8.59		8.80	9.30	8.48	7.89	9.05	8.17	
Sato, Fuga (JPN) (1996)	time	6.29	11.47	16.82	22.42	28.18	34.09	40.17	46.70	46.70	3 / 5							
reaction time 0.190	interval		5.18	5.35	5.60	5.76	5.91	6.08	6.53		# of strides	11.47	10.95	11.67	12.61	22.42	24.28	1.86
	velocity	7.95	9.65	9.35	8.93	8.68	8.46	8.22	7.66	8.57		8.72	9.13	8.57	7.93	8.92	8.24	
Ikeda, Kohsuke (JPN) (1995	time	6.38	11.53	16.85	22.45	28.26	34.22	40.35	46.95	46.95	8 / 6							
reaction time 0.181	interval		5.15	5.32	5.60	5.81	5.96	6.13	6.60		# of strides	11.53	10.92	11.77	12.73	22.45	24.50	2.05
	velocity	7.84	9.71	9.40	8.93	8.61	8.39	8.16	7.58	8.52		8.67	9.16	8.50	7.86	8.91	8.16	

2021 Japanese U20 National Championships (Osaka, JPN)

Final date 25-Jun-21

Yamanaka (2021) - race analysis of men's and women's 400m and 300m races in 2021 competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Yoshiki, Tsubasa (JPN) (20	time	6.22	11.27	16.45	21.86	27.36	33.18	39.58	46.58	46.58	6 / 1							
reaction time 0.172	interval		5.05	5.18	5.41	5.50	5.82	6.40	7.00	PB	# of strides	11.27	10.59	11.32	13.40	21.86	24.72	2.86
	velocity	8.04	9.90	9.65	9.24	9.09	8.59	7.81	7.14	8.59	207.0	8.87	9.44	8.83	7.46	9.15	8.09	
Kinoshita, Yuichi (JPN) (20	time	6.22	11.48	16.86	22.46	28.22	34.13	40.29	46.74	46.74	4 / 2							
reaction time 0.161	interval		5.26	5.38	5.60	5.76	5.91	6.16	6.45		# of strides	11.48	10.98	11.67	12.61	22.46	24.28	1.82
	velocity	8.04	9.51	9.29	8.93	8.68	8.46	8.12	7.75	8.56	187.0	8.71	9.11	8.57	7.93	8.90	8.24	
Morimoto, Ren (JPN) (2003	time	6.19	11.36	16.71	22.36	28.25	34.44	40.85	47.76	47.76	2 / 3							
reaction time 0.222	interval		5.17	5.35	5.65	5.89	6.19	6.41	6.91		# of strides	11.36	11.00	12.08	13.32	22.36	25.40	3.04
	velocity	8.08	9.67	9.35	8.85	8.49	8.08	7.80	7.24	8.38		8.80	9.09	8.28	7.51	8.94	7.87	
Kiyota, Yuki (JPN) (2002)	time	6.69	12.19	17.83	23.61	29.42	35.32	41.42	47.86	47.86	8 / 4							
reaction time 0.185	interval		5.50	5.64	5.78	5.81	5.90	6.10	6.44		# of strides	12.19	11.42	11.71	12.54	23.61	24.25	0.64
	velocity	7.47	9.09	8.87	8.65	8.61	8.47	8.20	7.76	8.36		8.20	8.76	8.54	7.97	8.47	8.25	
Kasai, Kuraki (JPN) (2002)	time	6.48	11.88	17.42	23.19	29.07	35.14	41.44	48.23	48.23	7 / 5							
reaction time 0.182	interval		5.40	5.54	5.77	5.88	6.07	6.30	6.79		# of strides	11.88	11.31	11.95	13.09	23.19	25.04	1.85
	velocity	7.72	9.26	9.03	8.67	8.50	8.24	7.94	7.36	8.29		8.42	8.84	8.37	7.64	8.62	7.99	

2021 Golden Gala Pietro Mennea (Florence, ITA)

FINAL date 10-Jun-21

Omega Timing (2021) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Zambrano, Anthony (COL)	time	6.3	11.4	16.7	22.1	27.5	33.1	38.8	44.76	44.76	5 / 1							
reaction time 0.152	interval		5.10	5.30	5.40	5.40	5.60	5.70	5.96		# of strides	11.40	10.70	11.00	11.66	22.10	22.66	0.56
	velocity	7.94	9.80	9.43	9.26	9.26	8.93	8.77	8.39	8.94		8.77	9.35	9.09	8.58	9.05	8.83	
Re, Davide (ITA) (1993)	time	6.4	11.6	16.8	22.2	27.8	33.6	39.6	45.80	45.80	6 / 2							
reaction time 0.139	interval		5.20	5.20	5.40	5.60	5.80	6.00	6.20		# of strides	11.60	10.60	11.40	12.20	22.20	23.60	1.40
	velocity	7.81	9.62	9.62	9.26	8.93	8.62	8.33	8.06	8.73		8.62	9.43	8.77	8.20	9.01	8.47	
Hudson-Smith, Matthew (C	time	6.5	11.6	16.9	22.3	27.8	33.4	39.4	45.93	45.93	4 / 3							
reaction time 0.131	interval		5.10	5.30	5.40	5.50	5.60	6.00	6.53		# of strides	11.60	10.70	11.10	12.53	22.30	23.63	1.33

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

	velocity	7.69	9.80	9.43	9.26	9.09	8.93	8.33	7.66	8.71		8.62	9.35	9.01	7.98	8.97	8.46	
Nene, Zakhiti (RSA) (1998)	time	6.3	11.3	16.5	21.9	27.5	33.3	39.4	46.23	46.23	8 / 4							
reaction time 0.142	interval		5.00	5.20	5.40	5.60	5.80	6.10	6.83		# of strides	11.30	10.60	11.40	12.93	21.90	24.33	2.43
	velocity	7.94	10.00	9.62	9.26	8.93	8.62	8.20	7.32	8.65	179.0	8.85	9.43	8.77	7.73	9.13	8.22	
Petrucciani, Ricky (SUI) (20	time	6.3	11.4	16.8	22.2	27.8	33.6	39.7	46.24	46.24	1 / 5							
reaction time 0.169	interval		5.10	5.40	5.40	5.60	5.80	6.10	6.54		# of strides	11.40	10.80	11.40	12.64	22.20	24.04	1.84
	velocity	7.94	9.80	9.26	9.26	8.93	8.62	8.20	7.65	8.65		8.77	9.26	8.77	7.91	9.01	8.32	
Scotti, Edoardo (ITA) (2000	time	6.5	11.6	16.7	22.1	27.7	33.6	39.8	46.38	46.38	7 / 6							
reaction time 0.169	interval		5.10	5.10	5.40	5.60	5.90	6.20	6.58		# of strides	11.60	10.50	11.50	12.78	22.10	24.28	2.18
	velocity	7.69	9.80	9.80	9.26	8.93	8.47	8.06	7.60	8.62	174.0	8.62	9.52	8.70	7.82	9.05	8.24	
Aceti, Vladimir (ITA) (1998)	time	6.6	11.8	17.1	22.5	28.1	33.9	40.0	46.55	46.55	2 / 7							
reaction time 0.170	interval		5.20	5.30	5.40	5.60	5.80	6.10	6.55		# of strides	11.80	10.70	11.40	12.65	22.50	24.05	1.55
	velocity	7.58	9.62	9.43	9.26	8.93	8.62	8.20	7.63	8.59		8.47	9.35	8.77	7.91	8.89	8.32	
Cedenio, Machel (TTO) (19	time	6.3	11.6							dnf	3 / --							
reaction time 0.185	interval		5.30								# of strides	11.60						
	velocity	7.94	9.43									8.62						

2021 Denka Athletics Challenge Cup (Niigata, JPN)

Final

date 06-Jun-21

Yamanaka (2021) - race analysis of men's and women's 400m and 300m races in 2021 competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Walsh, Julian (JPN) (1996)	time	6.39	11.57	16.77	21.97	27.29	32.98	39.13	45.80	45.80	4 / 1							
reaction time	interval		5.18	5.20	5.20	5.32	5.69	6.15	6.67		# of strides	11.57	10.40	11.01	12.82	21.97	23.83	1.86
	velocity	7.82	9.65	9.62	9.62	9.40	8.79	8.13	7.50	8.73		8.64	9.62	9.08	7.80	9.10	8.39	
Sato, Kentaro (JPN) (1994)	time	6.17	11.07	16.13	21.35	26.89	32.90	39.25	45.95	45.95	3 / 2							
reaction time	interval		4.90	5.06	5.22	5.54	6.01	6.35	6.70		# of strides	11.07	10.28	11.55	13.05	21.35	24.60	3.25
	velocity	8.10	10.20	9.88	9.58	9.03	8.32	7.87	7.46	8.71		9.03	9.73	8.66	7.66	9.37	8.13	
Sato, Fuga (JPN) (1996)	time	6.22	11.27	16.43	21.82	27.37	33.26	39.43	46.04	46.04	8 / 3							
reaction time	interval		5.05	5.16	5.39	5.55	5.89	6.17	6.61		# of strides	11.27	10.55	11.44	12.78	21.82	24.22	2.40
	velocity	8.04	9.90	9.69	9.28	9.01	8.49	8.10	7.56	8.69	178.7	8.87	9.48	8.74	7.82	9.17	8.26	
Ito, Rikuya (JPN) (1998)	time	6.24	11.26	16.35	21.68	27.25	33.19	39.46	46.15	46.15	7 / 4							
reaction time	interval		5.02	5.09	5.33	5.57	5.94	6.27	6.69		# of strides	11.26	10.42	11.51	12.96	21.68	24.47	2.79
	velocity	8.01	9.96	9.82	9.38	8.98	8.42	7.97	7.47	8.67	185.2	8.88	9.60	8.69	7.72	9.23	8.17	
Kawabata, Kaito (JPN) (199	time	6.16	10.99	15.93	21.18	26.69	32.67	39.12	46.19	46.15	5 / 5							
reaction time	interval		4.83	4.94	5.25	5.51	5.98	6.45	7.07		# of strides	10.99	10.19	11.49	13.52	21.18	25.01	3.83
	velocity	8.12	10.35	10.12	9.52	9.07	8.36	7.75	7.07	8.67		9.10	9.81	8.70	7.40	9.44	8.00	
Kawauchi, Mitsuki (JPN) (1	time	6.34	11.55	16.85	22.30	27.88	33.77	39.87	46.31	46.31	9 / 6							
reaction time	interval		5.21	5.30	5.45	5.58	5.89	6.10	6.44		# of strides	11.55	10.75	11.47	12.54	22.30	24.01	1.71
	velocity	7.89	9.60	9.43	9.17	8.96	8.49	8.20	7.76	8.64		8.66	9.30	8.72	7.97	8.97	8.33	

B Final

date 06-Jun-21

Yamanaka (2021) - race analysis of men's and women's 400m and 300m races in 2021 competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Yamaki, Kakeru (JPN) (1996	time	6.20	11.19	16.25	21.53	27.03	32.84	38.94	45.69	45.69	9 / 1							
reaction time	interval		4.99	5.06	5.28	5.50	5.81	6.10	6.75	PB	# of strides	11.19	10.34	11.31	12.85	21.53	24.16	2.63
	velocity	8.06	10.02	9.88	9.47	9.09	8.61	8.20	7.41	8.75	195.0	8.94	9.67	8.84	7.78	9.29	8.28	
Suzuki, Aoto (JPN) (2001)	time	6.08	10.96	15.98	21.31	26.83	32.70	38.93	45.94	45.94	8 / 2							
reaction time	interval		4.88	5.02	5.33	5.52	5.87	6.23	7.01	PB	# of strides	10.96	10.35	11.39	13.24	21.31	24.63	3.32
	velocity	8.22	10.25	9.96	9.38	9.06	8.52	8.03	7.13	8.71	178.0	9.12	9.66	8.78	7.55	9.39	8.12	

C Final

date 06-Jun-21

Yamanaka (2021) - race analysis of men's and women's 400m and 300m races in 2021 competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Nakajima, Yuki Joseph (JPN	time	6.43	11.58	16.83	22.28	27.82	33.63	39.68	46.09	46.09	1 / 1							
reaction time	interval		5.15	5.25	5.45	5.54	5.81	6.05	6.41	PB	# of strides	11.58	10.70	11.35	12.46	22.28	23.81	1.53
	velocity	7.78	9.71	9.52	9.17	9.03	8.61	8.26	7.80	8.68	171.2	8.64	9.35	8.81	8.03	8.98	8.40	

2021 Doha Diamond League (Doha, QAT)

FINAL

date 28-May-21

Omega Timing (2021) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Norman, Michael (USA) (19	time	6.0	10.8	15.9	21.2	26.6	32.3	38.1	44.27	44.27	5 / 1							
reaction time 0.165	interval		4.80	5.10	5.30	5.40	5.70	5.80	6.17		# of strides	10.80	10.40	11.10	11.97	21.20	23.07	1.87
	velocity	8.33	10.42	9.80	9.43	9.26	8.77	8.62	8.10	9.04	170.5	9.26	9.62	9.01	8.35	9.43	8.67	
Zambrano, Anthony (COL)	time	6.2	11.3	16.5	22.0	27.5	33.1	38.8	44.57	44.57	3 / 2							
reaction time 0.139	interval		5.10	5.20	5.50	5.50	5.60	5.70	5.77		# of strides	11.30	10.70	11.10	11.47	22.00	22.57	0.57
	velocity	8.06	9.80	9.62	9.09	9.09	8.93	8.77	8.67	8.97		8.85	9.35	9.01	8.72	9.09	8.86	
Kerley, Fred (USA) (1995)	time	6.1	11.1	16.1	21.4	26.9	32.5	38.3	44.60	44.60	4 / 3							
reaction time 0.140	interval		5.00	5.00	5.30	5.50	5.60	5.80	6.30		# of strides	11.10	10.30	11.10	12.10	21.40	23.20	1.80
	velocity	8.20	10.00	10.00	9.43	9.09	8.93	8.62	7.94	8.97		9.01	9.71	9.01	8.26	9.35	8.62	
James, Kirani (GRN) (1992)	time	6.2	11.1	16.2	21.5	26.9	32.5	38.4	44.61	44.61	6 / 4							
reaction time 0.159	interval		4.90	5.10	5.30	5.40	5.60	5.90	6.21		# of strides	11.10	10.40	11.00	12.11	21.50	23.11	1.61
	velocity	8.06	10.20	9.80	9.43	9.26	8.93	8.47	8.05	8.97	162.0	9.01	9.62	9.09	8.26	9.30	8.65	

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

Norwood, Vernon (USA) (1	time	6.1	11.0	16.2	21.5	27.0	32.8	38.5	44.87	44.87	7 / 5						
reaction time 0.177	interval		4.90	5.20	5.30	5.50	5.80	5.70	6.37		# of strides	11.00	10.50	11.30	12.07	21.50	23.37	1.87
	velocity	8.20	10.20	9.62	9.43	9.09	8.62	8.77	7.85	8.91	170.5	9.09	9.52	8.85	8.29	9.30	8.56	
Al-Yassin, Mazen (KSA) (1!	time	6.3	11.4	16.6	22.0	27.5	33.2	39.5	45.78	45.78	8 / 6						
reaction time 0.164	interval		5.10	5.20	5.40	5.50	5.70	6.30	6.28		# of strides	11.40	10.60	11.20	12.58	22.00	23.78	1.78
	velocity	7.94	9.80	9.62	9.26	9.09	8.77	7.94	7.96	8.74	177.2	8.77	9.43	8.93	7.95	9.09	8.41	
Yahia Ibrahim, Ammar Isma	time	6.2	11.1	16.3	21.8	27.4	33.4	39.8	46.10	46.10	1 / 7						
reaction time 0.142	interval		4.90	5.20	5.50	5.60	6.00	6.40	6.30		# of strides	11.10	10.70	11.60	12.70	21.80	24.30	2.50
	velocity	8.06	10.20	9.62	9.09	8.93	8.33	7.81	7.94	8.68		9.01	9.35	8.62	7.87	9.17	8.23	
Borlée, Kevin (BEL) (1988)	time	6.3	11.5	16.8	22.3	27.9	33.8	39.8	46.29	46.29	2 / 8						
reaction time 0.136	interval		5.20	5.30	5.50	5.60	5.90	6.00	6.49		# of strides	11.50	10.80	11.50	12.49	22.30	23.99	1.69
	velocity	7.94	9.62	9.43	9.09	8.93	8.47	8.33	7.70	8.64		8.70	9.26	8.70	8.01	8.97	8.34	

B FINAL

date 28-May-21

Omega Timing (2021) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Luchembe, Kennedy (ZAM	time	6.2	11.1	16.4	22.0	27.7	33.7	39.8	46.29	46.29	4 / 1							
reaction time 0.183	interval		4.90	5.30	5.60	5.70	6.00	6.10	6.49		# of strides	11.10	10.90	11.70	12.59	22.00	24.29	2.29
	velocity	8.06	10.20	9.43	8.93	8.77	8.33	8.20	7.70	8.64		9.01	9.17	8.55	7.94	9.09	8.23	
Jelassi, Mohamed Fares (TI	time	6.4	11.7	17.2	22.9	28.6	34.5	40.5	46.73	46.73	7 / 2							
reaction time 0.181	interval		5.30	5.50	5.70	5.70	5.90	6.00	6.23		# of strides	11.70	11.20	11.60	12.23	22.90	23.83	0.93
	velocity	7.81	9.43	9.09	8.77	8.77	8.47	8.33	8.03	8.56		8.55	8.93	8.62	8.18	8.73	8.39	
Balti, Rami (TUN) (2001)	time	6.4	11.5	16.9	22.5	28.4	34.4	40.6	47.03	47.03	5 / 3							
reaction time 0.220	interval		5.10	5.40	5.60	5.90	6.00	6.20	6.43		# of strides	11.50	11.00	11.90	12.63	22.50	24.53	2.03
	velocity	7.81	9.80	9.26	8.93	8.47	8.33	8.06	7.78	8.51		8.70	9.09	8.40	7.92	8.89	8.15	
Ibrahim Issaka, Hussein (Q/	time	6.4	11.5	17.0	22.8	28.9	35.1	41.5	48.10	48.10	2 / 4							
reaction time 0.173	interval		5.10	5.50	5.80	6.10	6.20	6.40	6.60	PB	# of strides	11.50	11.30	12.30	13.00	22.80	25.30	2.50
	velocity	7.81	9.80	9.09	8.62	8.20	8.06	7.81	7.58	8.32		8.70	8.85	8.13	7.69	8.77	7.91	
Futayni, Ibrahim (KSA) (19	time	6.3	11.6	17.1	22.7	28.5	34.6	41.1	48.33	48.33	6 / 5							
reaction time 0.131	interval		5.30	5.50	5.60	5.80	6.10	6.50	7.23		# of strides	11.60	11.10	11.90	13.73	22.70	25.63	2.93
	velocity	7.94	9.43	9.09	8.93	8.62	8.20	7.69	6.92	8.28		8.62	9.01	8.40	7.28	8.81	7.80	
Abdulrahman, Mohamed M	time	6.3	11.4	16.8	22.5	28.4	34.6	41.3	48.84	48.84	8 / 6							
reaction time 0.164	interval		5.10	5.40	5.70	5.90	6.20	6.70	7.54		# of strides	11.40	11.10	12.10	14.24	22.50	26.34	3.84
	velocity	7.94	9.80	9.26	8.77	8.47	8.06	7.46	6.63	8.19		8.77	9.01	8.26	7.02	8.89	7.59	
Mohadjir, Abdel Madjid (Q/	time	6.4	11.8	17.2	23.0	28.9	35.1	41.5	48.91	48.91	3 / 7							
reaction time 0.149	interval		5.40	5.40	5.80	5.90	6.20	6.40	7.41	PB	# of strides	11.80	11.20	12.10	13.81	23.00	25.91	2.91
	velocity	7.81	9.26	9.26	8.62	8.47	8.06	7.81	6.75	8.18		8.47	8.93	8.26	7.24	8.70	7.72	

2021 Shimane High School Championships (Izumo, JPN)

FINAL

date 28-May-21

Shimizu (2021) - shimane high school championships 2021 - biomechanics data analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kajima, Ayato (JPN) (2003)	time		12.15		23.47		35.67		49.64	49.64	4 / 1							
reaction time	interval				11.32		12.20		13.97		# of strides	12.15	11.32	12.20	13.97	23.47	26.17	2.70
	velocity		8.23		8.83		8.20		7.16	8.06		8.23	8.83	8.20	7.16	8.52	7.64	
Yamane, Yusuke (JPN) (200	time		12.05		23.38		35.76		50.00	50.00	3 / 2							
reaction time	interval				11.33		12.38		14.24		# of strides	12.05	11.33	12.38	14.24	23.38	26.62	3.24
	velocity		8.30		8.83		8.08		7.02	8.00		8.30	8.83	8.08	7.02	8.55	7.51	
Arai, Iori (JPN)	time		12.45		24.48		36.88		50.52	50.52	5 / 3							
reaction time	interval				12.03		12.40		13.64		# of strides	12.45	12.03	12.40	13.64	24.48	26.04	1.56
	velocity		8.03		8.31		8.06		7.33	7.92		8.03	8.31	8.06	7.33	8.17	7.68	
Arai, Yuta (JPN)	time		13.13		25.37		37.73		51.15	51.15	8 / 4							
reaction time	interval				12.24		12.36		13.42		# of strides	13.13	12.24	12.36	13.42	25.37	25.78	0.41
	velocity		7.62		8.17		8.09		7.45	7.82		7.62	8.17	8.09	7.45	7.88	7.76	
Mishima, Sota (JPN)	time		12.80		25.55		37.90		51.20	51.20	6 / 5							
reaction time	interval				12.75		12.35		13.30		# of strides	12.80	12.75	12.35	13.30	25.55	25.65	0.10
	velocity		7.81		7.84		8.10		7.52	7.81		7.81	7.84	8.10	7.52	7.83	7.80	
Nakao, Hyousei (JPN)	time		12.95		25.03		37.79		51.79	51.79	1 / 6							
reaction time	interval				12.08		12.76		14.00		# of strides	12.95	12.08	12.76	14.00	25.03	26.76	1.73
	velocity		7.72		8.28		7.84		7.14	7.72		7.72	8.28	7.84	7.14	7.99	7.47	
Kitamura, Yasukazu (JPN)	time		12.80		24.93		37.83		52.99	52.99	2 / 7							
reaction time	interval				12.13		12.90		15.16		# of strides	12.80	12.13	12.90	15.16	24.93	28.06	3.13
	velocity		7.81		8.24		7.75		6.60	7.55		7.81	8.24	7.75	6.60	8.02	7.13	
Kanetsuki, Satoshi (JPN)	time		13.53		26.72		40.22		54.01	54.01	7 / 8							
reaction time	interval				13.19		13.50		13.79		# of strides	13.53	13.19	13.50	13.79	26.72	27.29	0.57
	velocity		7.39		7.58		7.41		7.25	7.41		7.39	7.58	7.41	7.25	7.49	7.33	

2021 South Eastern Conference Championships (College Station, TX)

FINAL date 15-May-21

Vazel (2021) - https://twitter.com/pjvazel/status/1393829441172803591?s=21

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Godwin, Elija (USA) (1999)	time		10.6		20.4		31.5		44.61	44.61	4 / 3							
reaction time	interval				9.80		11.10		13.11	PB	# of strides	10.60	9.80	11.10	13.11	20.40	24.21	3.81
	velocity		9.43		10.20		9.01		7.63	8.97	180.0	9.43	10.20	9.01	7.63	9.80	8.26	

2021 Ready Steady Tokyo (Tokyo, JPN)

FINAL date 09-May-21

Yamanaka (2021) - race analysis of men's and women's 400m and 300m races in 2021 competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Sato, Kentaro (JPN) (1994)	time	6.04	10.93	15.97	21.33	27.03	32.97	39.11	45.61	45.61	7 / 1							
reaction time 0.176	interval		4.89	5.04	5.36	5.70	5.94	6.14	6.50		# of strides	10.93	10.40	11.64	12.64	21.33	24.28	2.95
	velocity	8.28	10.22	9.92	9.33	8.77	8.42	8.14	7.69	8.77	178.0	9.15	9.62	8.59	7.91	9.38	8.24	
Ito, Rikuya (JPN) (1998)	time	6.02	10.92	15.93	21.22	26.88	32.86	39.23	46.15	46.15	6 / 2							
reaction time 0.128	interval		4.90	5.01	5.29	5.66	5.98	6.37	6.92		# of strides	10.92	10.30	11.64	13.29	21.22	24.93	3.71
	velocity	8.31	10.20	9.98	9.45	8.83	8.36	7.85	7.23	8.67	187.0	9.16	9.71	8.59	7.52	9.43	8.02	
Kawabata, Kaito (JPN) (199	time	6.17	11.19	16.35	21.68	27.14	32.97	39.25	46.25	46.25	5 / 3							
reaction time 0.173	interval		5.02	5.16	5.33	5.46	5.83	6.28	7.00		# of strides	11.19	10.49	11.29	13.28	21.68	24.57	2.89
	velocity	8.10	9.96	9.69	9.38	9.16	8.58	7.96	7.14	8.65	193.2	8.94	9.53	8.86	7.53	9.23	8.14	
Ikeda, Kohsuke (JPN) (1995	time	6.25	11.27	16.40	21.83	27.49	33.42	39.77	46.58	46.58	9 / 4							
reaction time 0.156	interval		5.02	5.13	5.43	5.66	5.93	6.35	6.81	PB	# of strides	11.27	10.56	11.59	13.16	21.83	24.75	2.92
	velocity	8.00	9.96	9.75	9.21	8.83	8.43	7.87	7.34	8.59		8.87	9.47	8.63	7.60	9.16	8.08	
Kawauchi, Mitsuki (JPN) (1	time	6.29	11.46	16.73	22.14	27.89	33.87	40.08	46.71	46.71	1 / 6							
reaction time 0.150	interval		5.17	5.27	5.41	5.75	5.98	6.21	6.63		# of strides	11.46	10.68	11.73	12.84	22.14	24.57	2.43
	velocity	7.95	9.67	9.49	9.24	8.70	8.36	8.05	7.54	8.56		8.73	9.36	8.53	7.79	9.03	8.14	
Itahana, Kohei (JPN) (1994)	time	6.17	11.23	16.42	21.98	27.75	33.82	40.37	47.49	47.49	8 / 9							
reaction time 0.160	interval		5.06	5.19	5.56	5.77	6.07	6.55	7.12		# of strides	11.23	10.75	11.84	13.67	21.98	25.51	3.53
	velocity	8.10	9.88	9.63	8.99	8.67	8.24	7.63	7.02	8.42		8.90	9.30	8.45	7.32	9.10	7.84	

2021 Shizuoka International Athletics Meeting (Fukuroi, JPN)

FINAL date 03-May-21

Yamanaka (2021) - race analysis of men's and women's 400m and 300m races in 2021 competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kawauchi, Mitsuki (JPN) (1	time	6.34	11.43	16.58	21.89	27.49	33.45	39.56	46.10	46.10	5 / 1							
reaction time 0.204	interval		5.09	5.15	5.31	5.60	5.96	6.11	6.54		# of strides	11.43	10.46	11.56	12.65	21.89	24.21	2.32
	velocity	7.89	9.82	9.71	9.42	8.93	8.39	8.18	7.65	8.68	185.0	8.75	9.56	8.65	7.91	9.14	8.26	
Nose, Daiki (JPN) (2001)	time	6.16	11.28	16.53	21.93	27.57	33.49	39.64	46.35	46.35	4 / 2							
reaction time 0.164	interval		5.12	5.25	5.40	5.64	5.92	6.15	6.71	PB	# of strides	11.28	10.65	11.56	12.86	21.93	24.42	2.49
	velocity	8.12	9.77	9.52	9.26	8.87	8.45	8.13	7.45	8.63	183.0	8.87	9.39	8.65	7.78	9.12	8.19	
Kitadani, Naoki (JPN) (1998	time	6.31	11.37	16.50	21.94	27.67	33.62	39.88	46.96	46.96	8 / 5							
reaction time 0.166	interval		5.06	5.13	5.44	5.73	5.95	6.26	7.08		# of strides	11.37	10.57	11.68	13.34	21.94	25.02	3.08
	velocity	7.92	9.88	9.75	9.19	8.73	8.40	7.99	7.06	8.52		8.80	9.46	8.56	7.50	9.12	7.99	
Kobayashi, Naoki (JPN) (19	time	6.32	11.49	16.77	22.20	27.86	33.85	40.09	46.99	46.99	6 / 6							
reaction time 0.174	interval		5.17	5.28	5.43	5.66	5.99	6.24	6.90		# of strides	11.49	10.71	11.65	13.14	22.20	24.79	2.59
	velocity	7.91	9.67	9.47	9.21	8.83	8.35	8.01	7.25	8.51	178.0	8.70	9.34	8.58	7.61	9.01	8.07	

B FINAL date 03-May-21

Yamanaka (2021) - race analysis of men's and women's 400m and 300m races in 2021 competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Sato, Fuga (JPN) (1996)	time	6.20	11.32	16.53	21.97	27.64	33.55	39.90	46.99	46.99	6 / 5							
reaction time 0.184	interval		5.12	5.21	5.44	5.67	5.91	6.35	7.09		# of strides	11.32	10.65	11.58	13.44	21.97	25.02	3.05
	velocity	8.06	9.77	9.60	9.19	8.82	8.46	7.87	7.05	8.51		8.83	9.39	8.64	7.44	9.10	7.99	
Obuchi, Mizuki (JPN) (1997	time	6.24	11.49	16.85	22.40	28.14	34.18	40.54	48.08	48.08	5 / 8							
reaction time 0.191	interval		5.25	5.36	5.55	5.74	6.04	6.36	7.54		# of strides	11.49	10.91	11.78	13.90	22.40	25.68	3.28
	velocity	8.01	9.52	9.33	9.01	8.71	8.28	7.86	6.63	8.32		8.70	9.17	8.49	7.19	8.93	7.79	
Imoto, Yoshinobu (JPN) (1	time	6.00	11.01	16.23	21.85	27.68	33.79	40.41	48.09	48.09	8 / 9							
reaction time 0.151	interval		5.01	5.22	5.62	5.83	6.11	6.62	7.68		# of strides	11.01	10.84	11.94	14.30	21.85	26.24	4.39
	velocity	8.33	9.98	9.58	8.90	8.58	8.18	7.55	6.51	8.32		9.08	9.23	8.38	6.99	9.15	7.62	

2020 Japanese U20 National Championships (Hiroshima, JPN)

FINAL date 23-Oct-20

Kobayashi (2020) - national high school and U20 national championhsips

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Fujiyoshi, Shunta (JPN) (2(	time	6.69	12.00	17.42	23.06	28.94	34.98	41.10	47.39	47.39	2 / 1							
reaction time 0.224	interval		5.31	5.42	5.64	5.88	6.04	6.12	6.29		# of strides	12.00	11.06	11.92	12.41	23.06	24.33	1.27
	velocity	7.47	9.42	9.23	8.87	8.50	8.28	8.17	7.95	8.44	180.6	8.33	9.04	8.39	8.06	8.67	8.22	
Kawakami, Sota (JPN) (200	time	6.40	11.59	16.92	22.49	28.37	34.45	40.78	47.44	47.44	6 / 2							
reaction time 0.176	interval		5.19	5.33	5.57	5.88	6.08	6.33	6.66		# of strides	11.59	10.90	11.96	12.99	22.49	24.95	2.46
	velocity	7.81	9.63	9.38	8.98	8.50	8.22	7.90	7.51	8.43	177.0	8.63	9.17	8.36	7.70	8.89	8.02	
Nose, Hiroki (JPN) (2001)	time	6.42	11.80	17.28	22.92	28.79	34.78	40.94	47.50	47.50	8 / 3							
reaction time 0.176	interval		5.38	5.48	5.64	5.87	5.99	6.16	6.56		# of strides	11.80	11.12	11.86	12.72	22.92	24.58	1.66
	velocity	7.79	9.29	9.12	8.87	8.52	8.35	8.12	7.62	8.42	184.8	8.47	8.99	8.43	7.86	8.73	8.14	
Imaizumi, Takaki (JPN) (200	time	6.39	11.62	16.93	22.47	28.26	34.38	40.83	47.73	47.73	7 / 4							

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
reaction time 0.175	interval		5.23	5.31	5.54	5.79	6.12	6.45	6.90		# of strides	11.62	10.85	11.91	13.35	22.47	25.26	2.79
	velocity	7.82	9.56	9.42	9.03	8.64	8.17	7.75	7.25	8.38	182.8	8.61	9.22	8.40	7.49	8.90	7.92	
Keito, Sato (JPN) (2001)	time	6.56	11.99	17.52	23.27	29.29	35.41	41.61	48.05	48.05	1 / 5							
reaction time 0.148	interval		5.43	5.53	5.75	6.02	6.12	6.20	6.44		# of strides	11.99	11.28	12.14	12.64	23.27	24.78	1.51
	velocity	7.62	9.21	9.04	8.70	8.31	8.17	8.06	7.76	8.32	186.9	8.34	8.87	8.24	7.91	8.59	8.07	
Nakajima, Yuki Joseph (JPN	time	6.46	11.85	17.40	23.15	29.08	35.17	41.43	48.12	48.12	3 / 6							
reaction time 0.188	interval		5.39	5.55	5.75	5.93	6.09	6.26	6.69		# of strides	11.85	11.30	12.02	12.95	23.15	24.97	1.82
	velocity	7.74	9.28	9.01	8.70	8.43	8.21	7.99	7.47	8.31	173.7	8.44	8.85	8.32	7.72	8.64	8.01	

Heat 3

date 23-Oct-20

Kobayashi (2020) - national high school and U20 national championhsips

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Imaizumi, Takaki (JPN) (200	time	6.34	11.61	16.98	22.52	28.32	34.53	41.19	48.38	48.38	5 / 2							
reaction time 0.202	interval		5.27	5.37	5.54	5.80	6.21	6.66	7.19		# of strides	11.61	10.91	12.01	13.85	22.52	25.86	3.34
	velocity	7.89	9.49	9.31	9.03	8.62	8.05	7.51	6.95	8.27	183.8	8.61	9.17	8.33	7.22	8.88	7.73	

Heat 2

date 23-Oct-20

Kobayashi (2020) - national high school and U20 national championhsips

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Nakajima, Yuki Joseph (JPN	time	6.23	11.56	16.98	22.55	28.39	34.54	40.86	47.54	47.54	1 / 1							
reaction time 0.170	interval		5.33	5.42	5.57	5.84	6.15	6.32	6.68		# of strides	11.56	10.99	11.99	13.00	22.55	24.99	2.44
	velocity	8.03	9.38	9.23	8.98	8.56	8.13	7.91	7.49	8.41	171.1	8.65	9.10	8.34	7.69	8.87	8.00	
Keito, Sato (JPN) (2001)	time	6.50	11.96	17.57	23.34	29.25	35.30	41.40	47.90	47.90	3 / 3							
reaction time 0.165	interval		5.46	5.61	5.77	5.91	6.05	6.10	6.50		# of strides	11.96	11.38	11.96	12.60	23.34	24.56	1.22
	velocity	7.69	9.16	8.91	8.67	8.46	8.26	8.20	7.69	8.35	186.8	8.36	8.79	8.36	7.94	8.57	8.14	

Heat 1

date 23-Oct-20

Kobayashi (2020) - national high school and U20 national championhsips

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kawakami, Sota (JPN) (200	time	6.24	11.46	16.78	22.36	28.28	34.43	40.75	47.62	47.62	8 / 1							
reaction time 0.161	interval		5.22	5.32	5.58	5.92	6.15	6.32	6.87		# of strides	11.46	10.90	12.07	13.19	22.36	25.26	2.90
	velocity	8.01	9.58	9.40	8.96	8.45	8.13	7.91	7.28	8.40	178.6	8.73	9.17	8.29	7.58	8.94	7.92	
Nose, Hiroki (JPN) (2001)	time	6.28	11.47	16.82	22.40	28.34	34.46	40.85	47.86	47.86	4 / 2							
reaction time 0.152	interval		5.19	5.35	5.58	5.94	6.12	6.39	7.01		# of strides	11.47	10.93	12.06	13.40	22.40	25.46	3.06
	velocity	7.96	9.63	9.35	8.96	8.42	8.17	7.82	7.13	8.36	188.6	8.72	9.15	8.29	7.46	8.93	7.86	
Fujiyoshi, Shunta (JPN) (20	time	6.57	11.76	17.02	22.53	28.48	37.74	41.20	48.16	48.16	6 / 3							
reaction time 0.258	interval		5.19	5.26	5.51	5.95	9.26	3.46	6.96		# of strides	11.76	10.77	15.21	10.42	22.53	25.63	3.10
	velocity	7.61	9.63	9.51	9.07	8.40	5.40	14.45	7.18	8.31	183.0	8.50	9.29	6.57	9.60	8.88	7.80	

2020 Japanese High School National Championships (Hiroshima, JPN)

A FINAL

date 23-Oct-20

Kobayashi (2020) - national high school and U20 national championhsips

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Tomoda, Masataka (JPN) (2	time	6.23	11.36	16.65	22.12	27.79	33.75	40.01	46.51	46.51	3 / 1							
reaction time 0.152	interval		5.13	5.29	5.47	5.67	5.96	6.26	6.50		# of strides	11.36	10.76	11.63	12.76	22.12	24.39	2.27
	velocity	8.03	9.75	9.45	9.14	8.82	8.39	7.99	7.69	8.60	172.6	8.80	9.29	8.60	7.84	9.04	8.20	
Inagawa, Keisuke (JPN) (20	time	6.45	11.78	17.27	22.94	28.70	34.60	40.70	47.16	47.16	6 / 2							
reaction time 0.188	interval		5.33	5.49	5.67	5.76	5.90	6.10	6.46		# of strides	11.78	11.16	11.66	12.56	22.94	24.22	1.28
	velocity	7.75	9.38	9.11	8.82	8.68	8.47	8.20	7.74	8.48	185.8	8.49	8.96	8.58	7.96	8.72	8.26	
Kinoshita, Yuichi (JPN) (20	time	6.33	11.54	16.92	22.46	28.24	34.27	40.55	47.24	47.24	5 / 3							
reaction time 0.179	interval		5.21	5.38	5.54	5.78	6.03	6.28	6.69		# of strides	11.54	10.92	11.81	12.97	22.46	24.78	2.32
	velocity	7.90	9.60	9.29	9.03	8.65	8.29	7.96	7.47	8.47	188.1	8.67	9.16	8.47	7.71	8.90	8.07	
Suzuki, Daisuke (JPN)	time	6.24	11.44	16.80	22.48	28.40	34.55	40.85	47.26	47.26	4 / 4							
reaction time 0.174	interval		5.20	5.36	5.68	5.92	6.15	6.30	6.41		# of strides	11.44	11.04	12.07	12.71	22.48	24.78	2.30
	velocity	8.01	9.62	9.33	8.80	8.45	8.13	7.94	7.80	8.46	187.2	8.74	9.06	8.29	7.87	8.90	8.07	
Yoshiki, Tsubasa (JPN) (20	time	6.44	11.63	17.00	22.56	28.38	34.49	40.92	47.70	47.70	1 / 5							
reaction time 0.167	interval		5.19	5.37	5.56	5.82	6.11	6.43	6.78		# of strides	11.63	10.93	11.93	13.21	22.56	25.14	2.58
	velocity	7.76	9.63	9.31	8.99	8.59	8.18	7.78	7.37	8.39	207.1	8.60	9.15	8.38	7.57	8.87	7.96	
Mamada, Kodai (JPN) (200	time	6.53	11.87	17.35	23.03	28.91	34.91	41.13	47.81	47.81	7 / 6							
reaction time 0.150	interval		5.34	5.48	5.68	5.88	6.00	6.22	6.68		# of strides	11.87	11.16	11.88	12.90	23.03	24.78	1.75
	velocity	7.66	9.36	9.12	8.80	8.50	8.33	8.04	7.49	8.37	197.5	8.42	8.96	8.42	7.75	8.68	8.07	

Heat 5

date 23-Oct-20

Kobayashi (2020) - national high school and U20 national championhsips

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Suzuki, Daisuke (JPN)	time	6.14	11.19	16.42	21.95	27.78	33.91	40.44	47.51	47.51	7 / 1							
reaction time 0.164	interval		5.05	5.23	5.53	5.83	6.13	6.53	7.07		# of strides	11.19	10.76	11.96	13.60	21.95	25.56	3.61
	velocity	8.14	9.90	9.56	9.04	8.58	8.16	7.66	7.07	8.42	192.4	8.94	9.29	8.36	7.35	9.11	7.82	
Yoshiki, Tsubasa (JPN) (20	time	6.48	11.72	17.07	22.58	28.28	34.34	40.91	47.94	47.94	3 / 2							
reaction time 0.174	interval		5.24	5.35	5.51	5.70	6.06	6.57	7.03		# of strides	11.72	10.86	11.76	13.60	22.58	25.36	2.78
	velocity	7.72	9.54	9.35	9.07	8.77	8.25	7.61	7.11	8.34	209.5	8.53	9.21	8.50	7.35	8.86	7.89	

Heat 4

date 23-Oct-20

Kobayashi (2020) - national high school and U20 national championhsips

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Inagawa, Keisuke (JPN) (20	time	6.32	11.66	17.16	22.84	28.65	34.52	40.62	47.27	47.27	6 / 1							
reaction time 0.170	interval		5.34	5.50	5.68	5.81	5.87	6.10	6.65		# of strides	11.66	11.18	11.68	12.75	22.84	24.43	1.59
	velocity	7.91	9.36	9.09	8.80	8.61	8.52	8.20	7.52	8.46	185.3	8.58	8.94	8.56	7.84	8.76	8.19	

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

Heat 3

date 23-Oct-20

Kobayashi (2020) - national high school and U20 national championhsips

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Tomoda, Masataka (JPN) (2	time	6.24	11.29	16.58	22.20	28.05	34.11	40.59	47.39	47.39	6 / 1							
reaction time 0.155	interval		5.05	5.29	5.62	5.85	6.06	6.48	6.80		# of strides	11.29	10.91	11.91	13.28	22.20	25.19	2.99
	velocity	8.01	9.90	9.45	8.90	8.55	8.25	7.72	7.35	8.44	173.5	8.86	9.17	8.40	7.53	9.01	7.94	

Heat 2

date 23-Oct-20

Kobayashi (2020) - national high school and U20 national championhsips

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Mamada, Kodai (JPN) (200	time	6.47	11.71	16.98	22.56	28.47	34.59	40.92	47.69	47.69	4 / 1							
reaction time 0.157	interval		5.24	5.27	5.58	5.91	6.12	6.33	6.77		# of strides	11.71	10.85	12.03	13.10	22.56	25.13	2.57
	velocity	7.73	9.54	9.49	8.96	8.46	8.17	7.90	7.39	8.39	198.9	8.54	9.22	8.31	7.63	8.87	7.96	

Heat 1

date 23-Oct-20

Kobayashi (2020) - national high school and U20 national championhsips

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kinoshita, Yuichi (JPN) (20	time	6.31	11.52	16.82	22.35	28.03	34.05	40.62	47.49	47.49	3 / 1							
reaction time 0.192	interval		5.21	5.30	5.53	5.68	6.02	6.57	6.87		# of strides	11.52	10.83	11.70	13.44	22.35	25.14	2.79
	velocity	7.92	9.60	9.43	9.04	8.80	8.31	7.61	7.28	8.42	189.1	8.68	9.23	8.55	7.44	8.95	7.96	

2020 Japanese National Championships (Niigata, JPN)

FINAL

date 02-Oct-20

Yamanaka (2020) - 400m race analysis of men and women during 2020 season

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ito, Rikuya (JPN) (1998)	time	6.16	11.19	16.33	21.82	27.44	33.31	39.37	45.94	45.94	4 / 1							
reaction time 0.136	interval		5.03	5.14	5.49	5.62	5.87	6.06	6.57		# of strides	11.19	10.63	11.49	12.63	21.82	24.12	2.30
	velocity	8.12	9.94	9.73	9.11	8.90	8.52	8.25	7.61	8.71	187.2	8.94	9.41	8.70	7.92	9.17	8.29	
Inoue, Daichi (JPN) (1999)	time	6.30	11.27	16.47	22.04	27.75	33.71	39.82	46.48	46.48	3 / 2							
reaction time 0.215	interval		4.97	5.20	5.57	5.71	5.96	6.11	6.66		# of strides	11.27	10.77	11.67	12.77	22.04	24.44	2.40
	velocity	7.94	10.06	9.62	8.98	8.76	8.39	8.18	7.51	8.61	175.2	8.87	9.29	8.57	7.83	9.07	8.18	
Sato, Fuga (JPN) (1996)	time	6.43	11.53	16.82	22.38	28.07	33.89	39.93	46.50	46.50	9 / 3							
reaction time 0.176	interval		5.10	5.29	5.56	5.69	5.82	6.04	6.57		# of strides	11.53	10.85	11.51	12.61	22.38	24.12	1.74
	velocity	7.78	9.80	9.45	8.99	8.79	8.59	8.28	7.61	8.60	180.7	8.67	9.22	8.69	7.93	8.94	8.29	
Yoshizu, Takuho (JPN) (19	time	6.33	11.51	16.83	22.36	28.00	33.81	39.86	46.57	46.57	5 / 4							
reaction time 0.171	interval		5.18	5.32	5.53	5.64	5.81	6.05	6.71	PB	# of strides	11.51	10.85	11.45	12.76	22.36	24.21	1.85
	velocity	7.90	9.65	9.40	9.04	8.87	8.61	8.26	7.45	8.59	176.0	8.69	9.22	8.73	7.84	8.94	8.26	
Obuchi, Mizuki (JPN) (1997	time	6.31	11.40	16.80	22.52	28.36	34.30	40.21	46.58	46.58	7 / 5							
reaction time 0.179	interval		5.09	5.40	5.72	5.84	5.94	5.91	6.37		# of strides	11.40	11.12	11.78	12.28	22.52	24.06	1.54
	velocity	7.92	9.82	9.26	8.74	8.56	8.42	8.46	7.85	8.59	192.2	8.77	8.99	8.49	8.14	8.88	8.31	
Sato, Kentaro (JPN) (1994)	time	6.10	11.06	16.15	21.61	27.30	33.40	39.75	46.81	46.81	6 / 6							
reaction time 0.175	interval		4.96	5.09	5.46	5.69	6.10	6.35	7.06		# of strides	11.06	10.55	11.79	13.41	21.61	25.20	3.59
	velocity	8.20	10.08	9.82	9.16	8.79	8.20	7.87	7.08	8.55	178.2	9.04	9.48	8.48	7.46	9.25	7.94	
Kitakani, Naoki (JPN) (1998	time	6.19	11.23	16.50	22.00	27.78	33.83	40.17	47.26	47.26	8 / 8							
reaction time 0.139	interval		5.04	5.27	5.50	5.78	6.05	6.34	7.09		# of strides	11.23	10.77	11.83	13.43	22.00	25.26	3.26
	velocity	8.08	9.92	9.49	9.09	8.65	8.26	7.89	7.05	8.46	179.2	8.90	9.29	8.45	7.45	9.09	7.92	

Heat 3

date 01-Oct-20

Yamanaka (2020) - 400m race analysis of men and women during 2020 season

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Sato, Fuga (JPN) (1996)	time	6.48	11.75	17.08	22.63	28.29	34.15	40.27	46.86	46.86	4 / 2							
reaction time 0.180	interval		5.27	5.33	5.55	5.66	5.86	6.12	6.59		# of strides	11.75	10.88	11.52	12.71	22.63	24.23	1.60
	velocity	7.72	9.49	9.38	9.01	8.83	8.53	8.17	7.59	8.54		8.51	9.19	8.68	7.87	8.84	8.25	
Inoue, Daichi (JPN) (1999)	time	6.38	11.51	16.97	22.67	28.49	34.37	40.37	46.91	46.91	6 / 3							
reaction time 0.188	interval		5.13	5.46	5.70	5.82	5.88	6.00	6.54		# of strides	11.51	11.16	11.70	12.54	22.67	24.24	1.57
	velocity	7.84	9.75	9.16	8.77	8.59	8.50	8.33	7.65	8.53		8.69	8.96	8.55	7.97	8.82	8.25	
Imoto, Yoshinobu (JPN) (1	time	6.17	11.26	16.57	22.20	27.96	33.98	40.25	46.99	46.99	3 / 4							
reaction time 0.176	interval		5.09	5.31	5.63	5.76	6.02	6.27	6.74		# of strides	11.26	10.94	11.78	13.01	22.20	24.79	2.59
	velocity	8.10	9.82	9.42	8.88	8.68	8.31	7.97	7.42	8.51		8.88	9.14	8.49	7.69	9.01	8.07	
Kawauchi, Mitsuki (JPN) (1	time	6.41	11.69	17.07	22.67	28.46	34.54	40.90	47.84	47.84	5 / 6							
reaction time 0.159	interval		5.28	5.38	5.60	5.79	6.08	6.36	6.94		# of strides	11.69	10.98	11.87	13.30	22.67	25.17	2.50
	velocity	7.80	9.47	9.29	8.93	8.64	8.22	7.86	7.20	8.36		8.55	9.11	8.42	7.52	8.82	7.95	

Heat 2

date 01-Oct-20

Yamanaka (2020) - 400m race analysis of men and women during 2020 season

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ito, Rikuya (JPN) (1998)	time	6.21	11.22	16.30	21.72	27.47	33.52	39.66	46.20	46.20	6 / 1							
reaction time 0.142	interval		5.01	5.08	5.42	5.75	6.05	6.14	6.54		# of strides	11.22	10.50	11.80	12.68	21.72	24.48	2.76
	velocity	8.05	9.98	9.84	9.23	8.70	8.26	8.14	7.65	8.66		8.91	9.52	8.47	7.89	9.21	8.17	
Obuchi, Mizuki (JPN) (1997	time	6.23	11.23	16.42	21.96	27.70	33.72	40.00	46.70	46.70	5 / 2							
reaction time 0.176	interval		5.00	5.19	5.54	5.74	6.02	6.28	6.70		# of strides	11.23	10.73	11.76	12.98	21.96	24.74	2.78
	velocity	8.03	10.00	9.63	9.03	8.71	8.31	7.96	7.46	8.57		8.90	9.32	8.50	7.70	9.11	8.08	
Wakabayashi, Kota (JPN) (	time	6.22	11.21	16.40	22.01	27.94	34.22	40.88	48.70	48.70	4 / 5							
reaction time 0.169	interval		4.99	5.19	5.61	5.93	6.28	6.66	7.82		# of strides	11.21	10.80	12.21	14.48	22.01	26.69	4.68
	velocity	8.04	10.02	9.63	8.91	8.43	7.96	7.51	6.39	8.21		8.92	9.26	8.19	6.91	9.09	7.49	

Heat 1

date 01-Oct-20

Yamanaka (2020) - 400m race analysis of men and women during 2020 season

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Sato, Kentaro (JPN) (1994)	time	6.13	11.13	16.20	21.53	27.12	33.35	39.84	46.77	46.77	3 / 1							
reaction time 0.183	interval		5.00	5.07	5.33	5.59	6.23	6.49	6.93		# of strides	11.13	10.40	11.82	13.42	21.53	25.24	3.71
	velocity	8.16	10.00	9.86	9.38	8.94	8.03	7.70	7.22	8.55		8.98	9.62	8.46	7.45	9.29	7.92	
Kitakani, Naoki (JPN) (1998	time	6.24	11.34	16.55	21.97	27.68	33.72	40.06	47.07	47.07	4 / 2							
reaction time 0.167	interval		5.10	5.21	5.42	5.71	6.04	6.34	7.01		# of strides	11.34	10.63	11.75	13.35	21.97	25.10	3.13
	velocity	8.01	9.80	9.60	9.23	8.76	8.28	7.89	7.13	8.50		8.82	9.41	8.51	7.49	9.10	7.97	
Kimura, Kazushi (JPN) (19	time	6.40	11.54	16.82	22.39	28.15	34.20	40.61	47.76	47.76	5 / 3							
reaction time 0.212	interval		5.14	5.28	5.57	5.76	6.05	6.41	7.15		# of strides	11.54	10.85	11.81	13.56	22.39	25.37	2.98
	velocity	7.81	9.73	9.47	8.98	8.68	8.26	7.80	6.99	8.38		8.67	9.22	8.47	7.37	8.93	7.88	

2020 Japanese Multi-Event National Championships (Nagano, JPN)

Decathlon - Heat

date 26-Sep-20

Matsubayashi (2020) - research on athlete performance and technique- 2020 data book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Taue, Shun (JPN) (1997)	time	6.57	12.02	17.60	23.36	29.36	35.55	42.09	49.12	49.12	6 / 3							
reaction time	interval		5.45	5.58	5.76	6.00	6.19	6.54	7.03		# of strides	12.02	11.34	12.19	13.57	23.36	25.76	2.40
	velocity	7.61	9.17	8.96	8.68	8.33	8.08	7.65	7.11	8.14		8.32	8.82	8.20	7.37	8.56	7.76	
Nakamura, Akihiko (JPN) (1	time	6.52	12.00	17.68	23.52	29.55	35.83	42.38	49.39	49.39	5 / 6							
reaction time	interval		5.48	5.68	5.84	6.03	6.28	6.55	7.01		# of strides	12.00	11.52	12.31	13.56	23.52	25.87	2.35
	velocity	7.67	9.12	8.80	8.56	8.29	7.96	7.63	7.13	8.10		8.33	8.68	8.12	7.37	8.50	7.73	

Decathlon - Heat

date 26-Sep-20

Matsubayashi (2020) - research on athlete performance and technique- 2020 data book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ushiro, Keisuke (JPN) (198	time	6.71	12.34	18.17	24.30	30.61	37.24	44.30	52.11	52.11	5 / 6							
reaction time	interval		5.63	5.83	6.13	6.31	6.63	7.06	7.81		# of strides	12.34	11.96	12.94	14.87	24.30	27.81	3.51
	velocity	7.45	8.88	8.58	8.16	7.92	7.54	7.08	6.40	7.68		8.10	8.36	7.73	6.72	8.23	7.19	

2020 All Japan Corporate Championships (Kumagaya, JPN)

FINAL

date 19-Sep-20

Yamanaka (2020) - 400m race analysis of men and women during 2020 season

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Sato, Fuga (JPN) (1996)	time	6.62	11.92	17.27	22.71	28.29	34.01	39.97	46.39	46.39	4 / 1							
reaction time 0.240	interval		5.30	5.35	5.44	5.58	5.72	5.96	6.42		# of strides	11.92	10.79	11.30	12.38	22.71	23.68	0.97
	velocity	7.55	9.43	9.35	9.19	8.96	8.74	8.39	7.79	8.62		8.39	9.27	8.85	8.08	8.81	8.45	
Obuchi, Mizuki (JPN) (1997	time	6.32	11.38	16.73	22.32	28.02	33.90	40.06	46.84	46.84	6 / 2							
reaction time 0.207	interval		5.06	5.35	5.59	5.70	5.88	6.16	6.78		# of strides	11.38	10.94	11.58	12.94	22.32	24.52	2.20
	velocity	7.91	9.88	9.35	8.94	8.77	8.50	8.12	7.37	8.54	193.0	8.79	9.14	8.64	7.73	8.96	8.16	
Wakabayashi, Kota (JPN) (	time	6.36	11.45	16.75	22.47	28.40	34.51	40.96	48.18	48.18	7 / 5							
reaction time 0.204	interval		5.09	5.30	5.72	5.93	6.11	6.45	7.22		# of strides	11.45	11.02	12.04	13.67	22.47	25.71	3.24
	velocity	7.86	9.82	9.43	8.74	8.43	8.18	7.75	6.93	8.30	172.5	8.73	9.07	8.31	7.32	8.90	7.78	
Sato, Kentaro (JPN) (1994)	time	6.24	11.33	16.55	21.99	27.86	34.36	41.24	48.65	48.65	2 / 8							
reaction time 0.225	interval		5.09	5.22	5.44	5.87	6.50	6.88	7.41		# of strides	11.33	10.66	12.37	14.29	21.99	26.66	4.67
	velocity	8.01	9.82	9.58	9.19	8.52	7.69	7.27	6.75	8.22		8.83	9.38	8.08	7.00	9.10	7.50	

2020 World Athletics Trials (Fuji, JPN)

FINAL

date 06-Sep-20

Yamanaka (2020) - 400m race analysis of men and women during 2020 season

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Sato, Fuga (JPN) (1996)	time	6.39	11.58	16.83	22.19	27.70	33.38	39.44	46.15	46.15	3 / 1							
reaction time	interval		5.19	5.25	5.36	5.51	5.68	6.06	6.71		# of strides	11.58	10.61	11.19	12.77	22.19	23.96	1.77
	velocity	7.82	9.63	9.52	9.33	9.07	8.80	8.25	7.45	8.67	177.5	8.64	9.43	8.94	7.83	9.01	8.35	
Wakabayashi, Kota (JPN) (	time	6.30	11.47	16.73	22.29	28.14	34.17	40.47	47.40	47.40	5 / 3							
reaction time	interval		5.17	5.26	5.56	5.85	6.03	6.30	6.93		# of strides	11.47	10.82	11.88	13.23	22.29	25.11	2.82
	velocity	7.94	9.67	9.51	8.99	8.55	8.29	7.94	7.22	8.44	172.7	8.72	9.24	8.42	7.56	8.97	7.96	

2020 Bauhaus Galan (Stockholm, SWE)

FINAL

date 23-Aug-20

Omega Timing (2020) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Warholm, Karsten (NOR) (	time	6.2	11.5	16.9	22.4	27.9	33.6	39.3	45.05	45.05	8 / 1							
reaction time 0.163	interval		5.30	5.40	5.50	5.50	5.70	5.70	5.75		# of strides	11.50	10.90	11.20	11.45	22.40	22.65	0.25
	velocity	8.06	9.43	9.26	9.09	9.09	8.77	8.77	8.70	8.88	164.2	8.70	9.17	8.93	8.73	8.93	8.83	
Janežic, Luka (SLO) (1995)	time	6.4	11.5	16.8	22.2	27.9	33.7	39.6	45.85	45.85	6 / 2							
reaction time 0.177	interval		5.10	5.30	5.40	5.70	5.80	5.90	6.25		# of strides	11.50	10.70	11.50	12.15	22.20	23.65	1.45
	velocity	7.81	9.80	9.43	9.26	8.77	8.62	8.47	8.00	8.72		8.70	9.35	8.70	8.23	9.01	8.46	
Dobber, Jochem (NED) (19	time	6.3	11.2	16.5	21.9	27.6	33.5	39.7	46.23	46.23	2 / 3							
reaction time 0.190	interval		4.90	5.30	5.40	5.70	5.90	6.20	6.53		# of strides	11.20	10.70	11.60	12.73	21.90	24.33	2.43
	velocity	7.94	10.20	9.43	9.26	8.77	8.47	8.06	7.66	8.65		8.93	9.35	8.62	7.86	9.13	8.22	
Yousif, Rabah (GBR) (1986	time	6.4	11.6	16.9	22.3	27.9	33.7	39.9	46.63	46.63	4 / 4							
reaction time 0.177	interval		5.20	5.30	5.40	5.60	5.80	6.20	6.73		# of strides	11.60	10.70	11.40	12.93	22.30	24.33	2.03
	velocity	7.81	9.62	9.43	9.26	8.93	8.62	8.06	7.43	8.58		8.62	9.35	8.77	7.73	8.97	8.22	
Schlegel, Marvin (GER) (19	time	6.3	11.5	16.9	22.2	27.8	33.7	40.1	46.99	46.99	7 / 5							
reaction time 0.195	interval		5.20	5.40	5.30	5.60	5.90	6.40	6.89		# of strides	11.50	10.70	11.50	13.29	22.20	24.79	2.59

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

	velocity	7.94	9.62	9.26	9.43	8.93	8.47	7.81	7.26	8.51	167.7	8.70	9.35	8.70	7.52	9.01	8.07	
Re, Davide (ITA) (1993)	time	6.5	11.7	17.2	22.6	28.4	34.2	40.3	47.00	47.00	5 / 6							
reaction time 0.157	interval		5.20	5.50	5.40	5.80	5.80	6.10	6.70		# of strides	11.70	10.90	11.60	12.80	22.60	24.40	1.80
	velocity	7.69	9.62	9.09	9.26	8.62	8.62	8.20	7.46	8.51		8.55	9.17	8.62	7.81	8.85	8.20	
Ekelund-Arenander, Nick (	time	6.4	11.6	17.1	22.6	28.4	34.4	40.7	47.42	47.42	3 / 7							
reaction time 0.159	interval		5.20	5.50	5.50	5.80	6.00	6.30	6.72		# of strides	11.60	11.00	11.80	13.02	22.60	24.82	2.22
	velocity	7.81	9.62	9.09	9.09	8.62	8.33	7.94	7.44	8.44		8.62	9.09	8.47	7.68	8.85	8.06	
Johansson, Emil (SWE) (20	time	6.4	11.6	17.1	22.9	29.1	35.2	41.3	47.84	47.84	1 / 8							
reaction time 0.161	interval		5.20	5.50	5.80	6.20	6.10	6.10	6.54		# of strides	11.60	11.30	12.30	12.64	22.90	24.94	2.04
	velocity	7.81	9.62	9.09	8.62	8.06	8.20	8.20	7.65	8.36		8.62	8.85	8.13	7.91	8.73	8.02	

2020 Seiko Golden Grand Prix (Tokyo, JPN)

FINAL date 23-Aug-20

Yamanaka (2020) - 400m race analysis of men and women during 2020 season

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ito, Rikuya (JPN) (1998)	time	6.04	10.95	16.00	21.27	26.83	32.77	39.04	45.83	45.83	4 / 1							
reaction time 0.132	interval		4.91	5.05	5.27	5.56	5.94	6.27	6.79		# of strides	10.95	10.32	11.50	13.06	21.27	24.56	3.29
	velocity	8.28	10.18	9.90	9.49	8.99	8.42	7.97	7.36	8.73		9.13	9.69	8.70	7.66	9.40	8.14	
Obuchi, Mizuki (JPN) (1997	time	6.17	11.22	16.37	21.70	27.37	33.24	39.44	46.25	46.25	2 / 2							
reaction time 0.168	interval		5.05	5.15	5.33	5.67	5.87	6.20	6.81		# of strides	11.22	10.48	11.54	13.01	21.70	24.55	2.85
	velocity	8.10	9.90	9.71	9.38	8.82	8.52	8.06	7.34	8.65		8.91	9.54	8.67	7.69	9.22	8.15	
Imoto, Yoshinobu (JPN) (1	time	6.06	10.99	16.17	21.72	27.44	33.44	39.80	46.67	46.67	7 / 3							
reaction time 0.138	interval		4.93	5.18	5.55	5.72	6.00	6.36	6.87		# of strides	10.99	10.73	11.72	13.23	21.72	24.95	3.23
	velocity	8.25	10.14	9.65	9.01	8.74	8.33	7.86	7.28	8.57		9.10	9.32	8.53	7.56	9.21	8.02	
Sato, Kentaro (JPN) (1994)	time	6.05	11.02	16.13	21.56	27.24	33.41	39.94	46.95	46.95	6 / 4							
reaction time 0.150	interval		4.97	5.11	5.43	5.68	6.17	6.53	7.01		# of strides	11.02	10.54	11.85	13.54	21.56	25.39	3.83
	velocity	8.26	10.06	9.78	9.21	8.80	8.10	7.66	7.13	8.52		9.07	9.49	8.44	7.39	9.28	7.88	
Kimura, Kazushi (JPN) (19	time	6.19	11.24	16.37	21.76	27.42	33.46	39.93	47.28	47.28	3 / 5							
reaction time 0.176	interval		5.05	5.13	5.39	5.66	6.04	6.47	7.35		# of strides	11.24	10.52	11.70	13.82	21.76	25.52	3.76
	velocity	8.08	9.90	9.75	9.28	8.83	8.28	7.73	6.80	8.46		8.90	9.51	8.55	7.24	9.19	7.84	
Kawauchi, Mitsuki (JPN) (1	time	6.34	11.59	16.97	22.51	28.32	34.35	40.63	47.29	47.29	8 / 6							
reaction time 0.135	interval		5.25	5.38	5.54	5.81	6.03	6.28	6.66		# of strides	11.59	10.92	11.84	12.94	22.51	24.78	2.27
	velocity	7.89	9.52	9.29	9.03	8.61	8.29	7.96	7.51	8.46		8.63	9.16	8.45	7.73	8.88	8.07	
Wakabayashi, Kota (JPN) (	time	6.24	11.34	16.53	22.02	27.82	33.98	40.48	47.72	47.72	9 / 7							
reaction time 0.156	interval		5.10	5.19	5.49	5.80	6.16	6.50	7.24		# of strides	11.34	10.68	11.96	13.74	22.02	25.70	3.68
	velocity	8.01	9.80	9.63	9.11	8.62	8.12	7.69	6.91	8.38		8.82	9.36	8.36	7.28	9.08	7.78	

2020 Shimane High School Championships (Izumo, JPN)

FINAL date 11-Jul-20

Shimizu (2020) - shimane high school championships 2020 - biomechanics data analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Matsuura, Taiga (JPN) (200	time		11.38		22.73		35.41		49.24	49.24	6 / 1							
reaction time	interval				11.35		12.68		13.83		# of strides	11.38	11.35	12.68	13.83	22.73	26.51	3.78
	velocity		8.79		8.81		7.89		7.23	8.12		8.79	8.81	7.89	7.23	8.80	7.54	
Tobita, Riku (JPN)	time		11.81		23.50		36.53		50.72	50.72	7 / 2							
reaction time	interval				11.69		13.03		14.19		# of strides	11.81	11.69	13.03	14.19	23.50	27.22	3.72
	velocity		8.47		8.55		7.67		7.05	7.89		8.47	8.55	7.67	7.05	8.51	7.35	
Ibukun, Hisashiyo (JPN)	time		12.14		24.08		36.83		50.80	50.80	4 / 3							
reaction time	interval				11.94		12.75		13.97		# of strides	12.14	11.94	12.75	13.97	24.08	26.72	2.64
	velocity		8.24		8.38		7.84		7.16	7.87		8.24	8.38	7.84	7.16	8.31	7.49	
Yamane, Yusuke (JPN) (200	time		11.91		24.00		37.41		51.85	51.85	8 / 4							
reaction time	interval				12.09		13.41		14.44		# of strides	11.91	12.09	13.41	14.44	24.00	27.85	3.85
	velocity		8.40		8.27		7.46		6.93	7.71		8.40	8.27	7.46	6.93	8.33	7.18	

2019 Japanese National U18/U20 Championships (Hiroshima, JPN)

U20 FINAL date 18-Oct-19

Kijima (2019) - research on athlete performance and technique- 2019 data book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Daichi, Tomita (JPN) (2001)	time	6.30	11.48	16.77	22.38	28.13	34.07	40.16	46.64	46.64	5 / 1							
reaction time 0.189	interval		5.18	5.29	5.61	5.75	5.94	6.09	6.48		# of strides	11.48	10.90	11.69	12.57	22.38	24.26	1.88
	velocity	7.94	9.65	9.45	8.91	8.70	8.42	8.21	7.72	8.58	181.0	8.71	9.17	8.55	7.96	8.94	8.24	
Tatsunami, Clay Aaron (JPI	time	6.54	11.89	17.30	22.89	28.63	34.52	40.62	47.12	47.12	4 / 2							
reaction time 0.165	interval		5.35	5.41	5.59	5.74	5.89	6.10	6.50		# of strides	11.89	11.00	11.63	12.60	22.89	24.23	1.34
	velocity	7.65	9.35	9.24	8.94	8.71	8.49	8.20	7.69	8.49	189.7	8.41	9.09	8.60	7.94	8.74	8.25	
Suzuki, Aoto (JPN) (2001)	time	6.43	11.80	17.28	23.06	29.06	35.13	41.27	47.69	47.69	3 / 3							
reaction time 0.211	interval		5.37	5.48	5.78	6.00	6.07	6.14	6.42		# of strides	11.80	11.26	12.07	12.56	23.06	24.63	1.57
	velocity	7.78	9.31	9.12	8.65	8.33	8.24	8.14	7.79	8.39	178.0	8.47	8.88	8.29	7.96	8.67	8.12	
Koshimizu, Yusuke (JPN) (	time	6.28	11.39	16.65	22.35	28.28	34.49	41.04	47.98	47.98	6 / 4							
reaction time 0.225	interval		5.11	5.26	5.70	5.93	6.21	6.55	6.94		# of strides	11.39	10.96	12.14	13.49	22.35	25.63	3.28
	velocity	7.96	9.78	9.51	8.77	8.43	8.05	7.63	7.20	8.34	179.7	8.78	9.12	8.24	7.41	8.95	7.80	

Fujiyoshi, Shunta (JPN) (2(	time	6.54	11.77	17.08	22.69	28.64	34.81	41.18	48.00	48.00	2 / 5							
reaction time 0.178	interval		5.23	5.31	5.61	5.95	6.17	6.37	6.82		# of strides	11.77	10.92	12.12	13.19	22.69	25.31	2.62
	velocity	7.65	9.56	9.42	8.91	8.40	8.10	7.85	7.33	8.33		8.50	9.16	8.25	7.58	8.81	7.90	

U18 FINAL (300m date 18-Oct-19

Kijima (2019) - research on athlete performance and technique- 2019 data book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kinoshita, Yuichi (JPN) (20	time		11.12		21.58		33.07			33.07	4 / 1							***100m-300m***
reaction time 0.159	interval				10.46		11.49				# of strides	11.12	10.46	11.49		21.58		*21.95*
	velocity		8.99		9.56		8.70			9.07	140.0	8.99	9.56	8.70		9.27		*9.11*
Inoue, Futoshi (JPN)	time		11.38		21.92		33.46			33.46	5 / 2							***100m-300m***
reaction time 0.192	interval				10.54		11.54				# of strides	11.38	10.54	11.54		21.92		*22.08*
	velocity		8.79		9.49		8.67			8.97	135.5	8.79	9.49	8.67		9.12		*9.06*
Hirano, Yuki (JPN) (2002)	time		11.29		22.23		33.87			33.87	7 / 3							***100m-300m***
reaction time 0.187	interval				10.94		11.64				# of strides	11.29	10.94	11.64		22.23		*22.58*
	velocity		8.86		9.14		8.59			8.86	140.0	8.86	9.14	8.59		9.00		*8.86*
Mamada, Kodai (JPN) (200	time		11.39		22.07		34.00			34.00	3 / 4							***100m-300m***
reaction time 0.160	interval				10.68		11.93				# of strides	11.39	10.68	11.93		22.07		*22.61*
	velocity		8.78		9.36		8.38			8.82	145,7	8.78	9.36	8.38		9.06		*8.85*
Hirai, Masato (JPN) (2002)	time		11.59		22.41		34.25			34.25	6 / 5							***100m-300m***
reaction time 0.153	interval				10.82		11.84				# of strides	11.59	10.82	11.84		22.41		*22.66*
	velocity		8.63		9.24		8.45			8.76	138.0	8.63	9.24	8.45		8.92		*8.83*
Iwagaki, Yuji (JPN)	time		11.45		22.36		34.79			34.79	2 / 6							***100m-300m***
reaction time 0.123	interval				10.91		12.43				# of strides	11.45	10.91	12.43		22.36		*23.34*
	velocity		8.73		9.17		8.05			8.62		8.73	9.17	8.05		8.94		*8.57*
Yamada, Reo (JPN)	time		11.69		22.96		35.28			35.28	8 / 7							***100m-300m***
reaction time 0.204	interval				11.27		12.32				# of strides	11.69	11.27	12.32		22.96		*23.59*
	velocity		8.55		8.87		8.12			8.50		8.55	8.87	8.12		8.71		*8.48*
Nakajima, Yuki Joseph (JPI	time		12.10		23.57		35.70			35.70	1 / 8							***100m-300m***
reaction time 0.184	interval				11.47		12.13				# of strides	12.10	11.47	12.13		23.57		*23.60*
	velocity		8.26		8.72		8.24			8.40		8.26	8.72	8.24		8.49		*8.47*

2019 IAAF World Championships (Doha, QAT)

FINAL date 04-Oct-19

Yamanaka (2019) - race analysis of men and women 400m competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Gardiner, Steven (BAH) (19	time	6.22	11.00	15.92	20.96	26.15	31.59	37.32	43.48	43.48	4 / 1							
reaction time 0.164	interval		4.78	4.92	5.04	5.19	5.44	5.73	6.16	**NR PB**	# of strides	11.00	9.96	10.63	11.89	20.96	22.52	1.56
	velocity	8.04	10.46	10.16	9.92	9.63	9.19	8.73	8.12	9.20	158.5	9.09	10.04	9.41	8.41	9.54	8.88	
Zambrano, Anthony (COL)	time	6.08	10.98	15.98	21.13	26.54	32.10	37.91	44.15	44.15	8 / 2							
reaction time 0.182	interval		4.90	5.00	5.15	5.41	5.56	5.81	6.24	**AR PB**	# of strides	10.98	10.15	10.97	12.05	21.13	23.02	1.89
	velocity	8.22	10.20	10.00	9.71	9.24	8.99	8.61	8.01	9.06	174.7	9.11	9.85	9.12	8.30	9.47	8.69	
Kerley, Fred (USA) (1995)	time	6.03	10.87	15.78	20.87	26.16	31.79	37.74	44.17	44.17	5 / 3							
reaction time 0.144	interval		4.84	4.91	5.09	5.29	5.63	5.95	6.43		# of strides	10.87	10.00	10.92	12.38	20.87	23.30	2.43
	velocity	8.29	10.33	10.18	9.82	9.45	8.88	8.40	7.78	9.06	170.0	9.20	10.00	9.16	8.08	9.58	8.58	
Gaye, Demish (JAM) (1993)	0.171	no information available							**PB**	44.46	3 / 4		# of strides	178.2				
James, Kirani (GRN) (1992)	0.127	no information available								44.54	7 / 5		# of strides	164.7				
Korir, Emmanuel (KEN) (19	0.160	no information available								44.94	9 / 6		# of strides	178.2				
Cedenio, Machel (TTO) (19	time	6.01	10.78	15.67	20.73	26.07	31.83	38.05	45.30	45.30	6 / 7							
reaction time 0.221	interval		4.77	4.89	5.06	5.34	5.76	6.22	7.25		# of strides	10.78	9.95	11.10	13.47	20.73	24.57	3.84
	velocity	8.32	10.48	10.22	9.88	9.36	8.68	8.04	6.90	8.83	167.5	9.28	10.05	9.01	7.42	9.65	8.14	
Bloomfield, Akeem (JAM) (	time	6.33	11.15	16.15	21.40	26.84	32.66	38.74	45.36	45.36	2 / 8							
reaction time 0.196	interval		4.82	5.00	5.25	5.44	5.82	6.08	6.62		# of strides	11.15	10.25	11.26	12.70	21.40	23.96	2.56
	velocity	7.90	10.37	10.00	9.52	9.19	8.59	8.22	7.55	8.82	164.0	8.97	9.76	8.88	7.87	9.35	8.35	

Semi-Final 3 date 02-Oct-19

Yamanaka (2019) - race analysis of men and women 400m competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Cedenio, Machel (TTO) (19	time	6.05	10.84	15.76	20.98	26.45	32.17	38.07	44.41	44.41	7 / 1							
reaction time 0.239	interval		4.79	4.92	5.22	5.47	5.72	5.90	6.34		# of strides	10.84	10.14	11.19	12.24	20.98	23.43	2.45
	velocity	8.26	10.44	10.16	9.58	9.14	8.74	8.47	7.89	9.01	166.2	9.23	9.86	8.94	8.17	9.53	8.54	
Zambrano, Anthony (COL)	time	6.15	11.09	16.19	21.56	27.07	32.67	38.42	44.55	44.55	8 / 2							
reaction time 0.183	interval		4.94	5.10	5.37	5.51	5.60	5.75	6.13	**NR PB**	# of strides	11.09	10.47	11.11	11.88	21.56	22.99	1.43
	velocity	8.13	10.12	9.80	9.31	9.07	8.93	8.70	8.16	8.98	177.2	9.02	9.55	9.00	8.42	9.28	8.70	
Bloomfield, Akeem (JAM) (	time	6.24	11.14	16.12	21.25	26.66	32.34	38.29	44.77	44.77	6 / 3							
reaction time 0.207	interval		4.90	4.98	5.13	5.41	5.68	5.95	6.48		# of strides	11.14	10.11	11.09	12.43	21.25	23.52	2.27
	velocity	8.01	10.20	10.04	9.75	9.24	8.80	8.40	7.72	8.93	162.5	8.98	9.89	9.02	8.05	9.41	8.50	
Walsh, Julian Jrummi (JPN	time	6.14	11.16	16.33	21.72	27.22	32.91	38.84	45.13	45.13	5 / 4							
reaction time 0.132	interval		5.02	5.17	5.39	5.50	5.69	5.93	6.29	**PB**	# of strides	11.16	10.56	11.19	12.22	21.72	23.41	1.69
	velocity	8.14	9.96	9.67	9.28	9.09	8.79	8.43	7.95	8.86	171.5	8.96	9.47	8.94	8.18	9.21	8.54	

Semi-Final 2

date 02-Oct-19

Yamanaka (2019) - race analysis of men and women 400m competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Gardiner, Steven (BAH) (19	time	6.09	10.98	15.91	21.09	26.40	32.00	37.88	44.13	44.13	6 / 1							
reaction time 0.154	interval		4.89	4.93	5.18	5.31	5.60	5.88	6.25		# of strides	10.98	10.11	10.91	12.13	21.09	23.04	1.95
	velocity	8.21	10.22	10.14	9.65	9.42	8.93	8.50	8.00	9.06	157.5	9.11	9.89	9.17	8.24	9.48	8.68	
James, Kirani (GRN) (1992)	time	6.02	10.89	15.84	21.02	26.40	32.02	37.93	44.23	44.23	5 / 2							
reaction time 0.119	interval		4.87	4.95	5.18	5.38	5.62	5.91	6.30		# of strides	10.89	10.13	11.00	12.21	21.02	23.21	2.19
	velocity	8.31	10.27	10.10	9.65	9.29	8.90	8.46	7.94	9.04	161.0	9.18	9.87	9.09	8.19	9.51	8.62	
Gaye, Demish (JAM) (1993)	time	6.07	10.89	15.82	21.07	26.58	32.33	38.25	44.66	44.66	7 / 3							
reaction time 0.188	interval		4.82	4.93	5.25	5.51	5.75	5.92	6.41		# of strides	10.89	10.18	11.26	12.33	21.07	23.59	2.52
	velocity	8.24	10.37	10.14	9.52	9.07	8.70	8.45	7.80	8.96	180.2	9.18	9.82	8.88	8.11	9.49	8.48	

Semi-Final 1

date 02-Oct-19

Yamanaka (2019) - race analysis of men and women 400m competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kerley, Fred (USA) (1995)	time	6.06	10.83	15.73	20.81	26.16	31.81	37.77	44.25	44.25	4 / 1							
reaction time 0.152	interval		4.77	4.90	5.08	5.35	5.65	5.96	6.48		# of strides	10.83	9.98	11.00	12.44	20.81	23.44	2.63
	velocity	8.25	10.48	10.20	9.84	9.35	8.85	8.39	7.72	9.04	170.7	9.23	10.02	9.09	8.04	9.61	8.53	
Korir, Emmanuel (KEN) (19	time	6.28	11.15	16.07	21.24	26.63	32.25	38.13	44.37	44.37	5 / 2							
reaction time 0.153	interval		4.87	4.92	5.17	5.39	5.62	5.88	6.24		# of strides	11.15	10.09	11.01	12.12	21.24	23.13	1.89
	velocity	7.96	10.27	10.16	9.67	9.28	8.90	8.50	8.01	9.02	176.5	8.97	9.91	9.08	8.25	9.42	8.65	

2019 The Match - Europe v USA (Minsk, BLR)

FINAL

date 09-Sep-19

European Athletics (2019) - race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Cherry, Michael (USA) (199	time		10.99		21.24		32.55		45.13	45.13	3 / 1							
reaction time 0.163	interval				10.25		11.31		12.58		# of strides	10.99	10.25	11.31	12.58	21.24	23.89	2.65
	velocity		9.10		9.76		8.84		7.95	8.86	165.0	9.10	9.76	8.84	7.95	9.42	8.37	
London, Wil (USA) (1997)	time		11.41		21.96		33.20		45.39	45.39	5 / 2							
reaction time 0.204	interval				10.55		11.24		12.19		# of strides	11.41	10.55	11.24	12.19	21.96	23.43	1.47
	velocity		8.76		9.48		8.90		8.20	8.81	178.2	8.76	9.48	8.90	8.20	9.11	8.54	
Re, Davide (ITA) (1993)	time		11.34		21.96		33.45		46.05	46.05	4 / 3							
reaction time 0.154	interval				10.62		11.49		12.60		# of strides	11.34	10.62	11.49	12.60	21.96	24.09	2.13
	velocity		8.82		9.42		8.70		7.94	8.69	176.0	8.82	9.42	8.70	7.94	9.11	8.30	
Richard, Tyrell (USA) (1997	time		11.54		22.51		34.09		46.38	46.38	9 / 4							
reaction time 0.145	interval				10.97		11.58		12.29		# of strides	11.54	10.97	11.58	12.29	22.51	23.87	1.36
	velocity		8.67		9.12		8.64		8.14	8.62	176.7	8.67	9.12	8.64	8.14	8.88	8.38	
Zalewski, Karol (POL) (1993	time		11.30		22.06		33.65		46.57	46.57	2 / 5							
reaction time 0.171	interval				10.76		11.59		12.92		# of strides	11.30	10.76	11.59	12.92	22.06	24.51	2.45
	velocity		8.85		9.29		8.63		7.74	8.59	175.2	8.85	9.29	8.63	7.74	9.07	8.16	
Yousif, Rabah (GBR) (1986	time		11.42		21.89		33.48		46.76	46.76	6 / 6							
reaction time 0.166	interval				10.47		11.59		13.28		# of strides	11.42	10.47	11.59	13.28	21.89	24.87	2.98
	velocity		8.76		9.55		8.63		7.53	8.55	167.0	8.76	9.55	8.63	7.53	9.14	8.04	
Janežič, Luka (SLO) (1995)	time		11.61		22.39		34.09		46.89	46.89	8 / 7							
reaction time 0.205	interval				10.78		11.70		12.80		# of strides	11.61	10.78	11.70	12.80	22.39	24.50	2.11
	velocity		8.61		9.28		8.55		7.81	8.53	167.5	8.61	9.28	8.55	7.81	8.93	8.16	
Strother, Nathan (USA) (19	time		11.46		22.15		33.64		47.15	47.15	7 / 8							
reaction time 0.215	interval				10.69		11.49		13.51		# of strides	11.46	10.69	11.49	13.51	22.15	25.00	2.85
	velocity		8.73		9.35		8.70		7.40	8.48	184.0	8.73	9.35	8.70	7.40	9.03	8.00	

2019 Memorial van Damme (Brussels, BEL)

FINAL

date 06-Sep-19

Omega Timing (2019) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Norman, Michael (USA) (19	time	6.0	10.8	15.7	21.0	26.4	32.1	38.1	44.26	44.26	5 / 1							
reaction time 0.155	interval		4.8	4.9	5.3	5.4	5.7	6.0	6.2		# of strides	10.80	10.20	11.10	12.16	21.00	23.26	2.26
	velocity	8.33	10.42	10.20	9.43	9.26	8.77	8.33	8.12	9.04	171.0	9.26	9.80	9.01	8.22	9.52	8.60	
Kerley, Fred (USA) (1995)	time	6.1	10.8	15.8	20.8	26.3	32.0	38.0	44.46	44.46	7 / 2							
reaction time 0.147	interval		4.7	5.0	5.0	5.5	5.7	6.0	12.5		# of strides	10.80	10.00	11.20	12.46	20.80	23.66	2.86
	velocity	8.20	10.64	10.00	10.00	9.09	8.77	8.33	8.03	9.00	173.0	9.26	10.00	8.93	8.03	9.62	8.45	
Bloomfield, Akeem (JAM) (	time	6.2	10.9	15.8	20.8	26.2	32.0	38.0	44.67	44.67	6 / 3							
reaction time 0.184	interval		4.7	4.9	5.0	5.4	5.8	6.0	12.7		# of strides	10.90	9.90	11.20	12.67	20.80	23.87	3.07
	velocity	8.06	10.64	10.20	10.00	9.26	8.62	8.33	7.89	8.95	164.0	9.17	10.10	8.93	7.89	9.62	8.38	
Igbokwe, Obi (USA) (1997)	time	6.1	11.0	16.0	21.2	26.6	32.4	38.4	44.96	44.96	3 / 4							
reaction time 0.136	interval		4.9	5.0	5.2	5.4	5.8	6.0	12.6		# of strides	11.00	10.20	11.20	12.56	21.20	23.76	2.56
	velocity	8.20	10.20	10.00	9.62	9.26	8.62	8.33	7.96	8.90		9.09	9.80	8.93	7.96	9.43	8.42	
Montgomery, Kahmari (US	time	6.0	10.8	15.9	21.1	26.6	32.4	38.5	45.31	45.31	2 / 5							
reaction time 0.186	interval		4.8	5.1	5.2	5.5	5.8	6.1	12.9		# of strides	10.80	10.30	11.30	12.91	21.10	24.21	3.11
	velocity	8.33	10.42	9.80	9.62	9.09	8.62	8.20	7.75	8.83		9.26	9.71	8.85	7.75	9.48	8.26	
Cherry, Michael (USA) (199	time	6.2	11.0	15.9	21.1	26.6	32.5	38.6	45.55	45.55	8 / 6							

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

reaction time 0.209	interval		4.8	4.9	5.2	5.5	5.9	6.1	13.1		# of strides	11.00	10.10	11.40	13.05	21.10	24.45	3.35
	velocity	8.06	10.42	10.20	9.62	9.09	8.47	8.20	7.66	8.78		9.09	9.90	8.77	7.66	9.48	8.18	
Sacoor, Jonathan (BEL) (1	time	6.2	11.1	16.2	21.5	27.1	32.9	39.0	45.72	45.72	9 / 7							
reaction time 0.147	interval		4.9	5.1	5.3	5.6	5.8	6.1	12.8		# of strides	11.10	10.40	11.40	12.82	21.50	24.22	2.72
	velocity	8.06	10.20	9.80	9.43	8.93	8.62	8.20	7.80	8.75		9.01	9.62	8.77	7.80	9.30	8.26	
Allen, Nathon (JAM) (1995)	time	6.4	11.3	16.4	21.6	27.3	33.3	39.6	46.17	46.17	1 / 8							
reaction time 0.168	interval		4.9	5.1	5.2	5.7	6.0	6.3	12.9		# of strides	11.30	10.30	11.70	12.87	21.60	24.57	2.97
	velocity	7.81	10.20	9.80	9.62	8.77	8.33	7.94	7.77	8.66		8.85	9.71	8.55	7.77	9.26	8.14	
Strother, Nathan (USA) (19	time	6.4	11.4	16.5	21.8	27.3	33.1	39.4	47.04	47.04	4 / 9							
reaction time 0.187	interval		5.0	5.1	5.3	5.5	5.8	6.3	13.9		# of strides	11.40	10.40	11.30	13.94	21.80	25.24	3.44
	velocity	7.81	10.00	9.80	9.43	9.09	8.62	7.94	7.17	8.50		8.77	9.62	8.85	7.17	9.17	7.92	

National FINAL

date 06-Sep-19

Omega Timing (2019) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Cedenio, Machel (TTO) (19	time	6.3	11.2	16.3	21.6	27.1	32.9	38.8	44.93	44.93	4 / 1							
reaction time	interval		4.9	5.1	5.3	5.5	5.8	5.9	6.1		# of strides	11.20	10.40	11.30	12.03	21.60	23.33	1.73
	velocity	7.94	10.20	9.80	9.43	9.09	8.62	8.47	8.16	8.90		8.93	9.62	8.85	8.31	9.26	8.57	
Hudson-Smith, Matthew (C	time	6.2	11.2	16.2	21.5	26.9	32.8	38.9	45.63	45.63	6 / 2							
reaction time	interval		5.0	5.0	5.3	5.4	5.9	6.1	12.8		# of strides	11.20	10.30	11.30	12.83	21.50	24.13	2.63
	velocity	8.06	10.00	10.00	9.43	9.26	8.47	8.20	7.79	8.77		8.93	9.71	8.85	7.79	9.30	8.29	
Borlée, Kevin (BEL) (1988)	time	6.4	11.4	16.6	21.9	27.4	33.3	39.3	45.89	45.89	5 / 3							
reaction time	interval		5.0	5.2	5.3	5.5	5.9	6.0	12.6		# of strides	11.40	10.50	11.40	12.59	21.90	23.99	2.09
	velocity	7.81	10.00	9.62	9.43	9.09	8.47	8.33	7.94	8.72		8.77	9.52	8.77	7.94	9.13	8.34	
Agard, Terrence (NED) (19	time	6.4	11.4	16.6	21.9	27.4	33.3	39.5	46.29	46.29	2 / 4							
reaction time	interval		5.0	5.2	5.3	5.5	5.9	6.2	13.0		# of strides	11.40	10.50	11.40	12.99	21.90	24.39	2.49
	velocity	7.81	10.00	9.62	9.43	9.09	8.47	8.06	7.70	8.64		8.77	9.52	8.77	7.70	9.13	8.20	
Watrin, Julien (BEL) (1992)	time	6.4	11.4	16.6	22.0	27.7	33.6	39.8	46.60	46.60	3 / 5							
reaction time	interval		5.0	5.2	5.4	5.7	5.9	6.2	13.0		# of strides	11.40	10.60	11.60	13.00	22.00	24.60	2.60
	velocity	7.81	10.00	9.62	9.26	8.77	8.47	8.06	7.69	8.58		8.77	9.43	8.62	7.69	9.09	8.13	
Borlée, Dylan (BEL) (1992)	time	6.3	11.2	16.3	21.7	27.3	33.4	39.8	46.69	46.69	7 / 6							
reaction time	interval		4.9	5.1	5.4	5.6	6.1	6.4	13.3		# of strides	11.20	10.50	11.70	13.29	21.70	24.99	3.29
	velocity	7.94	10.20	9.80	9.26	8.93	8.20	7.81	7.52	8.57		8.93	9.52	8.55	7.52	9.22	8.00	
Badji, Asamti (BEL) (1995)	time	6.4	11.5	16.8	22.3	28.1	34.3	40.8	48.00	48.00	9 / 7							
reaction time	interval		5.1	5.3	5.5	5.8	6.2	6.5	13.7		# of strides	11.50	10.80	12.00	13.70	22.30	25.70	3.40
	velocity	7.81	9.80	9.43	9.09	8.62	8.06	7.69	7.30	8.33		8.70	9.26	8.33	7.30	8.97	7.78	
Makwala, Isaac (BOT) (1985	time	6.4	11.3	16.5	21.9	27.3	33.1	39.4		???	8 / --							
reaction time	interval		4.9	5.2	5.4	5.4	5.8	6.3		DQ	# of strides	11.30	10.60	11.20		21.90		
	velocity	7.81	10.20	9.62	9.26	9.26	8.62	7.94				8.85	9.43	8.93		9.13		

2019 Japanese World Championships Trials (Fujiyoshida, JPN)

FINAL

date 01-Sep-19

Yamanaka (2019) - race analysis of men and women 400m competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Walsh, Julian Jrummi (JPN	time	6.13	11.01	16.10	21.43	27.00	32.84	38.87	45.21	45.21	5 / 1							
reaction time	interval		4.88	5.09	5.33	5.57	5.84	6.03	6.34	PB	# of strides	11.01	10.42	11.41	12.37	21.43	23.78	2.35
	velocity	8.16	10.25	9.82	9.38	8.98	8.56	8.29	7.89	8.85	172.7	9.08	9.60	8.76	8.08	9.33	8.41	
Wakabayashi, Kota (JPN) (	time	6.25	11.23	16.35	21.68	27.31	33.23	39.38	46.04	46.04	4 / 2							
reaction time	interval		4.98	5.12	5.33	5.63	5.92	6.15	6.66		# of strides	11.23	10.45	11.55	12.81	21.68	24.36	2.68
	velocity	8.00	10.04	9.77	9.38	8.88	8.45	8.13	7.51	8.69	173.0	8.90	9.57	8.66	7.81	9.23	8.21	
Tamura, Tomoya (JPN) (19	time	6.33	11.41	16.63	22.04	27.56	33.35	39.51	46.28	46.28	8 / 3							
reaction time	interval		5.08	5.22	5.41	5.52	5.79	6.16	6.77		# of strides	11.41	10.63	11.31	12.93	22.04	24.24	2.20
	velocity	7.90	9.84	9.58	9.24	9.06	8.64	8.12	7.39	8.64	184.0	8.76	9.41	8.84	7.73	9.07	8.25	
Sato, Kentaro (JPN) (1994)	time	6.30	11.32	16.52	21.95	27.59	33.56	39.75	46.36	46.36	6 / 4							
reaction time	interval		5.02	5.20	5.43	5.64	5.97	6.19	6.61		# of strides	11.32	10.63	11.61	12.80	21.95	24.41	2.46
	velocity	7.94	9.96	9.62	9.21	8.87	8.38	8.08	7.56	8.63	179.0	8.83	9.41	8.61	7.81	9.11	8.19	
Kawauchi, Mitsuki (JPN) (1	time	6.27	11.46	16.77	22.21	27.78	33.64	39.76	46.40	46.40	3 / 5							
reaction time	interval		5.19	5.31	5.44	5.57	5.86	6.12	6.64		# of strides	11.46	10.75	11.43	12.76	22.21	24.19	1.98
	velocity	7.97	9.63	9.42	9.19	8.98	8.53	8.17	7.53	8.62	190.0	8.73	9.30	8.75	7.84	9.00	8.27	
Ito, Rikiya (JPN) (1998)	time	6.42	11.54	16.73	22.17	27.85	33.74	39.94	46.71	46.71	7 / 6							
reaction time	interval		5.12	5.19	5.44	5.68	5.89	6.20	6.77		# of strides	11.54	10.63	11.57	12.97	22.17	24.54	2.37
	velocity	7.79	9.77	9.63	9.19	8.80	8.49	8.06	7.39	8.56	187.5	8.67	9.41	8.64	7.71	9.02	8.15	

2019 Müller Grand Prix (Birmingham, GBR)

FINAL

date 18-Aug-19

Omega Timing (2019) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Bloomfield, Akeem (JAM) (	time		11.4		21.8		33.0		45.04	45.04	6 / 1							
reaction time 0.191	interval				10.4		11.2		12.0		# of strides	11.40	10.40	11.20	12.04	21.80	23.24	1.44
	velocity		8.77		9.62		8.93		8.31	8.88	164.0	8.77	9.62	8.93	8.31	9.17	8.61	

Igbokwe, Obi (USA) (1997)	time	11.1	21.5	33.0	45.53	45.53	1 / 2								
reaction time 0.136	interval		10.4	11.5	12.5		# of strides	11.10	10.40	11.50	12.53	21.50	24.03	2.53	
	velocity	9.01	9.62	8.70	7.98	8.79	177.7	9.01	9.62	8.70	7.98	9.30	8.32		
Hudson-Smith, Matthew (	time	11.3	21.9	33.1	45.55	45.55	7 / 3								
reaction time 0.165	interval		10.6	11.2	12.5		# of strides	11.30	10.60	11.20	12.45	21.90	23.65	1.75	
	velocity	8.85	9.43	8.93	8.03	8.78	163.7	8.85	9.43	8.93	8.03	9.13	8.46		
Montgomery, Kahmari (US	time	11.2	21.7	33.1	45.59	45.59	2 / 4								
reaction time 0.213	interval		10.5	11.4	12.5		# of strides	11.20	10.50	11.40	12.49	21.70	23.89	2.19	
	velocity	8.93	9.52	8.77	8.01	8.77	178.7	8.93	9.52	8.77	8.01	9.22	8.37		
Cherry, Michael (USA) (199	time	11.4	22.3	33.5	45.61	45.61	8 / 5								
reaction time 0.148	interval		10.9	11.2	12.1		# of strides	11.40	10.90	11.20	12.11	22.30	23.31	1.01	
	velocity	8.77	9.17	8.93	8.26	8.77	164.2	8.77	9.17	8.93	8.26	8.97	8.58		
Gaye, Demish (JAM) (1993)	time	11.4	21.8	33.3	45.64	45.64	4 / 6								
reaction time 0.153	interval		10.4	11.5	12.3		# of strides	11.40	10.40	11.50	12.34	21.80	23.84	2.04	
	velocity	8.77	9.62	8.70	8.10	8.76	182.5	8.77	9.62	8.70	8.10	9.17	8.39		
Norwood, Vernon (USA) (1	time	11.2	21.7	33.1	45.79	45.79	3 / 7								
reaction time 0.171	interval		10.5	11.4	12.7		# of strides	11.20	10.50	11.40	12.69	21.70	24.09	2.39	
	velocity	8.93	9.52	8.77	7.88	8.74	177.2	8.93	9.52	8.77	7.88	9.22	8.30		

2019 Japanese National High School Championships (Okinawa, JPN)

FINAL date 04-Aug-19

Kota (2019) - 72nd high school championships: JAF scientific committee - biomechanics data collection

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kinoshita, Yuichi (JPN) (20	time	6.43	11.62	16.72	21.98	27.47	33.45	39.88	46.62	46.62	5 / 1							
reaction time	interval		5.19	5.10	5.26	5.49	5.98	6.43	6.74	**PB**	# of strides	11.62	10.36	11.47	13.17	21.98	24.64	2.66
	velocity	7.78	9.63	9.80	9.51	9.11	8.36	7.78	7.42	8.58		8.61	9.65	8.72	7.59	9.10	8.12	
Yoshikawa, Ryo (JPN) (200	time	6.61	11.92	17.19	22.57	28.25	34.21	40.35	46.87	46.87	7 / 2							
reaction time	interval		5.31	5.27	5.38	5.68	5.96	6.14	6.52	**PB**	# of strides	11.92	10.65	11.64	12.66	22.57	24.30	1.73
	velocity	7.56	9.42	9.49	9.29	8.80	8.39	8.14	7.67	8.53		8.39	9.39	8.59	7.90	8.86	8.23	
Fujiyoshi, Shunta (JPN) (2(	time	6.54	11.65	16.77	22.01	27.62	33.62	39.98	46.88	46.88	6 / 3							
reaction time	interval		5.11	5.12	5.24	5.61	6.00	6.36	6.90	**PB**	# of strides	11.65	10.36	11.61	13.26	22.01	24.87	2.86
	velocity	7.65	9.78	9.77	9.54	8.91	8.33	7.86	7.25	8.53		8.58	9.65	8.61	7.54	9.09	8.04	
Tomita, Daichi (JPN) (2001)	time	6.42	11.61	16.85	22.23	27.86	33.88	40.25	47.05	47.05	4 / 4							
reaction time	interval		5.19	5.24	5.38	5.63	6.02	6.37	6.80		# of strides	11.61	10.62	11.65	13.17	22.23	24.82	2.59
	velocity	7.79	9.63	9.54	9.29	8.88	8.31	7.85	7.35	8.50		8.61	9.42	8.58	7.59	9.00	8.06	
Imaizumi, Takaki (JPN) (200	time	6.60	11.94	17.27	22.76	28.47	34.47	40.84	47.52	47.52	8 / 5							
reaction time	interval		5.34	5.33	5.49	5.71	6.00	6.37	6.68		# of strides	11.94	10.82	11.71	13.05	22.76	24.76	2.00
	velocity	7.58	9.36	9.38	9.11	8.76	8.33	7.85	7.49	8.42		8.38	9.24	8.54	7.66	8.79	8.08	
Otsuki, Ohori (JPN) (2002)	time	6.87	12.37	17.84	23.32	28.94	34.79	41.02	47.70	47.70	2 / 6							
reaction time	interval		5.50	5.47	5.48	5.62	5.85	6.23	6.68		# of strides	12.37	10.95	11.47	12.91	23.32	24.38	1.06
	velocity	7.28	9.09	9.14	9.12	8.90	8.55	8.03	7.49	8.39		8.08	9.13	8.72	7.75	8.58	8.20	
Kosaka, Akihiro (JPN) (200	time	6.59	11.79	17.19	22.68	28.38	34.37	40.83	47.76	47.76	1 / 7							
reaction time	interval		5.20	5.40	5.49	5.70	5.99	6.46	6.93		# of strides	11.79	10.89	11.69	13.39	22.68	25.08	2.40
	velocity	7.59	9.62	9.26	9.11	8.77	8.35	7.74	7.22	8.38		8.48	9.18	8.55	7.47	8.82	7.97	
Jinushi, Naohiro (JPN) (20(	time	6.65	11.98	17.44	23.03	28.67	34.50	40.96	48.24	48.24	3 / 8							
reaction time	interval		5.33	5.46	5.59	5.64	5.83	6.46	7.28		# of strides	11.98	11.05	11.47	13.74	23.03	25.21	2.18
	velocity	7.52	9.38	9.16	8.94	8.87	8.58	7.74	6.87	8.29		8.35	9.05	8.72	7.28	8.68	7.93	

2019 USATF National Championships (Des Moines, IA)

FINAL date 27-Jul-19

Track Newsletter (2019) - USATF championships men

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kerley, Fred (USA) (1995)	time				21.1		32.0		43.6	43.64	/ 1							
reaction time	interval						10.90		11.60	**PB**	# of strides			10.90	11.60	21.10	22.50	1.40
	velocity				9.48		9.17		8.62	9.17				9.17	8.62	9.48	8.89	
Norman, Michael (USA) (19	time				21.1		32.2		43.8	43.79	/ 2							
reaction time	interval						11.10		11.60		# of strides			11.10	11.60	21.10	22.70	1.60
	velocity				9.48		9.01		8.62	9.13				9.01	8.62	9.48	8.81	
Strother, Nathan (USA) (19	time				21.8		32.6		44.3	44.29	/ 3							
reaction time	interval						10.80		11.70	**PB**	# of strides			10.80	11.70	21.80	22.50	0.70
	velocity				9.17		9.26		8.55	9.03				9.26	8.55	9.17	8.89	
Norwood, Vernon (USA) (1	time				21.6		32.3		44.4	44.40	/ 4							
reaction time	interval						10.70		12.10	**PB**	# of strides			10.70	12.10	21.60	22.80	1.20
	velocity				9.26		9.35		8.26	9.01				9.35	8.26	9.26	8.77	

2019 Müller Anniversary Games (London, GBR)

FINAL date 21-Jul-19

Omega Timing (2019) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Bloomfield, Akeem (JAM) (	time		11.1		21.0		32.1		44.40	44.40	5 / 1							
reaction time 0.184	interval				9.9		11.1		12.3		# of strides	11.10	9.90	11.10	12.30	21.00	23.40	2.40

	velocity	9.01	10.10	9.01	8.13	9.01	163.7	9.01	10.10	9.01	8.13	9.52	8.55	
Jones, Jonathan (BAR) (19	time	11.2	21.3	32.3	44.63	44.63	8 / 2							
reaction time 0.185	interval		10.1	11.0	12.3	NR	# of strides	11.20	10.10	11.00	12.33	21.30	23.33	2.03
	velocity	8.93	9.90	9.09	8.11	8.96	174.2	8.93	9.90	9.09	8.11	9.39	8.57	
Allen, Nathon (JAM) (1995)	time	11.1	21.2	32.2	44.85	44.85	6 / 3							
reaction time 0.149	interval		10.1	11.0	12.7		# of strides	11.10	10.10	11.00	12.65	21.20	23.65	2.45
	velocity	9.01	9.90	9.09	7.91	8.92	164.7	9.01	9.90	9.09	7.91	9.43	8.46	
Igbokwe, Obi (USA) (1997)	time	10.8	20.9	32.0	45.06	45.06	3 / 4							
reaction time 0.128	interval		10.1	11.1	13.1		# of strides	10.80	10.10	11.10	13.06	20.90	24.16	3.26
	velocity	9.26	9.90	9.01	7.66	8.88	175.0	9.26	9.90	9.01	7.66	9.57	8.28	
Gaye, Demish (JAM) (1993)	time	10.9	20.9	32.2	45.11	45.11	7 / 5							
reaction time 0.157	interval		10.0	11.3	12.9		# of strides	10.90	10.00	11.30	12.91	20.90	24.21	3.31
	velocity	9.17	10.00	8.85	7.75	8.87	183.0	9.17	10.00	8.85	7.75	9.57	8.26	
Thebe, Baboloki (BOT) (19	time	11.2	21.6	32.7	45.23	45.23	4 / 6							
reaction time 0.156	interval		10.4	11.1	12.5		# of strides	11.20	10.40	11.10	12.53	21.60	23.63	2.03
	velocity	8.93	9.62	9.01	7.98	8.84	180.0	8.93	9.62	9.01	7.98	9.26	8.46	
Janežič, Luka (SLO) (1995)	time	11.4	21.7	33.2	45.49	45.49	1 / 7							
reaction time 0.145	interval		10.3	11.5	12.3		# of strides	11.40	10.30	11.50	12.29	21.70	23.79	2.09
	velocity	8.77	9.71	8.70	8.14	8.79		8.77	9.71	8.70	8.14	9.22	8.41	
Yousif, Rabah (GBR) (1986	time	11.3	21.7	32.9	45.52	45.52	9 / 8							
reaction time 0.121	interval		10.4	11.2	12.6		# of strides	11.30	10.40	11.20	12.62	21.70	23.82	2.12
	velocity	8.85	9.62	8.93	7.92	8.79	165.2	8.85	9.62	8.93	7.92	9.22	8.40	
Chambers, Marcus (USA) (	time	11.2	21.8	33.4	46.26	46.26	2 / 9							
reaction time 0.165	interval		10.6	11.6	12.9		# of strides	11.20	10.60	11.60	12.86	21.80	24.46	2.66
	velocity	8.93	9.43	8.62	7.78	8.65		8.93	9.43	8.62	7.78	9.17	8.18	

2019 Herculis Meeting International d'Athlétisme (Monaco, MON)

FINAL date 12-Jul-19

Omega Timing (2019) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Gardiner, Steven (BAH) (19	time		11.2		21.4		32.6		44.51	44.51	5 / 1							
reaction time 0.128	interval				10.2		11.2		11.9		# of strides	11.20	10.20	11.20	11.91	21.40	23.11	1.71
	velocity		8.93		9.80		8.93		8.40	8.99	158.0	8.93	9.80	8.93	8.40	9.35	8.65	
Samba, Abderrahman (QAT	time		11.2		21.6		32.8		45.00	45.00	3 / 2							
reaction time 0.141	interval				10.4		11.2		12.2		# of strides	11.20	10.40	11.20	12.20	21.60	23.40	1.80
	velocity		8.93		9.62		8.93		8.20	8.89		8.93	9.62	8.93	8.20	9.26	8.55	
Strother, Nathan (USA) (19	time		11.3		21.9		33.2		45.54	45.54	2 / 3							
reaction time 0.179	interval				10.6		11.3		12.3		# of strides	11.30	10.60	11.30	12.34	21.90	23.64	1.74
	velocity		8.85		9.43		8.85		8.10	8.78		8.85	9.43	8.85	8.10	9.13	8.46	
Janežič, Luka (SLO) (1995)	time		11.4		21.9		33.4		45.76	45.76	1 / 4							
reaction time 0.180	interval				10.5		11.5		12.4		# of strides	11.40	10.50	11.50	12.36	21.90	23.86	1.96
	velocity		8.77		9.52		8.70		8.09	8.74		8.77	9.52	8.70	8.09	9.13	8.38	
Montgomery, Kahmari (US	time		11.4		22.1		33.6		46.02	46.02	4 / ~~5~~							
reaction time 0.167	interval				10.7		11.5		12.4	DQ	# of strides	11.40	10.70	11.50	12.42	22.10	23.92	1.82
	velocity		8.77		9.35		8.70		8.05	8.69		8.77	9.35	8.70	8.05	9.05	8.36	
Re, Davide (ITA) (1993)	time		11.3		21.9		33.3		46.21	46.21	6 / ~~6~~ 5							
reaction time 0.137	interval				10.6		11.4		12.9		# of strides	11.30	10.60	11.40	12.91	21.90	24.31	2.41
	velocity		8.85		9.43		8.77		7.75	8.66		8.85	9.43	8.77	7.75	9.13	8.23	
Jones, Jonathan (BAR) (19	time		11.2		21.5		32.6		nt	nt	7 / --							
reaction time	interval				10.3		11.1			DNS	# of strides	11.20	10.30	11.10		21.50		
	velocity		8.93		9.71		9.01					8.93	9.71	9.01		9.30		
Zambrano, Anthony José (	time		11.3		21.9				nt	nt	8 / --							
reaction time	interval				10.6					DNS	# of strides	11.30	10.60			21.90		
	velocity		8.85		9.43							8.85	9.43			9.13		

did not hear the recall gun for the false start in lane 4

did not hear the recall gun for the false start in lane 4

2019 Japanese National Championships (Fukuoka, JPN)

FINAL date 28-Jun-19

Yamanaka (2019) - research on athlete performance and technique- 2019 data book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Walsh, Julian Jrummi (JPN	time	6.20	11.24	16.38	21.66	27.20	33.02	39.18	45.80	45.80	4 / 1							
reaction time 0.160	interval		5.04	5.14	5.28	5.54	5.82	6.16	6.62		# of strides	11.24	10.42	11.36	12.78	21.66	24.14	2.48
	velocity	8.06	9.92	9.73	9.47	9.03	8.59	8.12	7.55	8.73	174.7	8.90	9.60	8.80	7.82	9.23	8.29	
Obuchi, Mizuki (JPN) (1997	time	6.22	11.32	16.60	22.11	27.85	33.74	39.75	46.18	46.18	6 / 2							
reaction time 0.169	interval		5.10	5.28	5.51	5.74	5.89	6.01	6.43		# of strides	11.32	10.79	11.63	12.44	22.11	24.07	1.96
	velocity	8.04	9.80	9.47	9.07	8.71	8.49	8.32	7.78	8.66	192.0	8.83	9.27	8.60	8.04	9.05	8.31	
Sato, Kentaro (JPN) (1994)	time	6.18	11.14	16.23	21.55	27.17	33.15	39.41	46.19	46.19	7 / 3							
reaction time 0.165	interval		4.96	5.09	5.32	5.62	5.98	6.26	6.78		# of strides	11.14	10.41	11.60	13.04	21.55	24.64	3.09
	velocity	8.09	10.08	9.82	9.40	8.90	8.36	7.99	7.37	8.66	181.0	8.98	9.61	8.62	7.67	9.28	8.12	

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kawauchi, Mitsuki (JPN) (1	time	6.37	11.51	16.80	22.26	27.92	33.77	39.84	46.26	46.26	9 / 4							
reaction time 0.187	interval		5.14	5.29	5.46	5.66	5.85	6.07	6.42		# of strides	11.51	10.75	11.51	12.49	22.26	24.00	1.74
	velocity	7.85	9.73	9.45	9.16	8.83	8.55	8.24	7.79	8.65	183.2	8.69	9.30	8.69	8.01	8.98	8.33	
Wakabayashi, Kota (JPN) (	time	6.17	11.16	16.32	21.67	27.29	33.26	39.50	46.34	46.34	5 / 5							
reaction time 0.166	interval		4.99	5.16	5.35	5.62	5.97	6.24	6.84		# of strides	11.16	10.51	11.59	13.08	21.67	24.67	3.00
	velocity	8.10	10.02	9.69	9.35	8.90	8.38	8.01	7.31	8.63	175.2	8.96	9.51	8.63	7.65	9.23	8.11	
Ito, Rikiya (JPN) (1998)	time	6.30	11.46	16.75	22.25	28.00	33.95	40.12	46.78	46.78	3 / 6							
reaction time 0.161	interval		5.16	5.29	5.50	5.75	5.95	6.17	6.66		# of strides	11.46	10.79	11.70	12.83	22.25	24.53	2.28
	velocity	7.94	9.69	9.45	9.09	8.70	8.40	8.10	7.51	8.55		8.73	9.27	8.55	7.79	8.99	8.15	
Matsukiyo, Kazuki (JPN) (1	time	6.54	11.77	17.14	22.71	28.35	34.13	40.15	46.82	46.82	2 / 7							
reaction time 0.172	interval		5.23	5.37	5.57	5.64	5.78	6.02	6.67		# of strides	11.77	10.94	11.42	12.69	22.71	24.11	1.40
	velocity	7.65	9.56	9.31	8.98	8.87	8.65	8.31	7.50	8.54		8.50	9.14	8.76	7.88	8.81	8.30	
Suzuki, Taichi (JPN) (1996)	time	6.11	11.16	16.40	21.92	27.59	33.55	39.92	47.12	47.12	8 / 8							
reaction time 0.159	interval		5.05	5.24	5.52	5.67	5.96	6.37	7.20		# of strides	11.16	10.76	11.63	13.57	21.92	25.20	3.28
	velocity	8.18	9.90	9.54	9.06	8.82	8.39	7.85	6.94	8.49		8.96	9.29	8.60	7.37	9.12	7.94	

Heat 3

date 27-Jun-19

Yamanaka (2019) - race analysis of men and women 400m competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Sato, Kentaro (JPN) (1994)	time	6.13	11.11	16.27	21.76	27.47	33.50	39.74	46.25	46.25	7 / 1							
reaction time 0.166	interval		4.98	5.16	5.49	5.71	6.03	6.24	6.51		# of strides	11.11	10.65	11.74	12.75	21.76	24.49	2.73
	velocity	8.16	10.04	9.69	9.11	8.76	8.29	8.01	7.68	8.65		9.00	9.39	8.52	7.84	9.19	8.17	
Kawauchi, Mitsuki (JPN) (1	time	6.31	11.60	17.02	22.57	28.30	34.16	40.18	46.39	46.39	4 / 2							
reaction time 0.180	interval		5.29	5.42	5.55	5.73	5.86	6.02	6.21		# of strides	11.60	10.97	11.59	12.23	22.57	23.82	1.25
	velocity	7.92	9.45	9.23	9.01	8.73	8.53	8.31	8.05	8.62		8.62	9.12	8.63	8.18	8.86	8.40	
Ito, Rikiya (JPN) (1998)	time	6.36	11.46	16.70	22.25	27.95	33.86	39.96	46.43	46.43	6 / 3							
reaction time 0.167	interval		5.10	5.24	5.55	5.70	5.91	6.10	6.47		# of strides	11.46	10.79	11.61	12.57	22.25	24.18	1.93
	velocity	7.86	9.80	9.54	9.01	8.77	8.46	8.20	7.73	8.62		8.73	9.27	8.61	7.96	8.99	8.27	
Horii, Kosuke (JPN) (1994)	time	6.21	11.33	16.63	22.24	28.04	34.09	40.35	46.92	46.92	8 / 4							
reaction time 0.163	interval		5.12	5.30	5.61	5.80	6.05	6.26	6.57		# of strides	11.33	10.91	11.85	12.83	22.24	24.68	2.44
	velocity	8.05	9.77	9.43	8.91	8.62	8.26	7.99	7.61	8.53		8.83	9.17	8.44	7.79	8.99	8.10	
Kimura, Jun (JPN) (1991)	time	6.19	11.24	16.45	22.00	27.81	33.81	40.08	46.95	46.95	5 / 5							
reaction time 0.157	interval		5.05	5.21	5.55	5.81	6.00	6.27	6.87		# of strides	11.24	10.76	11.81	13.14	22.00	24.95	2.95
	velocity	8.08	9.90	9.60	9.01	8.61	8.33	7.97	7.28	8.52		8.90	9.29	8.47	7.61	9.09	8.02	

Heat 2

date 27-Jun-19

Yamanaka (2019) - race analysis of men and women 400m competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Wakabayashi, Kota (JPN) (	time	6.24	11.25	16.40	21.86	27.57	33.53	39.67	46.27	46.27	6 / 1							
reaction time 0.177	interval		5.01	5.15	5.46	5.71	5.96	6.14	6.60		# of strides	11.25	10.61	11.67	12.74	21.86	24.41	2.55
	velocity	8.01	9.98	9.71	9.16	8.76	8.39	8.14	7.58	8.64		8.89	9.43	8.57	7.85	9.15	8.19	
Obuchi, Mizuki (JPN) (1997	time	6.12	11.10	16.27	21.76	27.54	33.52	39.68	46.31	46.31	7 / 2							
reaction time 0.169	interval		4.98	5.17	5.49	5.78	5.98	6.16	6.63		# of strides	11.10	10.66	11.76	12.79	21.76	24.55	2.79
	velocity	8.17	10.04	9.67	9.11	8.65	8.36	8.12	7.54	8.64		9.01	9.38	8.50	7.82	9.19	8.15	
Matsukiyo, Kazuki (JPN) (1	time	6.49	11.91	17.38	22.90	28.50	34.19	40.07	46.55	46.55	3 / 3							
reaction time 0.205	interval		5.42	5.47	5.52	5.60	5.69	5.88	6.48		# of strides	11.91	10.99	11.29	12.36	22.90	23.65	0.75
	velocity	7.70	9.23	9.14	9.06	8.93	8.79	8.50	7.72	8.59		8.40	9.10	8.86	8.09	8.73	8.46	

Heat 1

date 27-Jun-19

Yamanaka (2019) - race analysis of men and women 400m competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Walsh, Julian Jrummi (JPN	time	6.18	11.25	16.45	21.81	27.40	33.15	39.10	45.45	45.45	6 / 1							
reaction time 0.148	interval		5.07	5.20	5.36	5.59	5.75	5.95	6.35		# of strides	11.25	10.56	11.34	12.30	21.81	23.64	1.83
	velocity	8.09	9.86	9.62	9.33	8.94	8.70	8.40	7.87	8.80		8.89	9.47	8.82	8.13	9.17	8.46	
Suzuki, Taichi (JPN) (1996)	time	6.20	11.37	16.82	22.54	28.42	34.36	40.38	46.86	46.86	3 / 2							
reaction time 0.176	interval		5.17	5.45	5.72	5.88	5.94	6.02	6.48		# of strides	11.37	11.17	11.82	12.50	22.54	24.32	1.78
	velocity	8.06	9.67	9.17	8.74	8.50	8.42	8.31	7.72	8.54		8.80	8.95	8.46	8.00	8.87	8.22	
Kitakani, Naoki (JPN) (1998	time	6.28	11.42	16.77	22.37	28.19	34.27	40.56	47.18	47.18	4 / 4							
reaction time 0.159	interval		5.14	5.35	5.60	5.82	6.08	6.29	6.62		# of strides	11.42	10.95	11.90	12.91	22.37	24.81	2.44
	velocity	7.96	9.73	9.35	8.93	8.59	8.22	7.95	7.55	8.48		8.76	9.13	8.40	7.75	8.94	8.06	
Tamura, Tomoya (JPN) (19	time	6.26	11.37	16.62	22.11	27.82	33.79	40.18	47.20	47.20	2 / 5							
reaction time 0.171	interval		5.11	5.25	5.49	5.71	5.97	6.39	7.02		# of strides	11.37	10.74	11.68	13.41	22.11	25.09	2.98
	velocity	7.99	9.78	9.52	9.11	8.76	8.38	7.82	7.12	8.47		8.80	9.31	8.56	7.46	9.05	7.97	

2019 Bislett Games (Olso, NOR)

National FINAL

date 13-Jun-19

Omega Timing (2019) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Thompson, Luca (NOR) (2	time		12.2		23.3		35.2		47.97	47.97	3 / 1							
reaction time 0.143	interval				11.1		11.9		12.8	PB	# of strides	12.20	11.10	11.90	12.77	23.30	24.67	1.37
	velocity		8.20		9.01		8.40		7.83	8.34		8.20	9.01	8.40	7.83	8.58	8.11	
Sigurdsen, Simen (NOR) (1	time		11.5		22.6		34.7		48.11	48.11	6 / 2							

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

reaction time 0.144	interval		11.1	12.1	13.4		# of strides	11.50	11.10	12.10	13.41	22.60	25.51	2.91
	velocity	8.70	9.01	8.26	7.46	8.31		8.70	9.01	8.26	7.46	8.85	7.84	
Nielsen, Gustav Lundholm	time	11.8	23.0	35.0	48.16	48.16	4 / 3							
reaction time 0.201	interval		11.2	12.0	13.2		# of strides	11.80	11.20	12.00	13.16	23.00	25.16	2.16
	velocity	8.47	8.93	8.33	7.60	8.31		8.47	8.93	8.33	7.60	8.70	7.95	
Claridge, Ben (GBR) (1997)	time	11.5	22.4	34.6	48.64	48.64	5 / 4							
reaction time 0.160	interval		10.9	12.2	14.0		# of strides	11.50	10.90	12.20	14.04	22.40	26.24	3.84
	velocity	8.70	9.17	8.20	7.12	8.22		8.70	9.17	8.20	7.12	8.93	7.62	
Lysne, Torbjørn (NOR) (19	time	11.9	23.4	35.9	48.95	48.95	1 / 5							
reaction time 0.178	interval		11.5	12.5	13.1		# of strides	11.90	11.50	12.50	13.05	23.40	25.55	2.15
	velocity	8.40	8.70	8.00	7.66	8.17		8.40	8.70	8.00	7.66	8.55	7.83	
Berner, Markus Nikolai (NO	time	11.6	22.7	35.3	48.99	48.99	8 / 6							
reaction time 0.210	interval		11.1	12.6	13.7	PB	# of strides	11.60	11.10	12.60	13.69	22.70	26.29	3.59
	velocity	8.62	9.01	7.94	7.30	8.16		8.62	9.01	7.94	7.30	8.81	7.61	
Stølen, Lars Gausemel (NO	time	11.8	23.0	35.6	49.75	49.75	7 / 7							
reaction time 0.171	interval		11.2	12.6	14.2		# of strides	11.80	11.20	12.60	14.15	23.00	26.75	3.75
	velocity	8.47	8.93	7.94	7.07	8.04		8.47	8.93	7.94	7.07	8.70	7.48	
Tveit, Espen (NOR) (1991)	time	12.2	23.9	36.4	49.92	49.92	2 / 8							
reaction time 0.194	interval		11.7	12.5	13.5		# of strides	12.20	11.70	12.50	13.52	23.90	26.02	2.12
	velocity	8.20	8.55	8.00	7.40	8.01		8.20	8.55	8.00	7.40	8.37	7.69	

2019 Japanese National Multi-Event Championships (Nagano, JPN)

Decathlon - Heat

date 08-Jun-19

Matsubayashi (2019) - research on athlete performance and technique- 2019 data book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Nakamura, Akihiko (JPN) (1	time	6.45	11.90	17.48	23.39	29.57	35.95	42.67	50.06	50.06	7 / 4							
reaction time	interval		5.45	5.58	5.91	6.18	6.38	6.72	7.39		# of strides	11.90	11.49	12.56	14.11	23.39	26.67	3.28
	velocity	7.75	9.17	8.96	8.46	8.09	7.84	7.44	6.77	7.99		8.40	8.70	7.96	7.09	8.55	7.50	

Decathlon - Heat

date 08-Jun-19

Matsubayashi (2019) - research on athlete performance and technique- 2019 data book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Maruyama, Yuma (JPN) (19	time	6.41	11.81	17.38	23.29	29.49	35.85	42.65	49.99	49.99	5 / 1							
reaction time	interval		5.40	5.57	5.91	6.20	6.36	6.80	7.34		# of strides	11.81	11.48	12.56	14.14	23.29	26.70	3.41
	velocity	7.80	9.26	8.98	8.46	8.06	7.86	7.35	6.81	8.00		8.47	8.71	7.96	7.07	8.59	7.49	
Ushiro, Keisuke (JPN) (198	time	6.65	12.28	18.05	24.15	30.54	36.97	43.85	51.46	51.46	6 / 4							
reaction time	interval		5.63	5.77	6.10	6.39	6.43	6.88	7.61		# of strides	12.28	11.87	12.82	14.49	24.15	27.31	3.16
	velocity	7.52	8.88	8.67	8.20	7.82	7.78	7.27	6.57	7.77		8.14	8.42	7.80	6.90	8.28	7.32	

2019 NCAA Championships (Austin, TX)

FINAL

date 07-Jun-19

Track Newsletter (2019) - NCAA men's championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Montgomery, Kahmari (US	time				21.7		32.5		44.2	44.23	/ 1							
reaction time 0.165	interval						10.80		11.70	PB	# of strides			10.80	11.70	21.70	22.50	0.80
	velocity				9.22		9.26		8.55	9.04				9.26	8.55	9.22	8.89	
Stewart, Trevor (USA) (199	time				21.4		32.2		44.2	44.25	/ 2							
reaction time 0.226	interval						10.80		12.00	PB	# of strides			10.80	12.00	21.40	22.80	1.40
	velocity				9.35		9.26		8.33	9.04				9.26	8.33	9.35	8.77	
London, Wil (USA) (1997)	time				21.8		32.7		44.6	44.63	/ 3							
reaction time 0.218	interval						10.90		11.90		# of strides			10.90	11.90	21.80	22.80	1.00
	velocity				9.17		9.17		8.40	8.96				9.17	8.40	9.17	8.77	
Jones, Jonathan (BAR) (19	time				21.6		32.4		44.6	44.64	/ 4							
reaction time 0.353	interval						10.80		12.20	NR	# of strides			10.80	12.20	21.60	23.00	1.40
	velocity				9.26		9.26		8.20	8.96				9.26	8.20	9.26	8.70	
Perlaza, Alejandro (COL) (1	time				21.6		32.8		45.0	45.02	/ 5							
reaction time 0.254	interval						11.20		12.20		# of strides			11.20	12.20	21.60	23.40	1.80
	velocity				9.26		8.93		8.20	8.88				8.93	8.20	9.26	8.55	
Deadmon, Bryce (USA) (19	time				21.6		32.9		45.2	45.18	/ 6							
reaction time 0.199	interval						11.30		12.30	PB	# of strides			11.30	12.30	21.60	23.60	2.00
	velocity				9.26		8.85		8.13	8.85				8.85	8.13	9.26	8.47	
Sawyers, Chantz (JAM) (19	time				21.6		32.8		45.2	45.24	/ 7							
reaction time 0.193	interval						11.20		12.40	PB	# of strides			11.20	12.40	21.60	23.60	2.00
	velocity				9.26		8.93		8.06	8.84				8.93	8.06	9.26	8.47	
Igbokwe, Obi (USA) (1997)	time				21.9		33.0		46.1	46.05	/ ~~8~~							
reaction time 0.171	interval						11.10		13.10	DQ	# of strides			11.10	13.10	21.90	24.20	2.30
	velocity				9.13		9.01		7.63	8.69				9.01	7.63	9.13	8.26	

2019 Bauhaus Galan (Stockholm, SWE)

FINAL

date 30-May-19

Omega Timing (2019) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Norman, Michael (USA) (19	time		11.0		21.8		32.6		44.53	44.53	5 / 1							

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

reaction time 0.158	interval		10.8	10.8	11.9		# of strides	11.00	10.80	10.80	11.93	21.80	22.73	0.93
	velocity	9.09	9.26	9.26	8.38	8.98	172.7	9.09	9.26	9.26	8.38	9.17	8.80	
Benjamin, Rai (USA) (1997)	time	11.1	21.7	32.6	45.13	45.13	6 / 2							
reaction time 0.179	interval		10.6	10.9	12.5		# of strides	11.10	10.60	10.90	12.53	21.70	23.43	1.73
	velocity	9.01	9.43	9.17	7.98	8.86	163.7	9.01	9.43	9.17	7.98	9.22	8.54	
Cherry, Michael (USA) (199	time	11.3	22.1	33.5	46.30	46.30	4 / 3							
reaction time 0.189	interval		10.8	11.4	12.8		# of strides	11.30	10.80	11.40	12.80	22.10	24.20	2.10
	velocity	8.85	9.26	8.77	7.81	8.64	174.7	8.85	9.26	8.77	7.81	9.05	8.26	
Norwood, Vernon (USA) (1	time	11.3	22.5	33.8	46.39	46.39	1 / 4							
reaction time 0.176	interval		11.2	11.3	12.6		# of strides	11.30	11.20	11.30	12.59	22.50	23.89	1.39
	velocity	8.85	8.93	8.85	7.94	8.62		8.85	8.93	8.85	7.94	8.89	8.37	
Janežič, Luka (SLO) (1995)	time	11.4	22.2	33.8	46.60	46.60	8 / 5							
reaction time 0.162	interval		10.8	11.6	12.8		# of strides	11.40	10.80	11.60	12.80	22.20	24.40	2.20
	velocity	8.77	9.26	8.62	7.81	8.58	170.0	8.77	9.26	8.62	7.81	9.01	8.20	
Strother, Nathan (USA) (19	time	11.5	22.5	34.1	46.64	46.64	7 / 6							
reaction time 0.199	interval		11.0	11.6	12.5		# of strides	11.50	11.00	11.60	12.54	22.50	24.14	1.64
	velocity	8.70	9.09	8.62	7.97	8.58	179.7	8.70	9.09	8.62	7.97	8.89	8.29	
Taplin, Bralon (GRN) (1992	time	11.4	22.1	33.5	46.87	46.87	2 / 7							
reaction time 0.152	interval		10.7	11.4	13.4		# of strides	11.40	10.70	11.40	13.37	22.10	24.77	2.67
	velocity	8.77	9.35	8.77	7.48	8.53		8.77	9.35	8.77	7.48	9.05	8.07	
Thebe, Baboloki (BOT) (19	time	11.3	22.2	33.9	48.85	48.85	3 / 8							
reaction time 0.170	interval		10.9	11.7	15.0		# of strides	11.30	10.90	11.70	14.95	22.20	26.65	4.45
	velocity	8.85	9.17	8.55	6.69	8.19		8.85	9.17	8.55	6.69	9.01	7.50	

2019 Shimane High School Championships (Izumo, JPN)

FINAL date 24-May-19

Shimizu (2019) - shimane high school championships 2019 - biomechanics data analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Saito, Jono (JPN)	time		12.09		23.71		36.00		49.30	49.30	6 / 1							
reaction time	interval				11.62		12.29		13.30		# of strides	12.09	11.62	12.29	13.30	23.71	25.59	1.88
	velocity		8.27		8.61		8.14		7.52	8.11		8.27	8.61	8.14	7.52	8.44	7.82	
Mitsunari, Reo (JPN)	time		12.82		24.82		37.25		50.53	50.53	5 / 2							
reaction time	interval				12.00		12.43		13.28		# of strides	12.82	12.00	12.43	13.28	24.82	25.71	0.89
	velocity		7.80		8.33		8.05		7.53	7.92		7.80	8.33	8.05	7.53	8.06	7.78	
Tsuchie, Ryu (JPN)	time		12.34		24.27		37.01		50.82	50.82	2 / 3							
reaction time	interval				11.93		12.74		13.81		# of strides	12.34	11.93	12.74	13.81	24.27	26.55	2.28
	velocity		8.10		8.38		7.85		7.24	7.87		8.10	8.38	7.85	7.24	8.24	7.53	
Sakamoto, Yuto (JPN)	time		12.90		25.36		38.03		50.97	50.97	7 / 4							
reaction time	interval				12.46		12.67		12.94		# of strides	12.90	12.46	12.67	12.94	25.36	25.61	0.25
	velocity		7.75		8.03		7.89		7.73	7.85		7.75	8.03	7.89	7.73	7.89	7.81	
Tobita, Riku (JPN)	time		12.09		24.21		37.47		50.99	50.99	8 / 5							
reaction time	interval				12.12		13.26		13.52		# of strides	12.09	12.12	13.26	13.52	24.21	26.78	2.57
	velocity		8.27		8.25		7.54		7.40	7.84		8.27	8.25	7.54	7.40	8.26	7.47	
Mizunara, Oba (JPN)	time		12.37		24.36		37.35		51.03	51.03	3 / 6							
reaction time	interval				11.99		12.99		13.68		# of strides	12.37	11.99	12.99	13.68	24.36	26.67	2.31
	velocity		8.08		8.34		7.70		7.31	7.84		8.08	8.34	7.70	7.31	8.21	7.50	
Horinishi, Koji (JPN)	time		12.65		25.04		38.05		51.05	51.05	4 / 7							
reaction time	interval				12.39		13.01		13.00		# of strides	12.65	12.39	13.01	13.00	25.04	26.01	0.97
	velocity		7.91		8.07		7.69		7.69	7.84		7.91	8.07	7.69	7.69	7.99	7.69	
Ryotaro, Masaki (JPN)	time		13.04		25.66		38.71		51.72	51.72	9 / 8							
reaction time	interval				12.62		13.05		13.01		# of strides	13.04	12.62	13.05	13.01	25.66	26.06	0.40
	velocity		7.67		7.92		7.66		7.69	7.73		7.67	7.92	7.66	7.69	7.79	7.67	

2019 Seiko Golden Grand Prix (Osaka, JPN)

FINAL date 19-May-19

Hirokawa (2019) - research on athlete performance and technique- 2019 data book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Norwood, Vernon (USA) (1	time	6.13	11.07	16.18	21.51	27.10	33.00	39.12	45.79	45.79	7 / 1							
reaction time 0.176	interval		4.94	5.11	5.33	5.59	5.90	6.12	6.67		# of strides	11.07	10.44	11.49	12.79	21.51	24.28	2.77
	velocity	8.16	10.12	9.78	9.38	8.94	8.47	8.17	7.50	8.74	173.0	9.03	9.58	8.70	7.82	9.30	8.24	
Walsh, Julian Jrummi (JPN	time	6.14	11.11	16.22	21.56	27.16	33.15	39.48	46.29	46.29	6 / 2							
reaction time 0.143	interval		4.97	5.11	5.34	5.60	5.99	6.33	6.81		# of strides	11.11	10.45	11.59	13.14	21.56	24.73	3.17
	velocity	8.14	10.06	9.78	9.36	8.93	8.35	7.90	7.34	8.64	178.7	9.00	9.57	8.63	7.61	9.28	8.09	
Kawauchi, Mitsuki (JPN) (1	time	6.26	11.49	16.83	22.23	27.89	33.92	40.10	46.69	46.69	5 / 3							
reaction time 0.164	interval		5.23	5.34	5.40	5.66	6.03	6.18	6.59		# of strides	11.49	10.74	11.69	12.77	22.23	24.46	2.23
	velocity	7.99	9.56	9.36	9.26	8.83	8.29	8.09	7.59	8.57	190.2	8.70	9.31	8.55	7.83	9.00	8.18	
Sato, Kentaro (JPN) (1994)	time	6.27	11.35	16.54	21.92	27.51	33.64	40.06	46.92	46.92	3 / 4							
reaction time 0.167	interval		5.08	5.19	5.38	5.59	6.13	6.42	6.86		# of strides	11.35	10.57	11.72	13.28	21.92	25.00	3.08

	velocity	7.97	9.84	9.63	9.29	8.94	8.16	7.79	7.29	8.53	181.0	8.81	9.46	8.53	7.53	9.12	8.00	
Kitakani, Naoki (JPN) (1998	time	6.24	11.30	16.53	22.06	27.84	33.97	40.31	47.34	47.34	9 / 7							
reaction time 0.164	interval		5.06	5.23	5.53	5.78	6.13	6.34	7.03		# of strides	11.30	10.76	11.91	13.37	22.06	25.28	3.22
	velocity	8.01	9.88	9.56	9.04	8.65	8.16	7.89	7.11	8.45	179.0	8.85	9.29	8.40	7.48	9.07	7.91	
Wakabayashi, Kota (JPN) (	time	6.31	11.39	16.60	22.00	27.75	34.02	40.49	47.37	47.37	1 / 8							
reaction time 0.169	interval		5.08	5.21	5.40	5.75	6.27	6.47	6.88		# of strides	11.39	10.61	12.02	13.35	22.00	25.37	3.37
	velocity	7.92	9.84	9.60	9.26	8.70	7.97	7.73	7.27	8.44	173.5	8.78	9.43	8.32	7.49	9.09	7.88	

2019 Shanghai (Shanghai, CHN)

FINAL

date 18-May-19

Omega Timing (2019) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kerley, Fred (USA) (1995)	time		10.6		20.8		32.3		44.81	44.81	5 / 1							
reaction time 0.158	interval				10.2		11.5		12.5		# of strides	10.60	10.20	11.50	12.51	20.80	24.01	3.21
	velocity		9.43		9.80		8.70		7.99	8.93	173.5	9.43	9.80	8.70	7.99	9.62	8.33	
Cherry, Michael (USA) (199	time		11.5		21.8		32.8		45.48	45.48	8 / 2							
reaction time 0.197	interval				10.3		11.0		12.7		# of strides	11.50	10.30	11.00	12.68	21.80	23.68	1.88
	velocity		8.70		9.71		9.09		7.89	8.80	163.0	8.70	9.71	9.09	7.89	9.17	8.45	
Strother, Nathan (USA) (19	time		11.0		21.9		33.5		45.52	45.52	3 / 3							
reaction time 0.181	interval				10.9		11.6		12.0		# of strides	11.00	10.90	11.60	12.02	21.90	23.62	1.72
	velocity		9.09		9.17		8.62		8.32	8.79	180.2	9.09	9.17	8.62	8.32	9.13	8.47	
Allen, Nathon (JAM) (1995)	time		10.9		21.5		33.2		45.73	45.73	4 / 4							
reaction time 0.163	interval				10.6		11.7		12.5		# of strides	10.90	10.60	11.70	12.53	21.50	24.23	2.73
	velocity		9.17		9.43		8.55		7.98	8.75	166.0	9.17	9.43	8.55	7.98	9.30	8.25	
Taplin, Bralon (GRN) (1992	time		11.7		22.0		32.8		45.93	45.93	6 / 5							
reaction time 0.164	interval				10.3		10.8		13.1		# of strides	11.70	10.30	10.80	13.13	22.00	23.93	1.93
	velocity		8.55		9.71		9.26		7.62	8.71	182.0	8.55	9.71	9.26	7.62	9.09	8.36	
Wu Yuang (CHN) (1998)	time		11.1		21.9		34.2		47.13	47.13	2 / 6							
reaction time 0.196	interval				10.8		12.3		12.9		# of strides	11.10	10.80	12.30	12.93	21.90	25.23	3.33
	velocity		9.01		9.26		8.13		7.73	8.49		9.01	9.26	8.13	7.73	9.13	7.93	
Makwala, Isaac (BOT) (1986	time		11.9		22.3					dnf	7 / --							
reaction time 0.211	interval				10.4						# of strides	11.90	10.40			22.30		
	velocity		8.40		9.62							8.40	9.62			8.97		

2019 Doha (Doha, QAT)

National FINAL

date 03-May-19

Omega Timing (2019) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Humaida, Bassem (QAT) (2	time		11.5		22.3		33.9		45.88	45.88	6 / 1							
reaction time 0.168	interval				10.8		11.6		12.0	PB	# of strides	11.50	10.80	11.60	11.98	22.30	23.58	1.28
	velocity		8.70		9.26		8.62		8.35	8.72		8.70	9.26	8.62	8.35	8.97	8.48	
Bamidele, Emmanuel (NGR	time		11.2		21.6		33.2		45.99	45.99	4 / 2							
reaction time 0.185	interval				10.4		11.6		12.8		# of strides	11.20	10.40	11.60	12.79	21.60	24.39	2.79
	velocity		8.93		9.62		8.62		7.82	8.70		8.93	9.62	8.62	7.82	9.26	8.20	
Salem, Abdulaziz (QAT)	time		11.4		22.0		33.7		47.30	47.30	3 / 3							
reaction time 0.176	interval				10.6		11.7		13.6	PB	# of strides	11.40	10.60	11.70	13.60	22.00	25.30	3.30
	velocity		8.77		9.43		8.55		7.35	8.46		8.77	9.43	8.55	7.35	9.09	7.91	
Osman, Ashraf (QAT) (200	time		11.6		22.3		34.0		47.44	47.44	7 / 4							
reaction time 0.206	interval				10.7		11.7		13.4		# of strides	11.60	10.70	11.70	13.44	22.30	25.14	2.84
	velocity		8.62		9.35		8.55		7.44	8.43		8.62	9.35	8.55	7.44	8.97	7.96	
Zakaria, Abdulmajid (QAT)	time		12.5		24.5		37.7		51.44	51.44	1 / 5							
reaction time 0.164	interval				12.0		13.2		13.7		# of strides	12.50	12.00	13.20	13.74	24.50	26.94	2.44
	velocity		8.00		8.33		7.58		7.28	7.78		8.00	8.33	7.58	7.28	8.16	7.42	
Haroun, Mohamed Darm (C	time		13.0		25.9		39.4		53.47	53.47	8 / 6							
reaction time 0.163	interval				12.9		13.5		14.1		# of strides	13.00	12.90	13.50	14.07	25.90	27.57	1.67
	velocity		7.69		7.75		7.41		7.11	7.48		7.69	7.75	7.41	7.11	7.72	7.25	

2019 Shizuoka International Athletics Meeting (Fukuroi, JPN)

A FINAL

date 03-May-19

Kobayashi (2019) - research on athlete performance and technique- 2019 data book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kawauchi, Mitsuki (JPN) (1	time	6.27	11.42	16.67	22.07	27.73	33.68	39.86	46.48	46.48	5 / 1							
reaction time	interval		5.15	5.25	5.40	5.66	5.95	6.18	6.62		# of strides	11.42	10.65	11.61	12.80	22.07	24.41	2.34
	velocity	7.97	9.71	9.52	9.26	8.83	8.40	8.09	7.55	8.61	189.7	8.76	9.39	8.61	7.81	9.06	8.19	
Sato, Kentaro (JPN) (1994)	time	6.21	11.26	16.48	21.83	27.51	33.58	39.94	46.55	46.55	2 / 2							
reaction time	interval		5.05	5.22	5.35	5.68	6.07	6.36	6.61		# of strides	11.26	10.57	11.75	12.97	21.83	24.72	2.89
	velocity	8.05	9.90	9.58	9.35	8.80	8.24	7.86	7.56	8.59		8.88	9.46	8.51	7.71	9.16	8.09	
Kitakani, Naoki (JPN) (1998	time	6.17	11.18	16.42	21.91	27.66	33.67	39.97	46.68	46.68	4 / 4							
reaction time	interval		5.01	5.24	5.49	5.75	6.01	6.30	6.71		# of strides	11.18	10.73	11.76	13.01	21.91	24.77	2.86
	velocity	8.10	9.98	9.54	9.11	8.70	8.32	7.94	7.45	8.57	179.2	8.94	9.32	8.50	7.69	9.13	8.07	

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

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ito, Rikiya (JPN) (1998)	time	6.20	11.20	16.30	21.63	27.28	33.39	39.83	46.77	46.77	6 / 5							
reaction time	interval		5.00	5.10	5.33	5.65	6.11	6.44	6.94		# of strides	11.20	10.43	11.76	13.38	21.63	25.14	3.51
	velocity	8.06	10.00	9.80	9.38	8.85	8.18	7.76	7.20	8.55	190.0	8.93	9.59	8.50	7.47	9.25	7.96	
Horii, Kosuke (JPN) (1994)	time	6.26	11.36	16.62	22.14	27.96	34.07	40.43	47.11	47.11	3 / 6							
reaction time	interval		5.10	5.26	5.52	5.82	6.11	6.36	6.68		# of strides	11.36	10.78	11.93	13.04	22.14	24.97	2.83
	velocity	7.99	9.80	9.51	9.06	8.59	8.18	7.86	7.49	8.49		8.80	9.28	8.38	7.67	9.03	8.01	
Wakabayashi, Kota (JPN) (	time	6.18	11.15	16.27	21.68	27.40	33.52	40.00	47.25	47.25	7 / 7							
reaction time	interval		4.97	5.12	5.41	5.72	6.12	6.48	7.25		# of strides	11.15	10.53	11.84	13.73	21.68	25.57	3.89
	velocity	8.09	10.06	9.77	9.24	8.74	8.17	7.72	6.90	8.47	175.5	8.97	9.50	8.45	7.28	9.23	7.82	
Tamura, Tomoya (JPN) (19	time	6.21	11.32	16.57	22.06	27.81	33.93	40.44	47.79	47.79	9 / 8							
reaction time	interval		5.11	5.25	5.49	5.75	6.12	6.51	7.35		# of strides	11.32	10.74	11.87	13.86	22.06	25.73	3.67
	velocity	8.05	9.78	9.52	9.11	8.70	8.17	7.68	6.80	8.37		8.83	9.31	8.42	7.22	9.07	7.77	

B FINAL

date 03-May-19

Kobayashi (2019) - research on athlete performance and technique- 2019 data book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kimura, Jun (JPN) (1991)	time	6.24	11.44	16.84	22.57	28.47	34.65	41.04	47.90	47.90	4 / 3							
reaction time	interval		5.20	5.40	5.73	5.90	6.18	6.39	6.86		# of strides	11.44	11.13	12.08	13.25	22.57	25.33	2.76
	velocity	8.01	9.62	9.26	8.73	8.47	8.09	7.82	7.29	8.35	183.0	8.74	8.98	8.28	7.55	8.86	7.90	

2019 Asian Athletics Championships (Doha, QAT)

FINAL

date 22-Apr-19

Yamanaka (2019) - race analysis of men and women 400m competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Karam, Youssef (KUW) (19	time	6.20	11.17	16.22	21.49	26.94	32.58	38.44	44.84	44.84	6 / 1							
reaction time 0.149	interval		4.97	5.05	5.27	5.45	5.64	5.86	6.40	NR PB	# of strides	11.17	10.32	11.09	12.26	21.49	23.35	1.86
	velocity	8.06	10.06	9.90	9.49	9.17	8.87	8.53	7.81	8.92	167.2	8.95	9.69	9.02	8.16	9.31	8.57	
Abubaker, Abbas (BRN) (1	time	6.20	11.15	16.23	21.56	27.03	32.62	38.49	45.14	45.14	7 / 2							
reaction time 0.170	interval		4.95	5.08	5.33	5.47	5.59	5.87	6.65	PB	# of strides	11.15	10.41	11.06	12.52	21.56	23.58	2.02
	velocity	8.06	10.10	9.84	9.38	9.14	8.94	8.52	7.52	8.86	175.0	8.97	9.61	9.04	7.99	9.28	8.48	
Litvin, Mikhail (KAZ) (1996)	time	6.30	11.39	16.53	21.92	27.45	33.15	39.02	45.25	45.25	9 / 3							
reaction time 0.162	interval		5.09	5.14	5.39	5.53	5.70	5.87	6.23	NR PB	# of strides	11.39	10.53	11.23	12.10	21.92	23.33	1.41
	velocity	7.94	9.82	9.73	9.28	9.04	8.77	8.52	8.03	8.84	164.0	8.78	9.50	8.90	8.26	9.12	8.57	
Walsh, Julian Jrummi (JPN	time	6.20	11.21	16.37	21.67	27.24	33.09	39.12	45.55	45.55	2 / 5							
reaction time 0.151	interval		5.01	5.16	5.30	5.57	5.85	6.03	6.43		# of strides	11.21	10.46	11.42	12.46	21.67	23.88	2.21
	velocity	8.06	9.98	9.69	9.43	8.98	8.55	8.29	7.78	8.78		8.92	9.56	8.76	8.03	9.23	8.38	

Semi-Final 2

date 21-Apr-19

Yamanaka (2019) - race analysis of men and women 400m competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ito, Rikiya (JPN) (1998)	time	6.30	11.49	16.83	22.37	28.11	34.05	40.15	46.52	46.52	7 / 3							
reaction time 0.153	interval		5.19	5.34	5.54	5.74	5.94	6.10	6.37		# of strides	11.49	10.88	11.68	12.47	22.37	24.15	1.78
	velocity	7.94	9.63	9.36	9.03	8.71	8.42	8.20	7.85	8.60		8.70	9.19	8.56	8.02	8.94	8.28	

Semi-Final 1

date 21-Apr-19

Yamanaka (2019) - race analysis of men and women 400m competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Walsh, Julian Jrummi (JPN	time	6.14	11.23	16.43	21.82	27.44	33.20	39.22	45.67	45.67	4 / 4							
reaction time 0.139	interval		5.09	5.20	5.39	5.62	5.76	6.02	6.45		# of strides	11.23	10.59	11.38	12.47	21.82	23.85	2.03
	velocity	8.14	9.82	9.62	9.28	8.90	8.68	8.31	7.75	8.76		8.90	9.44	8.79	8.02	9.17	8.39	

2018 Japanese National Junior (U20) Championships (Nagano, JPN)

FINAL

date 19-Oct-18

Ryutaro (2018) - research on athlete performance and technique- 2018 data book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kawakami, Sota (JPN) (200	time	6.40	11.58	16.90	22.41	28.23	34.32	40.67	47.44	47.44	6 / 1							
reaction time 0.189	interval		5.18	5.32	5.51	5.82	6.09	6.35	6.77		# of strides	11.58	10.83	11.91	13.12	22.41	25.03	2.62
	velocity	7.81	9.65	9.40	9.07	8.59	8.21	7.87	7.39	8.43	178.0	8.64	9.23	8.40	7.62	8.92	7.99	
Umetani, Hoshia (JPN) (19	time	6.61	11.70	16.97	22.52	28.38	34.51	40.85	47.50	47.50	3 / 2							
reaction time 0.185	interval		5.09	5.27	5.55	5.86	6.13	6.34	6.65		# of strides	11.70	10.82	11.99	12.99	22.52	24.98	2.46
	velocity	7.56	9.82	9.49	9.01	8.53	8.16	7.89	7.52	8.42	184.7	8.55	9.24	8.34	7.70	8.88	8.01	
Shibasaki, Yuto (JPN) (199	time	6.52	12.00	17.55	23.19	28.91	34.78	40.98	47.60	47.60	5 / 3							
reaction time 0.147	interval		5.48	5.55	5.64	5.72	5.87	6.20	6.62		# of strides	12.00	11.19	11.59	12.82	23.19	24.41	1.22
	velocity	7.67	9.12	9.01	8.87	8.74	8.52	8.06	7.55	8.40	181.0	8.33	8.94	8.63	7.80	8.62	8.19	
Yoshida, Tatsuya (JPN) (19	time	6.45	11.58	16.88	22.35	28.12	34.17	40.60	47.85	47.85	7 / 4							
reaction time 0.190	interval		5.13	5.30	5.47	5.77	6.05	6.43	7.25		# of strides	11.58	10.77	11.82	13.68	22.35	25.50	3.15
	velocity	7.75	9.75	9.43	9.14	8.67	8.26	7.78	6.90	8.36	181.2	8.64	9.29	8.46	7.31	8.95	7.84	
Matsuoka, Tomoki (JPN) (2	time	6.37	11.43	16.72	22.48	28.55	34.81	41.12	47.85	47.85	4 / 5							
reaction time 0.183	interval		5.06	5.29	5.76	6.07	6.26	6.31	6.73		# of strides	11.43	11.05	12.33	13.04	22.48	25.37	2.89
	velocity	7.85	9.88	9.45	8.68	8.24	7.99	7.92	7.43	8.36	185.0	8.75	9.05	8.11	7.67	8.90	7.88	
Kotake, Rion (JPN) (1999)	time	6.52	11.88	17.35	22.95	28.80	34.91	41.17	47.89	47.89	2 / 6							
reaction time 0.170	interval		5.36	5.47	5.60	5.85	6.11	6.26	6.72		# of strides	11.88	11.07	11.96	12.98	22.95	24.94	1.99
	velocity	7.67	9.33	9.14	8.93	8.55	8.18	7.99	7.44	8.35	185.0	8.42	9.03	8.36	7.70	8.71	8.02	
Yamasaki, Nenji (JPN) (200	time	6.35	11.51	16.93	22.70	28.70	34.96	41.35	48.00	48.00	8 / 7							
reaction time 0.180	interval		5.16	5.42	5.77	6.00	6.26	6.39	6.65		# of strides	11.51	11.19	12.26	13.04	22.70	25.30	2.60
	velocity	7.87	9.69	9.23	8.67	8.33	7.99	7.82	7.52	8.33	190.0	8.69	8.94	8.16	7.67	8.81	7.91	

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

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Noguchi, Kohei (JPN) (200	time	6.37	11.53	16.88	22.52	28.44	34.65	41.17	48.02	48.02	1 / 8							
reaction time 0.149	interval		5.16	5.35	5.64	5.92	6.21	6.52	6.85		# of strides	11.53	10.99	12.13	13.37	22.52	25.50	2.98
	velocity	7.85	9.69	9.35	8.87	8.45	8.05	7.67	7.30	8.33	187.0	8.67	9.10	8.24	7.48	8.88	7.84	

2018 Japanese National Youth (U18) Championships (Nagano, JPN)

FINAL

date 19-Oct-18

Ryutaro (2018) - research on athlete performance and technique- 2018 data book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Yoshikawa, Ryo (JPN) (200	time	6.66	12.01	17.48	23.19	29.08	35.06	41.16	47.59	47.59	7 / 1							
reaction time 0.187	interval		5.35	5.47	5.71	5.89	5.98	6.10	6.43		# of strides	12.01	11.18	11.87	12.53	23.19	24.40	1.21
	velocity	7.51	9.35	9.14	8.76	8.49	8.36	8.20	7.78	8.41	192.0	8.33	8.94	8.42	7.98	8.62	8.20	
Imaizumi, Kenki (JPN) (200	time	6.51	11.88	17.32	22.95	28.66	34.58	40.85	47.60	47.60	4 / 2							
reaction time 0.176	interval		5.37	5.44	5.63	5.71	5.92	6.27	6.75		# of strides	11.88	11.07	11.63	13.02	22.95	24.65	1.70
	velocity	7.68	9.31	9.19	8.88	8.76	8.45	7.97	7.41	8.40	180.0	8.42	9.03	8.60	7.68	8.71	8.11	
Ono, Kona (JPN) (2002)	time	6.46	11.76	17.23	22.91	28.64	34.62	40.86	47.79	47.79	5 / 3							
reaction time 0.188	interval		5.30	5.47	5.68	5.73	5.98	6.24	6.93		# of strides	11.76	11.15	11.71	13.17	22.91	24.88	1.97
	velocity	7.74	9.43	9.14	8.80	8.73	8.36	8.01	7.22	8.37	186.0	8.50	8.97	8.54	7.59	8.73	8.04	
Fujiyoshi, Shunta (JPN) (2(	time	6.67	11.97	17.32	22.91	28.82	35.03	41.36	48.15	48.15	2 / 4							
reaction time 0.173	interval		5.30	5.35	5.59	5.91	6.21	6.33	6.79		# of strides	11.97	10.94	12.12	13.12	22.91	25.24	2.33
	velocity	7.50	9.43	9.35	8.94	8.46	8.05	7.90	7.36	8.31	183.0	8.35	9.14	8.25	7.62	8.73	7.92	
Jinushi, Naohiro (JPN) (20(	time	6.62	12.12	17.75	23.47	29.26	35.29	41.63	48.35	48.35	6 / 5							
reaction time 0.187	interval		5.50	5.63	5.72	5.79	6.03	6.34	6.72		# of strides	12.12	11.35	11.82	13.06	23.47	24.88	1.41
	velocity	7.55	9.09	8.88	8.74	8.64	8.29	7.89	7.44	8.27	177.0	8.25	8.81	8.46	7.66	8.52	8.04	
Miyagawa, Sota (JPN) (200	time	6.62	11.94	17.45	23.25	29.29	35.50	41.79	48.40	48.40	8 / 6							
reaction time 0.186	interval		5.32	5.51	5.80	6.04	6.21	6.29	6.61		# of strides	11.94	11.31	12.25	12.90	23.25	25.15	1.90
	velocity	7.55	9.40	9.07	8.62	8.28	8.05	7.95	7.56	8.26		8.38	8.84	8.16	7.75	8.60	7.95	
Nomura, Shotaro (JPN) (20	time	6.58	12.00	17.58	23.21	29.23	35.35	41.65	48.51	48.51	3 / 7							
reaction time 0.188	interval		5.42	5.58	5.63	6.02	6.12	6.30	6.86		# of strides	12.00	11.21	12.14	13.16	23.21	25.30	2.09
	velocity	7.60	9.23	8.96	8.88	8.31	8.17	7.94	7.29	8.25		8.33	8.92	8.24	7.60	8.62	7.91	
Masuda, Shion (JPN) (2001	time	6.52	11.87	17.37	23.18	29.15	35.32	41.79	48.84	48.84	1 / 8							
reaction time	interval		5.35	5.50	5.81	5.97	6.17	6.47	7.05		# of strides	11.87	11.31	12.14	13.52	23.18	25.66	2.48
	velocity	7.67	9.35	9.09	8.61	8.38	8.10	7.73	7.09	8.19		8.42	8.84	8.24	7.40	8.63	7.79	

2018 National Sports Festival (Fukui, JPN)

FINAL

date 08-Oct-18

Yamanaka (2018) - Race analysis of men and women 400m at 2018 competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kawauchi, Mitsuki (JPN) (1	time	6.28	11.58	17.12	22.75	28.49	34.34	40.25	46.43	46.43	7 / 1							
reaction time 0.174	interval		5.30	5.54	5.63	5.74	5.85	5.91	6.18		# of strides	11.58	11.17	11.59	12.09	22.75	23.68	0.93
	velocity	7.96	9.43	9.03	8.88	8.71	8.55	8.46	8.09	8.62		8.64	8.95	8.63	8.27	8.79	8.45	
Ito, Rikiya (JPN) (1998)	time	6.36	11.57	16.93	22.47	28.21	34.10	40.09	46.49	46.49	6 / 2							
reaction time 0.166	interval		5.21	5.36	5.54	5.74	5.89	5.99	6.40	PB	# of strides	11.57	10.90	11.63	12.39	22.47	24.02	1.55
	velocity	7.86	9.60	9.33	9.03	8.71	8.49	8.35	7.81	8.60		8.64	9.17	8.60	8.07	8.90	8.33	
Wakabayashi, Kota (JPN) (	time	6.31	11.41	16.74	22.27	28.01	33.88	39.93	46.54	46.54	4 / 3							
reaction time 0.194	interval		5.10	5.33	5.53	5.74	5.87	6.05	6.61		# of strides	11.41	10.86	11.61	12.66	22.27	24.27	2.00
	velocity	7.92	9.80	9.38	9.04	8.71	8.52	8.26	7.56	8.59		8.76	9.21	8.61	7.90	8.98	8.24	
Imoto, Yoshinobu (JPN) (1	time	6.13	11.15	16.47	22.04	27.79	33.82	40.04	46.61	46.61	3 / 4							
reaction time 0.156	interval		5.02	5.32	5.57	5.75	6.03	6.22	6.57		# of strides	11.15	10.89	11.78	12.79	22.04	24.57	2.53
	velocity	8.16	9.96	9.40	8.98	8.70	8.29	8.04	7.61	8.58		8.97	9.18	8.49	7.82	9.07	8.14	
Azuma, Kaiki (JPN) (1993)	time	6.23	11.33	16.73	22.29	27.96	33.78	40.02	46.96	46.96	8 / 5							
reaction time 0.125	interval		5.10	5.40	5.56	5.67	5.82	6.24	6.94		# of strides	11.33	10.96	11.49	13.18	22.29	24.67	2.38
	velocity	8.03	9.80	9.26	8.99	8.82	8.59	8.01	7.20	8.52		8.83	9.12	8.70	7.59	8.97	8.11	
Kimura, Kazushi (JPN) (19	time	6.25	11.47	16.98	22.62	28.38	34.20	40.25	46.96	46.96	5 / 6							
reaction time 0.172	interval		5.22	5.51	5.64	5.76	5.82	6.05	6.71		# of strides	11.47	11.15	11.58	12.76	22.62	24.34	1.72
	velocity	8.00	9.58	9.07	8.87	8.68	8.59	8.26	7.45	8.52		8.72	8.97	8.64	7.84	8.84	8.22	
Kimura, Jun (JPN) (1991)	time	6.28	11.46	16.85	22.55	28.45	34.47	40.60	47.19	47.19	1 / 7							
reaction time 0.146	interval		5.18	5.39	5.70	5.90	6.02	6.13	6.59		# of strides	11.46	11.09	11.92	12.72	22.55	24.64	2.09
	velocity	7.96	9.65	9.28	8.77	8.47	8.31	8.16	7.59	8.48		8.73	9.02	8.39	7.86	8.87	8.12	

U20 FINAL

date 08-Oct-18

Joshi (2018) - research on athlete performance and technique- 2018 data book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Fujiyoshi, Shunta (JPN) (2(	time	6.47	11.57	16.93	22.73	28.77	34.92	41.10	47.48	47.48	3 / 1							
reaction time 0.178	interval		5.10	5.36	5.80	6.04	6.15	6.18	6.38		# of strides	11.57	11.16	12.19	12.56	22.73	24.75	2.02
	velocity	7.73	9.80	9.33	8.62	8.28	8.13	8.09	7.84	8.42		8.64	8.96	8.20	7.96	8.80	8.08	
Shoji, Kosuke (JPN) (2001)	time	6.38	11.47	16.83	22.47	28.46	34.57	40.83	47.56	47.56	5 / 2							
reaction time 0.187	interval		5.09	5.36	5.64	5.99	6.11	6.26	6.73	PB	# of strides	11.47	11.00	12.10	12.99	22.47	25.09	2.62
	velocity	7.84	9.82	9.33	8.87	8.35	8.18	7.99	7.43	8.41		8.72	9.09	8.26	7.70	8.90	7.97	
Kidachi, Muto (JPN)	time	6.34	11.90	17.52	23.42	29.41	35.42	41.47	47.65	47.65	6 / 3							
reaction time 0.153	interval		5.56	5.62	5.90	5.99	6.01	6.05	6.18		# of strides	11.90	11.52	12.00	12.23	23.42	24.23	0.81

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
	velocity	7.89	8.99	8.90	8.47	8.35	8.32	8.26	8.09	8.39		8.40	8.68	8.33	8.18	8.54	8.25	

2018 Japanese Corporate Championships (Osaka, JPN)

FINAL date 23-Sep-18

Yamanaka (2018) - Race analysis of men and women 400m at 2018 competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Itahana, Kohei (JPN) (1994)	time	6.38	11.76	17.20	22.79	28.42	34.07	39.94	46.24	46.24	5 / 1							
reaction time 0.181	interval		5.38	5.44	5.59	5.63	5.65	5.87	6.30	**PB**	# of strides	11.76	11.03	11.28	12.17	22.79	23.45	0.66
	velocity	7.84	9.29	9.19	8.94	8.88	8.85	8.52	7.94	8.65		8.50	9.07	8.87	8.22	8.78	8.53	
Kimura, Kazushi (JPN) (19	time	6.42	11.78	17.20	22.71	28.27	33.91	39.85	46.43	46.43	6 / 2							
reaction time 0.192	interval		5.36	5.42	5.51	5.56	5.64	5.94	6.58		# of strides	11.78	10.93	11.20	12.52	22.71	23.72	1.01
	velocity	7.79	9.33	9.23	9.07	8.99	8.87	8.42	7.60	8.62		8.49	9.15	8.93	7.99	8.81	8.43	
Azuma, Kaiki (JPN) (1993)	time	6.39	11.74	17.22	22.79	28.38	34.06	39.99	46.83	46.83	7 / 3							
reaction time 0.141	interval		5.35	5.48	5.57	5.59	5.68	5.93	6.84		# of strides	11.74	11.05	11.27	12.77	22.79	24.04	1.25
	velocity	7.82	9.35	9.12	8.98	8.94	8.80	8.43	7.31	8.54		8.52	9.05	8.87	7.83	8.78	8.32	
Kimura, Jun (JPN) (1991)	time	6.28	11.55	16.92	22.48	28.25	34.10	40.16	46.97	46.97	4 / 4							
reaction time 0.116	interval		5.27	5.37	5.56	5.77	5.85	6.06	6.81		# of strides	11.55	10.93	11.62	12.87	22.48	24.49	2.01
	velocity	7.96	9.49	9.31	8.99	8.67	8.55	8.25	7.34	8.52		8.66	9.15	8.61	7.77	8.90	8.17	
Horii, Kosuke (JPN) (1994)	time	6.46	11.84	17.30	23.09	29.07	35.14	41.33	47.96	47.96	9 / 6							
reaction time 0.177	interval		5.38	5.46	5.79	5.98	6.07	6.19	6.63		# of strides	11.84	11.25	12.05	12.82	23.09	24.87	1.78
	velocity	7.74	9.29	9.16	8.64	8.36	8.24	8.08	7.54	8.34		8.45	8.89	8.30	7.80	8.66	8.04	

2018 Weltklasse (Zürich, SUI)

FINAL date 30-Aug-18

Omega Timing (2018) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kerley, Fred (USA) (1995)	time		11.1		21.3		32.5		44.80	44.80	5 / 1							
reaction time 0.140	interval				10.2		11.2		12.3		# of strides	11.10	10.20	11.20	12.30	21.30	23.50	2.20
	velocity		9.01		9.80		8.93		8.13	8.93	173.5	9.01	9.80	8.93	8.13	9.39	8.51	
Strother, Nathan (USA) (19	time		11.3		21.7		32.7		44.93	44.93	3 / 2							
reaction time 0.156	interval				10.4		11.0		12.2		# of strides	11.30	10.40	11.00	12.23	21.70	23.23	1.53
	velocity		8.85		9.62		9.09		8.18	8.90	175.2	8.85	9.62	9.09	8.18	9.22	8.61	
Hudson-Smith, Matthew (	time		11.0		21.3		32.5		44.95	44.95	6 / 3							
reaction time 0.139	interval				10.3		11.2		12.5		# of strides	11.00	10.30	11.20	12.45	21.30	23.65	2.35
	velocity		9.09		9.71		8.93		8.03	8.90	161.2	9.09	9.71	8.93	8.03	9.39	8.46	
Dedewo, Paul (USA) (1991)	time		11.4		21.8		33.0		45.18	45.18	7 / 4							
reaction time 0.157	interval				10.4		11.2		12.2		# of strides	11.40	10.40	11.20	12.18	21.80	23.38	1.58
	velocity		8.77		9.62		8.93		8.21	8.85	168.7	8.77	9.62	8.93	8.21	9.17	8.55	
Thebe, Baboloki (BOT) (19	time		11.0		21.3		32.5		45.41	45.41	2 / 5							
reaction time 0.149	interval				10.3		11.2		12.9		# of strides	11.00	10.30	11.20	12.91	21.30	24.11	2.81
	velocity		9.09		9.71		8.93		7.75	8.81		9.09	9.71	8.93	7.75	9.39	8.30	
Santos, Luguelín (DOM) (1	time		11.7		22.2		33.6		46.17	46.17	8 / 6							
reaction time 0.221	interval				10.5		11.4		12.6		# of strides	11.70	10.50	11.40	12.57	22.20	23.97	1.77
	velocity		8.55		9.52		8.77		7.96	8.66		8.55	9.52	8.77	7.96	9.01	8.34	
Conradie, Pieter (RSA) (19	time		11.3		21.9		33.6		47.37	47.37	1 / 7							
reaction time 0.137	interval				10.6		11.7		13.8		# of strides	11.30	10.60	11.70	13.77	21.90	25.47	3.57
	velocity		8.85		9.43		8.55		7.26	8.44		8.85	9.43	8.55	7.26	9.13	7.85	
Gardiner, Steven (BAH) (19	time		12.1							dnf	4 / --							
reaction time 0.126	interval										# of strides	12.10						
	velocity		8.26									8.26						

2018 Asian Games (Jakarta, INA)

FINAL date 26-Aug-18

Yamanaka (2018) - Race analysis of men and women 400m at 2018 competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Haroun, Abdaleh (QAT) (19	time	6.20	11.17	16.30	21.61	27.17	32.86	38.77	44.89	44.89	3 / 1							
reaction time 0.213	interval		4.97	5.13	5.31	5.56	5.69	5.91	6.12		# of strides	11.17	10.44	11.25	12.03	21.61	23.28	1.67
	velocity	8.06	10.06	9.75	9.42	8.99	8.79	8.46	8.17	8.91	167.5	8.95	9.58	8.89	8.31	9.25	8.59	
Anas, Y. Muhammed (IND)	time	6.06	11.07	16.27	21.67	27.21	32.97	39.12	45.69	45.69	5 / 2							
reaction time 0.151	interval		5.01	5.20	5.40	5.54	5.76	6.15	6.57		# of strides	11.07	10.60	11.30	12.72	21.67	24.02	2.35
	velocity	8.25	9.98	9.62	9.26	9.03	8.68	8.13	7.61	8.75	174.5	9.03	9.43	8.85	7.86	9.23	8.33	
Abbas, Abdulrahman Khar	time	6.17	11.18	16.40	21.91	27.53	33.31	39.38	45.70	45.70	7 / 3							
reaction time 0.153	interval		5.01	5.22	5.51	5.62	5.78	6.07	6.32	**PB**	# of strides	11.18	10.73	11.40	12.39	21.91	23.79	1.88
	velocity	8.10	9.98	9.58	9.07	8.90	8.65	8.24	7.91	8.75	172.2	8.94	9.32	8.77	8.07	9.13	8.41	
Rajiv, Arokia (IND) (1991)	time	6.24	11.39	16.63	22.08	27.55	33.15	39.18	45.84	45.84	8 / 4							
reaction time 0.187	interval		5.15	5.24	5.45	5.47	5.60	6.03	6.66		# of strides	11.39	10.69	11.07	12.69	22.08	23.76	1.68
	velocity	8.01	9.71	9.54	9.17	9.14	8.93	8.29	7.51	8.73	177.0	8.78	9.35	9.03	7.88	9.06	8.42	
Walsh, Julian Jrummi (JPN	time	6.08	11.07	16.17	21.53	27.13	33.04	39.27	45.89	45.89	4 / 5							
reaction time 0.120	interval		4.99	5.10	5.36	5.60	5.91	6.23	6.62		# of strides	11.07	10.46	11.51	12.85	21.53	24.36	2.83
	velocity	8.22	10.02	9.80	9.33	8.93	8.46	8.03	7.55	8.72	170.7	9.03	9.56	8.69	7.78	9.29	8.21	

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

Litvin, Mikhail (KAZ) (1996)	0.171	no information available							46.17	2 / 6								
Abubaker, Abbas (BRN) (1	time	6.37	11.39	16.50	21.84	27.37	33.15	39.38	46.41	46.41	6 / 7							
reaction time	0.170	interval		5.02	5.11	5.34	5.53	5.78	6.23	7.03		# of strides	11.39	10.45	11.31	13.26	21.84	24.57	2.73
		velocity	7.85	9.96	9.78	9.36	9.04	8.65	8.03	7.11	8.62	178.7	8.78	9.57	8.84	7.54	9.16	8.14	
Kumarage, H.K. Kalinga (Sl	0.159	no information available							46.49	1 / 8								

Semi Final 3

date 25-Aug-18

Yamanaka (2018) - Race analysis of men and women 400m at 2018 competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Haroun, Abdaleh (QAT) (1!	time	6.13	11.11	16.29	21.75	27.43	33.21	39.23	45.83	45.83	4 / 1							
reaction time 0.195	interval		4.98	5.18	5.46	5.68	5.78	6.02	6.60		# of strides	11.11	10.64	11.46	12.62	21.75	24.08	2.33
	velocity	8.16	10.04	9.65	9.16	8.80	8.65	8.31	7.58	8.73		9.00	9.40	8.73	7.92	9.20	8.31	
Abbas, Abdulrahman Khar	time	6.26	11.26	16.38	21.79	27.51	33.49	39.62	46.07	46.07	3 / 2							
reaction time 0.170	interval		5.00	5.12	5.41	5.72	5.98	6.13	6.45	PB	# of strides	11.26	10.53	11.70	12.58	21.79	24.28	2.49
	velocity	7.99	10.00	9.77	9.24	8.74	8.36	8.16	7.75	8.68		8.88	9.50	8.55	7.95	9.18	8.24	

Semi Final 2

date 25-Aug-18

Yamanaka (2018) - Race analysis of men and women 400m at 2018 competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Anas, Y. Muhammed (IND)	time	6.15	11.16	16.32	21.76	27.29	32.97	38.93	45.30	45.30	3 / 1							
reaction time 0.150	interval		5.01	5.16	5.44	5.53	5.68	5.96	6.37		# of strides	11.16	10.60	11.21	12.33	21.76	23.54	1.78
	velocity	8.13	9.98	9.69	9.19	9.04	8.80	8.39	7.85	8.83		8.96	9.43	8.92	8.11	9.19	8.50	
Walsh, Julian Jrummi (JPN	time	6.13	11.15	16.34	21.81	27.45	33.34	39.49	46.01	46.01	6 / 2							
reaction time 0.147	interval		5.02	5.19	5.47	5.64	5.89	6.15	6.52		# of strides	11.15	10.66	11.53	12.67	21.81	24.20	2.39
	velocity	8.16	9.96	9.63	9.14	8.87	8.49	8.13	7.67	8.69		8.97	9.38	8.67	7.89	9.17	8.26	

Semi Final 1

date 25-Aug-18

Yamanaka (2018) - Race analysis of men and women 400m at 2018 competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Abubaker, Abbas (BRN) (1	time	6.36	11.41	16.57	22.03	27.63	33.33	39.22	45.59	45.59	3 / 1							
reaction time 0.178	interval		5.05	5.16	5.46	5.60	5.70	5.89	6.37		# of strides	11.41	10.62	11.30	12.26	22.03	23.56	1.53
	velocity	7.86	9.90	9.69	9.16	8.93	8.77	8.49	7.85	8.77		8.76	9.42	8.85	8.16	9.08	8.49	
Rajiv, Arokia (IND) (1991)	time	6.34	11.53	16.83	22.39	28.01	33.79	39.68	46.08	46.08	6 / 2							
reaction time 0.179	interval		5.19	5.30	5.56	5.62	5.78	5.89	6.40		# of strides	11.53	10.86	11.40	12.29	22.39	23.69	1.30
	velocity	7.89	9.63	9.43	8.99	8.90	8.65	8.49	7.81	8.68		8.67	9.21	8.77	8.14	8.93	8.44	

Heat 5

date 25-Aug-18

Yamanaka (2018) - Race analysis of men and women 400m at 2018 competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Abbas, Abdulrahman Khar	time	6.15	11.26	16.55	22.20	28.19	34.30	40.56	47.41	47.41	6 / 2							
reaction time 0.169	interval		5.11	5.29	5.65	5.99	6.11	6.26	6.85		# of strides	11.26	10.94	12.10	13.11	22.20	25.21	3.01
	velocity	8.13	9.78	9.45	8.85	8.35	8.18	7.99	7.30	8.44		8.88	9.14	8.26	7.63	9.01	7.93	

Heat 4

date 25-Aug-18

Yamanaka (2018) - Race analysis of men and women 400m at 2018 competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Haroun, Abdaleh (QAT) (1!	time	6.34	11.53	16.82	22.29	27.95	33.85	39.91	46.28	46.28	3 / 1							
reaction time 0.192	interval		5.19	5.29	5.47	5.66	5.90	6.06	6.37		# of strides	11.53	10.76	11.56	12.43	22.29	23.99	1.70
	velocity	7.89	9.63	9.45	9.14	8.83	8.47	8.25	7.85	8.64		8.67	9.29	8.65	8.05	8.97	8.34	
Rajiv, Arokia (IND) (1991)	time	6.31	11.40	16.73	22.27	27.99	33.97	40.17	46.82	46.82	5 / 2							
reaction time 0.184	interval		5.09	5.33	5.54	5.72	5.98	6.20	6.65		# of strides	11.40	10.87	11.70	12.85	22.27	24.55	2.28
	velocity	7.92	9.82	9.38	9.03	8.74	8.36	8.06	7.52	8.54		8.77	9.20	8.55	7.78	8.98	8.15	

Heat 3

date 25-Aug-18

Yamanaka (2018) - Race analysis of men and women 400m at 2018 competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Abubaker, Abbas (BRN) (1	time	6.29	11.51	16.69	22.06	27.67	33.43	39.43	46.07	46.07	2 / 1							
reaction time 0.173	interval		5.22	5.18	5.37	5.61	5.76	6.00	6.64		# of strides	11.51	10.55	11.37	12.64	22.06	24.01	1.95
	velocity	7.95	9.58	9.65	9.31	8.91	8.68	8.33	7.53	8.68		8.69	9.48	8.80	7.91	9.07	8.33	
Walsh, Julian Jrummi (JPN	time	6.05	11.11	16.31	21.75	27.44	33.37	39.53	46.20	46.20	5 / 2							
reaction time 0.128	interval		5.06	5.20	5.44	5.69	5.93	6.16	6.67		# of strides	11.11	10.64	11.62	12.83	21.75	24.45	2.70
	velocity	8.26	9.88	9.62	9.19	8.79	8.43	8.12	7.50	8.66		9.00	9.40	8.61	7.79	9.20	8.18	

Heat 1

date 25-Aug-18

Yamanaka (2018) - Race analysis of men and women 400m at 2018 competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Anas, Y. Muhammed (IND)	time	6.13	11.04	16.16	21.56	27.21	33.06	39.25	45.63	45.63	3 / 1							
reaction time 0.180	interval		4.91	5.12	5.40	5.65	5.85	6.19	6.38		# of strides	11.04	10.52	11.50	12.57	21.56	24.07	2.51
	velocity	8.16	10.18	9.77	9.26	8.85	8.55	8.08	7.84	8.77		9.06	9.51	8.70	7.96	9.28	8.31	

2018 Müller Grand Prix (Birmingham, GBR)

FINAL

date 18-Aug-18

Omega Timing (2018) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kerley, Fred (USA) (1995)	time		11.3		22.0		33.3		45.54	45.54	6 / 1							
reaction time 0.145	interval				10.7		11.3		12.2		# of strides	11.30	10.70	11.30	12.24	22.00	23.54	1.54
	velocity		8.85		9.35		8.85		8.17	8.78	178.2	8.85	9.35	8.85	8.17	9.09	8.50	
Hudson-Smith, Matthew (C	time		11.3		22.0		33.2		45.59	45.59	5 / 2							
reaction time 0.141	interval				10.7		11.2		12.4		# of strides	11.30	10.70	11.20	12.39	22.00	23.59	1.59
	velocity		8.85		9.35		8.93		8.07	8.77	176.5	8.85	9.35	8.93	8.07	9.09	8.48	
Dedewo, Paul (USA) (1991)	time		11.5		22.1		33.4		45.62	45.62	4 / 3							

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

reaction time 0.233	interval		10.6	11.3	12.2		# of strides	11.50	10.60	11.30	12.22	22.10	23.52	1.42
	velocity	8.70	9.43	8.85	8.18	8.77	179.7	8.70	9.43	8.85	8.18	9.05	8.50	
Taylor, Christian (USA) (19	time	11.1	21.5	32.9	45.78	45.78	7 / 4							
reaction time 0.157	interval		10.4	11.4	12.9		# of strides	11.10	10.40	11.40	12.88	21.50	24.28	2.78
	velocity	9.01	9.62	8.77	7.76	8.74	167.7	9.01	9.62	8.77	7.76	9.30	8.24	
Santos, Luguelín (DOM) (1	time	11.8	22.6	33.8	45.81	45.81	3 / 5							
reaction time 0.207	interval		10.8	11.2	12.0		# of strides	11.80	10.80	11.20	12.01	22.60	23.21	0.61
	velocity	8.47	9.26	8.93	8.33	8.73	184.2	8.47	9.26	8.93	8.33	8.85	8.62	
Borlée, Jonathan (BEL) (19	time	11.4	22.3	33.9	46.27	46.27	1 / 6							
reaction time 0.149	interval		10.9	11.6	12.4		# of strides	11.40	10.90	11.60	12.37	22.30	23.97	1.67
	velocity	8.77	9.17	8.62	8.08	8.64	179.2	8.77	9.17	8.62	8.08	8.97	8.34	
Thebe, Baboloki (BOT) (19	time	11.5	22.6	33.8	46.35	46.35	2 / 7							
reaction time 0.167	interval		11.1	11.2	12.6		# of strides	11.50	11.10	11.20	12.55	22.60	23.75	1.15
	velocity	8.70	9.01	8.93	7.97	8.63	181.0	8.70	9.01	8.93	7.97	8.85	8.42	
Cowan, Dwayne (GBR) (19	time	11.3	22.1	33.8	46.94	46.94	8 / 8							
reaction time 0.144	interval		10.8	11.7	13.1		# of strides	11.30	10.80	11.70	13.14	22.10	24.84	2.74
	velocity	8.85	9.26	8.55	7.61	8.52		8.85	9.26	8.55	7.61	9.05	8.05	

2018 Japanese National High School Championships (Nagoya, JPN)

FINAL date 02-Aug-18

Kota (2018) - 71st high school championships: JAF scientific committee - biomechanics data collection

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Mori, Shushi (JPN)	time	6.45	11.69	17.00	22.35	27.90	33.90	40.29	47.14	47.14	6 / 1							
reaction time	interval		5.24	5.31	5.35	5.55	6.00	6.39	6.85	PB	# of strides	11.69	10.66	11.55	13.24	22.35	24.79	2.44
	velocity	7.75	9.54	9.42	9.35	9.01	8.33	7.82	7.30	8.49		8.55	9.38	8.66	7.55	8.95	8.07	
Kosuke, Soji (JPN)	time	6.49	11.68	16.98	22.46	28.27	34.38	40.62	47.22	47.22	9 / 2							
reaction time	interval		5.19	5.30	5.48	5.81	6.11	6.24	6.60	PB	# of strides	11.68	10.78	11.92	12.84	22.46	24.76	2.30
	velocity	7.70	9.63	9.43	9.12	8.61	8.18	8.01	7.58	8.47		8.56	9.28	8.39	7.79	8.90	8.08	
Noguchi, Kohei (JPN) (200	time	6.41	11.64	16.98	22.57	28.39	34.44	40.75	47.43	47.43	4 / 3							
reaction time	interval		5.23	5.34	5.59	5.82	6.05	6.31	6.68	PB	# of strides	11.64	10.93	11.87	12.99	22.57	24.86	2.29
	velocity	7.80	9.56	9.36	8.94	8.59	8.26	7.92	7.49	8.43		8.59	9.15	8.42	7.70	8.86	8.05	
Yamazaki, Norihiro (JPN)	time	6.36	11.57	16.98	22.57	28.43	34.75	41.17	47.68	47.68	5 / 4							
reaction time	interval		5.21	5.41	5.59	5.86	6.32	6.42	6.51	PB	# of strides	11.57	11.00	12.18	12.93	22.57	25.11	2.54
	velocity	7.86	9.60	9.24	8.94	8.53	7.91	7.79	7.68	8.39		8.64	9.09	8.21	7.73	8.86	7.96	
Matsuoka, Tomonori (JPN)	time	6.28	11.27	16.53	22.16	28.12	34.32	40.82	47.74	47.74	8 / 5							
reaction time	interval		4.99	5.26	5.63	5.96	6.20	6.50	6.92	PB	# of strides	11.27	10.89	12.16	13.42	22.16	25.58	3.42
	velocity	7.96	10.02	9.51	8.88	8.39	8.06	7.69	7.23	8.38		8.87	9.18	8.22	7.45	9.03	7.82	
Meldrum, Alan (JPN)	time	6.55	12.00	17.32	22.72	28.50	34.58	40.99	47.86	47.86	2 / 6							
reaction time	interval		5.45	5.32	5.40	5.78	6.08	6.41	6.87		# of strides	12.00	10.72	11.86	13.28	22.72	25.14	2.42
	velocity	7.63	9.17	9.40	9.26	8.65	8.22	7.80	7.28	8.36		8.33	9.33	8.43	7.53	8.80	7.96	
Kaneda, Riki (JPN) (2000)	time	6.32	11.59	16.93	22.57	28.49	34.60	41.00	47.93	47.93	3 / 7							
reaction time	interval		5.27	5.34	5.64	5.92	6.11	6.40	6.93		# of strides	11.59	10.98	12.03	13.33	22.57	25.36	2.79
	velocity	7.91	9.49	9.36	8.87	8.45	8.18	7.81	7.22	8.35		8.63	9.11	8.31	7.50	8.86	7.89	
Matsumoto, Shion (JPN)	time	6.55	11.93	17.45	23.29	29.37	35.64	41.81	48.24	48.24	7 / 8							
reaction time	interval		5.38	5.52	5.84	6.08	6.27	6.17	6.43		# of strides	11.93	11.36	12.35	12.60	23.29	24.95	1.66
	velocity	7.63	9.29	9.06	8.56	8.22	7.97	8.10	7.78	8.29		8.38	8.80	8.10	7.94	8.59	8.02	

2018 Müller Anniversary Games (London, GBR)

FINAL date 21-Jul-18

Omega Timing (2018) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Haroun, Abdalleleh (QAT)	time		11.3		21.5		32.5		44.07	44.07	4 / 1							
reaction time 0.189	interval				10.2		11.0		11.6	NR	# of strides	11.30	10.20	11.00	11.57	21.50	22.57	1.07
	velocity		8.85		9.80		9.09		8.64	9.08	166.7	8.85	9.80	9.09	8.64	9.30	8.86	
Dedewo, Paul (USA) (1991)	time		11.2		21.3		32.3		44.43	44.43	6 / 2							
reaction time 0.159	interval				10.1		11.0		12.1	PB	# of strides	11.20	10.10	11.00	12.13	21.30	23.13	1.83
	velocity		8.93		9.90		9.09		8.24	9.00	166.7	8.93	9.90	9.09	8.24	9.39	8.65	
James, Kirani (GRN) (1992)	time		11.0		21.0		32.2		44.50	44.50	7 / 3							
reaction time 0.154	interval				10.0		11.2		12.3		# of strides	11.00	10.00	11.20	12.30	21.00	23.50	2.50
	velocity		9.09		10.00		8.93		8.13	8.99	162.2	9.09	10.00	8.93	8.13	9.52	8.51	
Thebe, Baboloki (BOT) (19	time		11.6		21.9		32.8		44.54	44.54	9 / 4							
reaction time 0.165	interval				10.3		10.9		11.7		# of strides	11.60	10.30	10.90	11.74	21.90	22.64	0.74
	velocity		8.62		9.71		9.17		8.52	8.98	174.5	8.62	9.71	9.17	8.52	9.13	8.83	
Samba, Abderrahaman, (Q	time		11.4		21.8		32.8		44.62	44.62	2 / 5							
reaction time 0.179	interval				10.4		11.0		11.8	PB	# of strides	11.40	10.40	11.00	11.82	21.80	22.82	1.02
	velocity		8.77		9.62		9.09		8.46	8.96	179.7	8.77	9.62	9.09	8.46	9.17	8.76	
Hudson-Smith, Matthew (G	time		11.2		21.5		32.6		44.63	44.63	8 / 6							
reaction time 0.151	interval				10.3		11.1		12.0		# of strides	11.20	10.30	11.10	12.03	21.50	23.13	1.63

	velocity	8.93	9.71	9.01	8.31	8.96	163.0	8.93	9.71	9.01	8.31	9.30	8.65			
Allen, Nathon (JAM) (1995)	time	11.2	21.3	32.2	44.72	44.72	5 / 7									
reaction time 0.186	interval		10.1	10.9	12.5		# of strides	11.20	10.10	10.90	12.52	21.30	23.42	2.12		
	velocity	8.93	9.90	9.17	7.99	8.94	164.0	8.93	9.90	9.17	7.99	9.39	8.54			
Strother, Nathan (USA) (19	time	11.6	22.1	33.1	45.17	45.17	3 / 8									
reaction time 0.170	interval		10.5	11.0	12.1		# of strides	11.60	10.50	11.00	12.07	22.10	23.07	0.97		
	velocity	8.62	9.52	9.09	8.29	8.86	172.7	8.62	9.52	9.09	8.29	9.05	8.67			
Yousif, Rabah (GBR) (1986	time	11.3	21.9	33.3	46.07	46.07	1 / 9									
reaction time 0.153	interval		10.6	11.4	12.8		# of strides	11.30	10.60	11.40	12.77	21.90	24.17	2.27		
	velocity	8.85	9.43	8.77	7.83	8.68		8.85	9.43	8.77	7.83	9.13	8.27			

National FINAL

date 21-Jul-18

Omega Timing (2018) - diamond league race analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Cowan, Dwayne (GBR) (19	time		11.2		21.7		33.1		45.65	45.65	6 / 1							
reaction time 0.131	interval				10.5		11.4		12.6		# of strides	11.20	10.50	11.40	12.55	21.70	23.95	2.25
	velocity		8.93		9.52		8.77		7.97	8.76		8.93	9.52	8.77	7.97	9.22	8.35	
Rooney, Martyn (GBR) (19	time		11.4		22.0		33.3		46.11	46.11	5 / 2							
reaction time 0.140	interval				10.6		11.3		12.8		# of strides	11.40	10.60	11.30	12.81	22.00	24.11	2.11
	velocity		8.77		9.43		8.85		7.81	8.67		8.77	9.43	8.85	7.81	9.09	8.30	
Rhoden-Stevens, Jamal (GI	time		11.6		22.6		34.1		46.54	46.54	3 / 3							
reaction time 0.138	interval				11.0		11.5		12.4	PB	# of strides	11.60	11.00	11.50	12.44	22.60	23.94	1.34
	velocity		8.62		9.09		8.70		8.04	8.59		8.62	9.09	8.70	8.04	8.85	8.35	
Smith, Owen (GBR) (1994)	time		11.8		22.5		34.1		46.93	46.93	4 / 4							
reaction time 0.138	interval				10.7		11.6		12.8		# of strides	11.80	10.70	11.60	12.83	22.50	24.43	1.93
	velocity		8.47		9.35		8.62		7.79	8.52		8.47	9.35	8.62	7.79	8.89	8.19	
Plenderleith, Grant (GBR) (	time		11.5		22.2		33.7		47.01	47.01	7 / 5							
reaction time 0.163	interval				10.7		11.5		13.3		# of strides	11.50	10.70	11.50	13.31	22.20	24.81	2.61
	velocity		8.70		9.35		8.70		7.51	8.51		8.70	9.35	8.70	7.51	9.01	8.06	
Snaith, Ben (GBR) (1995)	time		11.7		22.3		33.9		47.15	47.15	8 / 6							
reaction time 0.162	interval				10.6		11.6		13.3		# of strides	11.70	10.60	11.60	13.25	22.30	24.85	2.55
	velocity		8.55		9.43		8.62		7.55	8.48		8.55	9.43	8.62	7.55	8.97	8.05	
Claridge, Ben (GBR) (1997)	time		11.6		22.4		34.1		47.35	47.35	1 / 7							
reaction time 0.138	interval				10.8		11.7		13.3		# of strides	11.60	10.80	11.70	13.25	22.40	24.95	2.55
	velocity		8.62		9.26		8.55		7.55	8.45		8.62	9.26	8.55	7.55	8.93	8.02	
Hazel, Sam (GBR) (1996)	time		11.8		22.6		34.4		47.37	47.37	9 / 8							
reaction time 0.170	interval				10.8		11.8		13.0		# of strides	11.80	10.80	11.80	12.97	22.60	24.77	2.17
	velocity		8.47		9.26		8.47		7.71	8.44		8.47	9.26	8.47	7.71	8.85	8.07	
Dunn, Jarryd (GBR) (1992)	time		11.8		22.7		34.7		48.05	48.05	2 / 9							
reaction time 0.157	interval				10.9		12.0		13.4		# of strides	11.80	10.90	12.00	13.35	22.70	25.35	2.65
	velocity		8.47		9.17		8.33		7.49	8.32		8.47	9.17	8.33	7.49	8.81	7.89	

2018 IAAF World Junior Championships (Tampere, FIN)

FINAL

date 13-Jul-18

Koyama (2018) - research on athlete performance and technique- 2018 data book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Sacoor, Jonathan (BEL) (1	time	6.24	11.29	16.40	21.80	27.35	33.00	38.83	45.03	45.03	5 / 1							
reaction time 0.154	interval		5.05	5.11	5.40	5.55	5.65	5.83	6.20	NJR	# of strides	11.29	10.51	11.20	12.03	21.80	23.23	1.43
	velocity	8.01	9.90	9.78	9.26	9.01	8.85	8.58	8.06	8.88		8.86	9.51	8.93	8.31	9.17	8.61	
Taylor, Christopher (JAM)	time	6.05	10.90	15.81	21.05	26.55	32.41	38.65	45.38	45.38	6 / 2							
reaction time 0.197	interval		4.85	4.91	5.24	5.50	5.86	6.24	6.73		# of strides	10.90	10.15	11.36	12.97	21.05	24.33	3.28
	velocity	8.26	10.31	10.18	9.54	9.09	8.53	8.01	7.43	8.81		9.17	9.85	8.80	7.71	9.50	8.22	
Sawyers, Chantz (JAM) (19	time	6.27	11.25	16.35	21.72	27.23	32.97	39.12	45.89	45.89	4 / 3							
reaction time 0.157	interval		4.98	5.10	5.37	5.51	5.74	6.15	6.77		# of strides	11.25	10.47	11.25	12.92	21.72	24.17	2.45
	velocity	7.97	10.04	9.80	9.31	9.07	8.71	8.13	7.39	8.72		8.89	9.55	8.89	7.74	9.21	8.27	
Scotti, Edoardo (ITA) (2000	time	6.34	11.51	16.80	22.30	27.95	33.66	39.63	46.20	46.20	3 / 4							
reaction time 0.180	interval		5.17	5.29	5.50	5.65	5.71	5.97	6.57		# of strides	11.51	10.79	11.36	12.54	22.30	23.90	1.60
	velocity	7.89	9.67	9.45	9.09	8.85	8.76	8.38	7.61	8.66		8.69	9.27	8.80	7.97	8.97	8.37	
Fields, Howard (USA) (199	time	6.16	11.24	16.47	21.95	27.61	33.42	39.64	46.53	46.53	2 / 5							
reaction time 0.163	interval		5.08	5.23	5.48	5.66	5.81	6.22	6.89		# of strides	11.24	10.71	11.47	13.11	21.95	24.58	2.63
	velocity	8.12	9.84	9.56	9.12	8.83	8.61	8.04	7.26	8.60		8.90	9.34	8.72	7.63	9.11	8.14	
Stewart-Baynes, Khamal (C	time	6.22	11.16	16.17	21.61	27.43	33.52	39.97	46.79	46.79	7 / 6							
reaction time 0.158	interval		4.94	5.01	5.44	5.82	6.09	6.45	6.82		# of strides	11.16	10.45	11.91	13.27	21.61	25.18	3.57
	velocity	8.04	10.12	9.98	9.19	8.59	8.21	7.75	7.33	8.55		8.96	9.57	8.40	7.54	9.25	7.94	
Misener-Daley, Myles (CAN	time	6.23	11.29	16.68	22.28	28.06	34.07	40.37	47.03	47.03	1 / 7							
reaction time 0.153	interval		5.06	5.39	5.60	5.78	6.01	6.30	6.66		# of strides	11.29	10.99	11.79	12.96	22.28	24.75	2.47
	velocity	8.03	9.88	9.28	8.93	8.65	8.32	7.94	7.51	8.51		8.86	9.10	8.48	7.72	8.98	8.08	

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Jones, Jonathan (BAR) (19	time	6.34	11.37	16.43	21.89	27.61	33.72	40.40	48.01	48.01	8 / 8							
reaction time 0.185	interval		5.03	5.06	5.46	5.72	6.11	6.68	7.61		# of strides	11.37	10.52	11.83	14.29	21.89	26.12	4.23
	velocity	7.89	9.94	9.88	9.16	8.74	8.18	7.49	6.57	8.33		8.80	9.51	8.45	7.00	9.14	7.66	

Heat 4

date 11-Jul-18

Koyama (2018) - research on athlete performance and technique- 2018 data book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Mori, Syuji (JPN) (2000)	time	6.28	11.36	16.57	22.20	28.13	34.39	40.99	48.12	48.12	2 / 6							
reaction time 0.159	interval		5.08	5.21	5.63	5.93	6.26	6.60	7.13		# of strides	11.36	10.84	12.19	13.73	22.20	25.92	3.72
	velocity	7.96	9.84	9.60	8.88	8.43	7.99	7.58	7.01	8.31		8.80	9.23	8.20	7.28	9.01	7.72	

Heat 2

date 11-Jul-18

Koyama (2018) - research on athlete performance and technique- 2018 data book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Sawa, Daichi (JPN) (2000)	time	6.38	11.64	16.97	22.63	28.44	34.50	40.99	48.15	48.15	3 / 7							
reaction time 0.144	interval		5.26	5.33	5.66	5.81	6.06	6.49	7.16	**PB**	# of strides	11.64	10.99	11.87	13.65	22.63	25.52	2.89
	velocity	7.84	9.51	9.38	8.83	8.61	8.25	7.70	6.98	8.31		8.59	9.10	8.42	7.33	8.84	7.84	

2018 USATF National Championships (Des Moines, IA)

FINAL

date 23-Jun-18

Track Newsletter (2018) - USATF championships men

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Montgomery, Kahmari (US	time				21.8		32.8		44.6	44.58	/ 1							
reaction time	interval						11.00		11.80	**PB**	# of strides			11.00	11.80	21.80	22.80	1.00
	velocity				9.17		9.09		8.47	8.97				9.09	8.47	9.17	8.77	
Dedewo, Paul (USA) (1991)	time				21.6		32.7		44.7	44.64	/ 2							
reaction time	interval						11.10		12.00		# of strides			11.10	12.00	21.60	23.10	1.50
	velocity				9.26		9.01		8.33	8.96				9.01	8.33	9.26	8.66	

2018 Japanese National Championships (Yamaguchi, JPN)

FINAL

date 23-Jun-18

Yamanaka (2018) - Race analysis of men and women 400m at 2018 competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Walsh, Julian Jrummi (JPN	time	6.04	11.05	16.17	21.54	27.20	33.17	39.39	45.97	45.97	5 / 1							
reaction time 0.143	interval		5.01	5.12	5.37	5.66	5.97	6.22	6.58		# of strides	11.05	10.49	11.63	12.80	21.54	24.43	2.89
	velocity	8.28	9.98	9.77	9.31	8.83	8.38	8.04	7.60	8.70	179.5	9.05	9.53	8.60	7.81	9.29	8.19	
Kimura, Jun (JPN) (1991)	time	6.13	11.22	16.45	21.98	27.73	33.65	39.77	46.39	46.39	4 / 2							
reaction time 0.138	interval		5.09	5.23	5.53	5.75	5.92	6.12	6.62		# of strides	11.22	10.76	11.67	12.74	21.98	24.41	2.43
	velocity	8.16	9.82	9.56	9.04	8.70	8.45	8.17	7.55	8.62	181.2	8.91	9.29	8.57	7.85	9.10	8.19	
Ito, Rikiya (JPN) (1998)	time	6.31	11.52	16.83	22.41	28.17	34.14	40.22	46.57	46.57	6 / 3							
reaction time 0.140	interval		5.21	5.31	5.58	5.76	5.97	6.08	6.35	**PB**	# of strides	11.52	10.89	11.73	12.43	22.41	24.16	1.75
	velocity	7.92	9.60	9.42	8.96	8.68	8.38	8.22	7.87	8.59	186.7	8.68	9.18	8.53	8.05	8.92	8.28	
Tamura, Tomoya (JPN) (19	time	6.18	11.33	16.58	22.07	27.75	33.62	39.82	46.58	46.58	8 / 4							
reaction time 0.169	interval		5.15	5.25	5.49	5.68	5.87	6.20	6.76		# of strides	11.33	10.74	11.55	12.96	22.07	24.51	2.44
	velocity	8.09	9.71	9.52	9.11	8.80	8.52	8.06	7.40	8.59	185.7	8.83	9.31	8.66	7.72	9.06	8.16	
Kimura, Kazushi (JPN) (19	time	6.32	11.46	16.75	22.20	27.77	33.57	39.83	46.67	46.67	7 / 5							
reaction time 0.197	interval		5.14	5.29	5.45	5.57	5.80	6.26	6.84		# of strides	11.46	10.74	11.37	13.10	22.20	24.47	2.27
	velocity	7.91	9.73	9.45	9.17	8.98	8.62	7.99	7.31	8.57	186.2	8.73	9.31	8.80	7.63	9.01	8.17	
Kanemaru, Yuzo (JPN) (19	time	6.20	11.31	16.57	22.12	28.01	34.37	41.07	48.23	48.23	2 / 8							
reaction time 0.170	interval		5.11	5.26	5.55	5.89	6.36	6.70	7.16		# of strides	11.31	10.81	12.25	13.86	22.12	26.11	3.99
	velocity	8.06	9.78	9.51	9.01	8.49	7.86	7.46	6.98	8.29		8.84	9.25	8.16	7.22	9.04	7.66	

Heat 3

date 22-Jun-18

Yamanaka (2018) - Race analysis of men and women 400m at 2018 competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kimura, Jun (JPN) (1991)	time	6.28	11.46	16.82	22.45	28.32	34.30	40.36	46.91	46.91	9 / 1							
reaction time 0.153	interval		5.18	5.36	5.63	5.87	5.98	6.06	6.55		# of strides	11.46	10.99	11.85	12.61	22.45	24.46	2.01
	velocity	7.96	9.65	9.33	8.88	8.52	8.36	8.25	7.63	8.53		8.73	9.10	8.44	7.93	8.91	8.18	
Tamura, Tomoya (JPN) (19	time	6.26	11.35	16.63	22.11	27.91	33.94	40.18	46.94	46.94	6 / 2							
reaction time 0.170	interval		5.09	5.28	5.48	5.80	6.03	6.24	6.76		# of strides	11.35	10.76	11.83	13.00	22.11	24.83	2.72
	velocity	7.99	9.82	9.47	9.12	8.62	8.29	8.01	7.40	8.52		8.81	9.29	8.45	7.69	9.05	8.05	

Heat 2

date 22-Jun-18

Yamanaka (2018) - Race analysis of men and women 400m at 2018 competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kimura, Kazushi (JPN) (19	time	6.32	11.56	17.02	22.66	28.36	34.12	40.07	46.65	46.65	5 / 1							
reaction time 0.184	interval		5.24	5.46	5.64	5.70	5.76	5.95	6.58		# of strides	11.56	11.10	11.46	12.53	22.66	23.99	1.33
	velocity	7.91	9.54	9.16	8.87	8.77	8.68	8.40	7.60	8.57		8.65	9.01	8.73	7.98	8.83	8.34	
Ito, Rikiya (JPN) (1998)	time	6.25	11.45	16.82	22.46	28.32	34.28	40.39	46.80	46.80	8 / 2							
reaction time 0.169	interval		5.20	5.37	5.64	5.86	5.96	6.11	6.41		# of strides	11.45	11.01	11.82	12.52	22.46	24.34	1.88
	velocity	8.00	9.62	9.31	8.87	8.53	8.39	8.18	7.80	8.55		8.73	9.08	8.46	7.99	8.90	8.22	
Horii, Kosuke (JPN) (1994)	time	6.61	11.82	17.35	23.10	29.00	34.94	40.95	47.28	47.28	4 / 5							
reaction time 0.150	interval		5.21	5.53	5.75	5.90	5.94	6.01	6.33		# of strides	11.82	11.28	11.84	12.34	23.10	24.18	1.08
	velocity	7.56	9.60	9.04	8.70	8.47	8.42	8.32	7.90	8.46		8.46	8.87	8.45	8.10	8.66	8.27	

Heat 1

date 22-Jun-18

Yamanaka (2018) - Race analysis of men and women 400m at 2018 competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Walsh, Julian Jrummi (JPN	time	6.13	11.14	16.38	21.89	27.62	33.55	39.67	46.10	46.10	6 / 1							
reaction time 0.150	interval		5.01	5.24	5.51	5.73	5.93	6.12	6.43		# of strides	11.14	10.75	11.66	12.55	21.89	24.21	2.32

	velocity	8.16	9.98	9.54	9.07	8.73	8.43	8.17	7.78	8.68	169.7	8.98	9.30	8.58	7.97	9.14	8.26	
Kanemaru, Yuzo (JPN) (19	time	6.14	11.22	16.50	22.07	27.95	34.04	40.35	47.02	47.02	4 / 3							
reaction time 0.156	interval		5.08	5.28	5.57	5.88	6.09	6.31	6.67		# of strides	11.22	10.85	11.97	12.98	22.07	24.95	2.88
	velocity	8.14	9.84	9.47	8.98	8.50	8.21	7.92	7.50	8.51	179.7	8.91	9.22	8.35	7.70	9.06	8.02	

2018 Japanese National Multi-Event Championships (Nagano, JPN)

Decathlon - Heat

date 16-Jun-18

Matsubayashi (2018) - research on athlete performance and technique- 2018 data book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Nakamura, Akihiko (JPN) (1	time	6.51	11.97	17.75	23.80	29.98	36.19	42.53	49.17	49.17	6 / 1							
reaction time	interval		5.46	5.78	6.05	6.18	6.21	6.34	6.64		# of strides	11.97	11.83	12.39	12.98	23.80	25.37	1.57
	velocity	7.68	9.16	8.65	8.26	8.09	8.05	7.89	7.53	8.14		8.35	8.45	8.07	7.70	8.40	7.88	
Morimoto, Kimihito (JPN) (	time	6.41	11.89	17.63	23.71	30.01	36.41	42.93	49.70	49.70	5 / 3							
reaction time	interval		5.48	5.74	6.08	6.30	6.40	6.52	6.77		# of strides	11.89	11.82	12.70	13.29	23.71	25.99	2.28
	velocity	7.80	9.12	8.71	8.22	7.94	7.81	7.67	7.39	8.05		8.41	8.46	7.87	7.52	8.44	7.70	

Decathlon - Heat

date 16-Jun-18

Matsubayashi (2018) - research on athlete performance and technique- 2018 data book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Maruyama, Yuma (JPN) (19	time	6.56	12.15	17.93	24.05	30.38	36.85	43.37	50.27	50.27	3 / 5							
reaction time	interval		5.59	5.78	6.12	6.33	6.47	6.52	6.90		# of strides	12.15	11.90	12.80	13.42	24.05	26.22	2.17
	velocity	7.62	8.94	8.65	8.17	7.90	7.73	7.67	7.25	7.96		8.23	8.40	7.81	7.45	8.32	7.63	

Decathlon - Heat

date 16-Jun-18

Matsubayashi (2018) - research on athlete performance and technique- 2018 data book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ushiro, Keisuke (JPN) (198	time	6.55	12.17	17.95	24.06	30.33	36.76	43.49	50.80	50.80	5 / 5							
reaction time	interval		5.62	5.78	6.11	6.27	6.43	6.73	7.31		# of strides	12.17	11.89	12.70	14.04	24.06	26.74	2.68
	velocity	7.63	8.90	8.65	8.18	7.97	7.78	7.43	6.84	7.87		8.22	8.41	7.87	7.12	8.31	7.48	

2018 NCAA Championships (Eugene, OR)

FINAL

date 08-Jun-18

Track Newsletter (2018) - NCAA men's championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Norman, Michael (USA) (19	time				21.0		31.9		43.6	43.61	/ 1							
reaction time	interval						10.90		11.70	PB	# of strides			10.90	11.70	21.00	22.60	1.60
	velocity				9.52		9.17		8.55	9.17				9.17	8.55	9.52	8.85	
Bloomfield, Akeem (JAM) (	time				20.9		31.8		43.9	43.94	/ 2							
reaction time	interval						10.90		12.10	PB	# of strides			10.90	12.10	20.90	23.00	2.10
	velocity				9.57		9.17		8.26	9.10				9.17	8.26	9.57	8.70	
Allen, Nathon (JAM) (1995)	time				21.1		31.9		44.1	44.13	/ 3							
reaction time	interval						10.80		12.20	PB	# of strides			10.80	12.20	21.10	23.00	1.90
	velocity				9.48		9.26		8.20	9.06				9.26	8.20	9.48	8.70	
Harris, Mar'yea (USA) (1997	time				21.4		32.4		45.0	45.00	/ 4							
reaction time	interval						11.00		12.60		# of strides			11.00	12.60	21.40	23.60	2.20
	velocity				9.35		9.09		7.94	8.89				9.09	7.94	9.35	8.47	
Richard, Tyrell (USA) (1997	time				22.1		33.1		45.1	45.10	/ 5							
reaction time	interval						11.00		12.00		# of strides			11.00	12.00	22.10	23.00	0.90
	velocity				9.05		9.09		8.33	8.87				9.09	8.33	9.05	8.70	
Igbokwe, Obi (USA) (1997)	time				21.9		33.0		45.2	45.16	/ 6							
reaction time	interval						11.10		12.20		# of strides			11.10	12.20	21.90	23.30	1.40
	velocity				9.13		9.01		8.20	8.86				9.01	8.20	9.13	8.58	
Montgomery, Kahmari (US	time				20.9		32.3		45.8	45.75	/ 7							
reaction time	interval						11.40		13.50		# of strides			11.40	13.50	20.90	24.90	4.00
	velocity				9.57		8.77		7.41	8.74				8.77	7.41	9.57	8.03	
London, Wil (USA) (1997)	time				22.1		33.3		46.2	46.20	/ 8							
reaction time	interval						11.20		12.90		# of strides			11.20	12.90	22.10	24.10	2.00
	velocity				9.05		8.93		7.75	8.66				8.93	7.75	9.05	8.30	

2018 Shimane High School Championships (Izumo, JPN)

FINAL

date 25-May-18

Shimizu (2018) - shimane high school championships 2018 - biomechanics data analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ito, Chikki (JPN)	time		12.43		24.50		36.71		49.60	49.60	6 / 1							
reaction time	interval				12.07		12.21		12.89		# of strides	12.43	12.07	12.21	12.89	24.50	25.10	0.60
	velocity		8.05		8.29		8.19		7.76	8.06		8.05	8.29	8.19	7.76	8.16	7.97	
Saito, Jona (JPN)	time		12.26		24.27		39.63		50.08	50.09	5 / 2							
reaction time	interval				12.01		15.36		10.45		# of strides	12.26	12.01	15.36	10.45	24.27	25.81	1.54
	velocity		8.16		8.33		6.51		9.57	7.99		8.16	8.33	6.51	9.57	8.24	7.75	
Tanaka, Rui (2000)	time		12.43		24.47		36.93		50.13	50.13	4 / 3							
reaction time	interval				12.04		12.46		13.20		# of strides	12.43	12.04	12.46	13.20	24.47	25.66	1.19
	velocity		8.05		8.31		8.03		7.58	7.98		8.05	8.31	8.03	7.58	8.17	7.79	
Sugitate, Yasuharu (JPN)	time		12.08		23.98		36.49		50.92	50.92	3 / 4							
reaction time	interval				11.90		12.51		14.43		# of strides	12.08	11.90	12.51	14.43	23.98	26.94	2.96
	velocity		8.28		8.40		7.99		6.93	7.86		8.28	8.40	7.99	6.93	8.34	7.42	

Aoki, Haruka (JPN)	time	12.48	24.75	37.33	51.69	51.69	2 / 5									
reaction time	interval		12.27	12.58	14.36		# of strides	12.48	12.27	12.58	14.36	24.75	26.94	2.19		
	velocity	8.01	8.15	7.95	6.96	7.74		8.01	8.15	7.95	6.96	8.08	7.42			
Morinaga, Natsuno (JPN)	time	12.83	25.33	38.28	52.33	52.33	8 / 6									
reaction time	interval		12.50	12.95	14.05		# of strides	12.83	12.50	12.95	14.05	25.33	27.00	1.67		
	velocity	7.79	8.00	7.72	7.12	7.64		7.79	8.00	7.72	7.12	7.90	7.41			
Natsuki, Senimoto (JPN)	time	12.47	24.95	38.23	52.57	52.57	1 / 7									
reaction time	interval		12.48	13.28	14.34		# of strides	12.47	12.48	13.28	14.34	24.95	27.62	2.67		
	velocity	8.02	8.01	7.53	6.97	7.61		8.02	8.01	7.53	6.97	8.02	7.24			
Matsumura, Kohei (JPN)	time	13.18	26.18	39.98	55.21	55.21	7 / 8									
reaction time	interval		13.00	13.80	15.23		# of strides	13.18	13.00	13.80	15.23	26.18	29.03	2.85		
	velocity	7.59	7.69	7.25	6.57	7.25		7.59	7.69	7.25	6.57	7.64	6.89			

2018 Seiko Golden Grand Prix (Osaka, JPN)

FINAL

date 20-May-18

Yamanaka (2018) - Race analysis of men and women 400m at 2018 competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Walsh, Julian Jrummi (JPN	time	6.10	11.04	16.10	21.38	26.99	32.90	39.11	45.63	45.63	6 / 1							
reaction time 0.133	interval		4.94	5.06	5.28	5.61	5.91	6.21	6.52		# of strides	11.04	10.34	11.52	12.73	21.38	24.25	2.87
	velocity	8.20	10.12	9.88	9.47	8.91	8.46	8.05	7.67	8.77	169.5	9.06	9.67	8.68	7.86	9.35	8.25	
Kimura, Atsushi (JPN)	time	6.17	11.16	16.27	21.66	27.34	33.30	39.53	46.20	46.20	8 / 2							
reaction time 0.141	interval		4.99	5.11	5.39	5.68	5.96	6.23	6.67		# of strides	11.16	10.50	11.64	12.90	21.66	24.54	2.88
	velocity	8.10	10.02	9.78	9.28	8.80	8.39	8.03	7.50	8.66	179.7	8.96	9.52	8.59	7.75	9.23	8.15	
Kimura, Kazushi (JPN) (19	time	6.24	11.30	16.48	21.86	27.37	33.23	39.50	46.26	46.26	5 / 3							
reaction time 0.174	interval		5.06	5.18	5.38	5.51	5.86	6.27	6.76		# of strides	11.30	10.56	11.37	13.03	21.86	24.40	2.54
	velocity	8.01	9.88	9.65	9.29	9.07	8.53	7.97	7.40	8.65	188.0	8.85	9.47	8.80	7.67	9.15	8.20	
Kanemaru, Yuzo (JPN) (19	time	6.03	11.13	16.27	21.63	27.35	33.45	39.80	46.29	46.29	4 / 4							
reaction time 0.173	interval		5.10	5.14	5.36	5.72	6.10	6.35	6.49		# of strides	11.13	10.50	11.82	12.84	21.63	24.66	3.03
	velocity	8.29	9.80	9.73	9.33	8.74	8.20	7.87	7.70	8.64	179.0	8.98	9.52	8.46	7.79	9.25	8.11	
Horii, Kosuke (JPN) (1994)	time	6.27	11.37	16.58	22.15	27.99	33.97	40.11	46.49	46.49	7 / 6							
reaction time 0.169	interval		5.10	5.21	5.57	5.84	5.98	6.14	6.38		# of strides	11.37	10.78	11.82	12.52	22.15	24.34	2.19
	velocity	7.97	9.80	9.60	8.98	8.56	8.36	8.14	7.84	8.60	185.2	8.80	9.28	8.46	7.99	9.03	8.22	
Kobayashi, Naoki (JPN) (19	time	6.32	11.49	16.72	22.12	27.73	33.76	40.23	47.25	47.25	3 / 8							
reaction time 0.181	interval		5.17	5.23	5.40	5.61	6.03	6.47	7.02		# of strides	11.49	10.63	11.64	13.49	22.12	25.13	3.01
	velocity	7.91	9.67	9.56	9.26	8.91	8.29	7.73	7.12	8.47	179.7	8.70	9.41	8.59	7.41	9.04	7.96	

2018 Shizuoka International Meeting (Fukuroi, JPN)

A FINAL

date 03-May-18

Yamanaka (2018) - Race analysis of men and women 400m at 2018 competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kanemaru, Yuzo (JPN) (19	time	6.20	11.24	16.54	22.06	27.78	33.71	39.88	46.38	46.38	8 / 1							
reaction time 0.168	interval		5.04	5.30	5.52	5.72	5.93	6.17	6.50		# of strides	11.24	10.82	11.65	12.67	22.06	24.32	2.26
	velocity	8.06	9.92	9.43	9.06	8.74	8.43	8.10	7.69	8.62	180.5	8.90	9.24	8.58	7.89	9.07	8.22	
Walsh, Julian Jrummi (JPN	time	6.16	11.26	16.48	21.89	27.48	33.36	39.63	46.43	46.43	5 / 2							
reaction time 0.160	interval		5.10	5.22	5.41	5.59	5.88	6.27	6.80		# of strides	11.26	10.63	11.47	13.07	21.89	24.54	2.65
	velocity	8.12	9.80	9.58	9.24	8.94	8.50	7.97	7.35	8.62	172.2	8.88	9.41	8.72	7.65	9.14	8.15	
Kimura, Kazushi (JPN) (19	time	6.35	11.62	16.87	22.29	27.81	33.53	39.73	46.68	46.68	4 / 3							
reaction time 0.222	interval		5.27	5.25	5.42	5.52	5.72	6.20	6.95		# of strides	11.62	10.67	11.24	13.15	22.29	24.39	2.10
	velocity	7.87	9.49	9.52	9.23	9.06	8.74	8.06	7.19	8.57	185.2	8.61	9.37	8.90	7.60	8.97	8.20	
Horii, Kosuke (JPN) (1994)	time	6.29	11.50	16.77	22.23	27.98	34.02	40.42	47.38	47.38	3 / 4							
reaction time 0.186	interval		5.21	5.27	5.46	5.75	6.04	6.40	6.96		# of strides	11.50	10.73	11.79	13.36	22.23	25.15	2.92
	velocity	7.95	9.60	9.49	9.16	8.70	8.28	7.81	7.18	8.44	189.7	8.70	9.32	8.48	7.49	9.00	7.95	
Tamura, Tomoya (JPN) (19	time	6.51	11.73	17.11	22.69	28.48	34.62	41.12	48.46	48.46	9 / 5							
reaction time 0.206	interval		5.22	5.38	5.58	5.79	6.14	6.50	7.34		# of strides	11.73	10.96	11.93	13.84	22.69	25.77	3.08
	velocity	7.68	9.58	9.29	8.96	8.64	8.14	7.69	6.81	8.25	190.2	8.53	9.12	8.38	7.23	8.81	7.76	

B FINAL

date 03-May-18

Yamanaka (2018) - Race analysis of men and women 400m at 2018 competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Imoto, Yoshinobu (JPN) (1	time	6.03	11.09	16.23	21.53	27.09	32.97	39.17	45.82	45.82	3 / 1							
reaction time 0.155	interval		5.06	5.14	5.30	5.56	5.88	6.20	6.65		# of strides	11.09	10.44	11.44	12.85	21.53	24.29	2.76
	velocity	8.29	9.88	9.73	9.43	8.99	8.50	8.06	7.52	8.73	196.0	9.02	9.58	8.74	7.78	9.29	8.23	
Kitakani, Naoki (JPN) (1998	time	6.23	11.43	16.70	22.15	27.84	33.71	39.71	45.98	45.98	8 / 2							
reaction time 0.180	interval		5.20	5.27	5.45	5.69	5.87	6.00	6.27	**PB**	# of strides	11.43	10.72	11.56	12.27	22.15	23.83	1.68
	velocity	8.03	9.62	9.49	9.17	8.79	8.52	8.33	7.97	8.70		8.75	9.33	8.65	8.15	9.03	8.39	
Wakabayashi Kota (JPN) (1	time	6.20	11.27	16.37	21.68	27.31	33.17	39.33	46.18	46.18	7 / 3							
reaction time 0.199	interval		5.07	5.10	5.31	5.63	5.86	6.16	6.85		# of strides	11.27	10.41	11.49	13.01	21.68	24.50	2.82
	velocity	8.06	9.86	9.80	9.42	8.88	8.53	8.12	7.30	8.66	175.0	8.87	9.61	8.70	7.69	9.23	8.16	

2018 Tokyo Combined Event Meeting (Tokyo, JPN)

Decathlon - Heat

date 21-Apr-18

Matsubayashi (2018) - research on athlete performance and technique- 2018 data book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Nakamura, Akihiko (JPN) (1	time	6.45	11.89	17.37	23.03	28.96	35.30	41.95	48.89	48.89	4 / 1							
reaction time	interval		5.44	5.48	5.66	5.93	6.34	6.65	6.94		# of strides	11.89	11.14	12.27	13.59	23.03	25.86	2.83
	velocity	7.75	9.19	9.12	8.83	8.43	7.89	7.52	7.20	8.18		8.41	8.98	8.15	7.36	8.68	7.73	
Shimizu, Tsuyoshi (JPN) (1	time	6.56	12.12	17.77	23.61	29.71	36.22	43.13	50.73	50.73	4 / 3							
reaction time	interval		5.56	5.65	5.84	6.10	6.51	6.91	7.60		# of strides	12.12	11.49	12.61	14.51	23.61	27.12	3.51
	velocity	7.62	8.99	8.85	8.56	8.20	7.68	7.24	6.58	7.88		8.25	8.70	7.93	6.89	8.47	7.37	

Decathlon - Heat

date 21-Apr-18

Matsubayashi (2018) - research on athlete performance and technique- 2018 data book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ushiro, Keisuke (JPN) (198	time	6.62	12.10	17.72	23.67	29.84	36.37	43.28	50.80	50.80	5 / 5							
reaction time	interval		5.48	5.62	5.95	6.17	6.53	6.91	7.52		# of strides	12.10	11.57	12.70	14.43	23.67	27.13	3.46
	velocity	7.55	9.12	8.90	8.40	8.10	7.66	7.24	6.65	7.87		8.26	8.64	7.87	6.93	8.45	7.37	

2017 National Sports Festival (Matsuyama, JPN)

U19 FINAL

date 09-Oct-17

(2017) - tfdata-store.com/2017/10/12/post-1100/

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Imoto, Yoshinobu (JPN) (1	time		11.22		22.26		33.80		46.38	46.38	4 / 1							
reaction time 0.165	interval				11.04		11.54		12.58	PB	# of strides	11.22	11.04	11.54	12.58	22.26	24.12	1.86
	velocity		8.91		9.06		8.67		7.95	8.62	201.0	8.91	9.06	8.67	7.95	8.98	8.29	
Mori, Zhou (JPN) (2000)	time		11.68		22.62		34.33		47.23	47.23	7 / 2							
reaction time 0.171	interval				10.94		11.71		12.90		# of strides	11.68	10.94	11.71	12.90	22.62	24.61	1.99
	velocity		8.56		9.14		8.54		7.75	8.47	187.0	8.56	9.14	8.54	7.75	8.84	8.13	
Matsuo, Shuhei (JPN) (199	time		11.80		23.24		35.17		47.46	47.46	6 / 3							
reaction time 0.179	interval				11.44		11.93		12.29		# of strides	11.80	11.44	11.93	12.29	23.24	24.22	0.98
	velocity		8.47		8.74		8.38		8.14	8.43	192.0	8.47	8.74	8.38	8.14	8.61	8.26	
Meldrum, Alan (JPN) (2000	time		11.97		23.04		34.87		47.46	47.46	8 / 4							
reaction time 0.203	interval				11.07		11.83		12.59		# of strides	11.97	11.07	11.83	12.59	23.04	24.42	1.38
	velocity		8.35		9.03		8.45		7.94	8.43	182.0	8.35	9.03	8.45	7.94	8.68	8.19	
Hosoi, Brian (JPN) (1999)	time		11.79		23.12		35.03		47.79	47.79	5 / 5							
reaction time 0.170	interval				11.33		11.91		12.76		# of strides	11.79	11.33	11.91	12.76	23.12	24.67	1.55
	velocity		8.48		8.83		8.40		7.84	8.37	191.2	8.48	8.83	8.40	7.84	8.65	8.11	
Asano, Kurodo (JPN) (199	time		11.89		23.32		35.38		48.13	48.13	3 / 6							
reaction time 0.194	interval				11.43		12.06		12.75		# of strides	11.89	11.43	12.06	12.75	23.32	24.81	1.49
	velocity		8.41		8.75		8.29		7.84	8.31	194.0	8.41	8.75	8.29	7.84	8.58	8.06	
Noda, Taiga (JPN) (1999)	time		11.96		23.46		35.75		48.28	48.28	9 / 7							
reaction time 0.179	interval				11.50		12.29		12.53		# of strides	11.96	11.50	12.29	12.53	23.46	24.82	1.36
	velocity		8.36		8.70		8.14		7.98	8.29	176.2	8.36	8.70	8.14	7.98	8.53	8.06	
Kotake, Rion (JPN) (1999)	time		11.88		23.68		36.31		49.92	49.92	2 / 8							
reaction time 0.148	interval				11.80		12.63		13.61		# of strides	11.88	11.80	12.63	13.61	23.68	26.24	2.56
	velocity		8.42		8.47		7.92		7.35	8.01	184.7	8.42	8.47	7.92	7.35	8.45	7.62	

Yamanaka (2017) - male and female 400m analysis in the 2017 season

FINAL

date 08-Oct-17

(2017) - tfdata-store.com/2017/10/12/post-1100/

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Walsh, Julian Jrummi (JPN	time	6.18	11.19	16.35	21.74	27.42	33.35	39.52	46.08	46.08	4 / 1						*Yamanaka (2017)*	
reaction time 0.168	interval		5.01	5.16	5.39	5.68	5.93	6.17	6.56		# of strides	11.19	10.55	11.61	12.73	21.74	24.34	2.60
	velocity	8.09	9.98	9.69	9.28	8.80	8.43	8.10	7.62	8.68	169.0	8.94	9.48	8.61	7.86	9.20	8.22	
Watanabe, Yoshihiro (JPN)	time	5.99	11.02	16.23	21.75	27.50	33.51	39.79	46.55	46.55	8 / 2						*Yamanaka (2017)*	
reaction time 0.165	interval		5.03	5.21	5.52	5.75	6.01	6.28	6.76	PB	# of strides	11.02	10.73	11.76	13.04	21.75	24.80	3.05
	velocity	8.35	9.94	9.60	9.06	8.70	8.32	7.96	7.40	8.59	189.0	9.07	9.32	8.50	7.67	9.20	8.06	
Kimura, Kazushi (JPN) (19	time	6.20	11.41	16.90	22.50	28.25	34.14	40.24	46.87	46.87	7 / 3						*Yamanaka (2017)*	
reaction time 0.202	interval		5.21	5.49	5.60	5.75	5.89	6.10	6.63		# of strides	11.41	11.09	11.64	12.73	22.50	24.37	1.87
	velocity	8.06	9.60	9.11	8.93	8.70	8.49	8.20	7.54	8.53	187.0	8.76	9.02	8.59	7.86	8.89	8.21	
Wakabayashi, Kota (JPN) (	time	6.21	11.40	16.77	22.30	28.15	34.20	40.39	47.05	47.05	5 / 4						*Yamanaka (2017)*	
reaction time 0.190	interval		5.19	5.37	5.53	5.85	6.05	6.19	6.66		# of strides	11.40	10.90	11.90	12.85	22.30	24.75	2.45
	velocity	8.05	9.63	9.31	9.04	8.55	8.26	8.08	7.51	8.50	175.0	8.77	9.17	8.40	7.78	8.97	8.08	
Sato, Fuga (JPN) (1996)	time		11.55		22.69		34.59		47.37	47.37	2 / 5						*(2017) - tfdata-store.com*	
reaction time 0.215	interval				11.14		11.90		12.78		# of strides	11.55	11.14	11.90	12.78	22.69	24.68	1.99
	velocity		8.66		8.98		8.40		7.82	8.44	179.2	8.66	8.98	8.40	7.82	8.81	8.10	
Naoki, Masafumi (JPN) (19	time		11.36		22.64		34.59		47.74	47.74	3 / 6						*(2017) - tfdata-store.com*	
reaction time 0.170	interval				11.28		11.95		13.15		# of strides	11.36	11.28	11.95	13.15	22.64	25.10	2.46
	velocity		8.80		8.87		8.37		7.60	8.38	178.2	8.80	8.87	8.37	7.60	8.83	7.97	
Ikeda, Kosuke (JPN) (1995)	time		11.69		22.75		34.92		48.02	48.02	6 / 7						*(2017) - tfdata-store.com*	
reaction time 0.172	interval				11.06		12.17		13.10		# of strides	11.69	11.06	12.17	13.10	22.75	25.27	2.52
	velocity		8.55		9.04		8.22		7.63	8.33	183.0	8.55	9.04	8.22	7.63	8.79	7.91	
Obuchi, Mizuki (JPN) (1997	time		11.74		23.27		35.19		48.25	48.25	9 / 8						*(2017) - tfdata-store.com*	
reaction time 0.173	interval				11.53		11.92		13.06		# of strides	11.74	11.53	11.92	13.06	23.27	24.98	1.71
	velocity		8.52		8.67		8.39		7.66	8.29	191.0	8.52	8.67	8.39	7.66	8.59	8.01	

U19 Semi-Final 2

date 08-Oct-17

(2017) - tfdata-store.com/2017/10/12/post-1100/

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hosoi, Brian (JPN) (1999)	time		11.63		22.29		34.05		47.06	47.06	6 / 1							
reaction time 0.179	interval				10.66		11.76		13.01		# of strides	11.63	10.66	11.76	13.01	22.29	24.77	2.48
	velocity		8.60		9.38		8.50		7.69	8.50	195.0	8.60	9.38	8.50	7.69	8.97	8.07	
Matsuo, Shuhei (JPN) (199	time		11.55		22.43		34.37		47.24	47.24	4 / 2							
reaction time 0.156	interval				10.88		11.94		12.87		# of strides	11.55	10.88	11.94	12.87	22.43	24.81	2.38
	velocity		8.66		9.19		8.38		7.77	8.47	180.5	8.66	9.19	8.38	7.77	8.92	8.06	
Noda, Taiga (JPN) (1999)	time		11.57		22.39		34.35		47.29	47.29	7 / 3							
reaction time 0.171	interval				10.82		11.96		12.94		# of strides	11.57	10.82	11.96	12.94	22.39	24.90	2.51
	velocity		8.64		9.24		8.36		7.73	8.46	178.0	8.64	9.24	8.36	7.73	8.93	8.03	
Kotake, Rion (JPN) (1999)	time		11.71		22.66		34.44		47.31	47.31	5 / 4							
reaction time 0.163	interval				10.95		11.78		12.87		# of strides	11.71	10.95	11.78	12.87	22.66	24.65	1.99
	velocity		8.54		9.13		8.49		7.77	8.45	184.0	8.54	9.13	8.49	7.77	8.83	8.11	
Hashimoto, Yoshinari (JPN	time		11.37		22.07		34.23		48.13	48.13	8 / 5							
reaction time 0.187	interval				10.70		12.16		13.90		# of strides	11.37	10.70	12.16	13.90	22.07	26.06	3.99
	velocity		8.80		9.35		8.22		7.19	8.31	186.5	8.80	9.35	8.22	7.19	9.06	7.67	
Matsumoto, Akira (JPN) (1	time		11.66		22.27		34.25		48.28	48.28	9 / 6							
reaction time 0.182	interval				10.61		11.98		14.03		# of strides	11.66	10.61	11.98	14.03	22.27	26.01	3.74
	velocity		8.58		9.43		8.35		7.13	8.29	184.2	8.58	9.43	8.35	7.13	8.98	7.69	
Nabeshima, Ebisu (JPN) (2	time		11.62		22.54		34.98		48.56	48.56	2 / 7							
reaction time 0.197	interval				10.92		12.44		13.58		# of strides	11.62	10.92	12.44	13.58	22.54	26.02	3.48
	velocity		8.61		9.16		8.04		7.36	8.24	185.2	8.61	9.16	8.04	7.36	8.87	7.69	
Kakuho, Miyauchi (JPN) (1	time		11.87		23.24		35.58		49.05	49.05	3 / 8							
reaction time 0.244	interval				11.37		12.34		13.47		# of strides	11.87	11.37	12.34	13.47	23.24	25.81	2.57
	velocity		8.42		8.80		8.10		7.42	8.15	192.2	8.42	8.80	8.10	7.42	8.61	7.75	

U19 Semi-Final 1

date 08-Oct-17

(2017) - tfdata-store.com/2017/10/12/post-1100/

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Imoto, Yoshinobu (JPN) (1	time		11.04		21.68		33.51		46.81	46.81	5 / 1							
reaction time 0.164	interval				10.64		11.83		13.30		# of strides	11.04	10.64	11.83	13.30	21.68	25.13	3.45
	velocity		9.06		9.40		8.45		7.52	8.55	198.0	9.06	9.40	8.45	7.52	9.23	7.96	
Mori, Zhou (JPN) (2000)	time		11.68		22.34		34.20		47.21	47.21	2 / 2							
reaction time 0.191	interval				10.66		11.86		13.01		# of strides	11.68	10.66	11.86	13.01	22.34	24.87	2.53
	velocity		8.56		9.38		8.43		7.69	8.47	185.0	8.56	9.38	8.43	7.69	8.95	8.04	
Meldrum, Alan (JPN) (2000	time		11.76		22.66		34.55		47.27	47.27	4 / 3							
reaction time 0.178	interval				10.90		11.89		12.72		# of strides	11.76	10.90	11.89	12.72	22.66	24.61	1.95
	velocity		8.50		9.17		8.41		7.86	8.46	182.0	8.50	9.17	8.41	7.86	8.83	8.13	
Asano, Kurodo (JPN) (199	time		11.63		22.59		34.36		47.28	47.28	9 / 4							
reaction time 0.169	interval				10.96		11.77		12.92		# of strides	11.63	10.96	11.77	12.92	22.59	24.69	2.10
	velocity		8.60		9.12		8.50		7.74	8.46	191.7	8.60	9.12	8.50	7.74	8.85	8.10	
Saito, Ryohei (JPN) (1999)	time		11.68		22.72		34.44		47.52	47.52	6 / 5							
reaction time 0.198	interval				11.04		11.72		13.08		# of strides	11.68	11.04	11.72	13.08	22.72	24.80	2.08
	velocity		8.56		9.06		8.53		7.65	8.42	181.0	8.56	9.06	8.53	7.65	8.80	8.06	
Hanada, Shion (JPN) (1999	time		11.54		22.59		34.70		47.75	47.75	7 / 6							
reaction time 0.156	interval				11.05		12.11		13.05		# of strides	11.54	11.05	12.11	13.05	22.59	25.16	2.57
	velocity		8.67		9.05		8.26		7.66	8.38	177.5	8.67	9.05	8.26	7.66	8.85	7.95	
Hokkaido, Kunieda (JPN) (	time		11.67		22.51		34.82		48.38	48.38	3 / 7							
reaction time 0.193	interval				10.84		12.31		13.56		# of strides	11.67	10.84	12.31	13.56	22.51	25.87	3.36
	velocity		8.57		9.23		8.12		7.37	8.27	178.5	8.57	9.23	8.12	7.37	8.88	7.73	
Katayama, Takuya (JPN) (2	time		11.98		23.43		35.60		48.75	48.75	8 / 8							
reaction time 0.209	interval				11.45		12.17		13.15		# of strides	11.98	11.45	12.17	13.15	23.43	25.32	1.89
	velocity		8.35		8.73		8.22		7.60	8.21	179.0	8.35	8.73	8.22	7.60	8.54	7.90	

Heat 2

date 08-Oct-17

(2017) - tfdata-store.com/2017/10/12/post-1100/

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Wakabayashi, Kota (JPN) (	time		11.45		21.92		33.69		46.66	46.66	3 / 1							
reaction time 0.191	interval				10.47		11.77		12.97		# of strides	11.45	10.47	11.77	12.97	21.92	24.74	2.82
	velocity		8.73		9.55		8.50		7.71	8.57	173.2	8.73	9.55	8.50	7.71	9.12	8.08	
Ikeda, Kosuke (JPN) (1995)	time		11.64		22.28		33.98		46.67	46.67	5 / 2							
reaction time 0.193	interval				10.64		11.70		12.69	PB	# of strides	11.64	10.64	11.70	12.69	22.28	24.39	2.11
	velocity		8.59		9.40		8.55		7.88	8.57	180.5	8.59	9.40	8.55	7.88	8.98	8.20	
Sato, Fuga (JPN) (1996)	time		11.46		21.97		33.71		46.80	46.80	4 / 3							
reaction time 0.205	interval				10.51		11.74		13.09		# of strides	11.46	10.51	11.74	13.09	21.97	24.83	2.86
	velocity		8.73		9.51		8.52		7.64	8.55	180.0	8.73	9.51	8.52	7.64	9.10	8.05	

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Naoki, Masafumi (JPN) (19	time		11.46		22.16		33.73		47.29	47.29	2 / 4							
reaction time 0.164	interval				10.70		11.57		13.56		# of strides	11.46	10.70	11.57	13.56	22.16	25.13	2.97
	velocity		8.73		9.35		8.64		7.37	8.46	181.0	8.73	9.35	8.64	7.37	9.03	7.96	
Yamaki, Kakeru (JPN) (1996	time		11.41		22.21		34.14		47.72	47.72	6 / 5							
reaction time 0.155	interval				10.80		11.93		13.58		# of strides	11.41	10.80	11.93	13.58	22.21	25.51	3.30
	velocity		8.76		9.26		8.38		7.36	8.38	185.0	8.76	9.26	8.38	7.36	9.00	7.84	
Asakawa, Hiroki (JPN) (199	time		11.66		22.53		34.43		48.12	48.12	9 / 6							
reaction time 0.215	interval				10.87		11.90		13.69	PB	# of strides	11.66	10.87	11.90	13.69	22.53	25.59	3.06
	velocity		8.58		9.20		8.40		7.30	8.31	185.0	8.58	9.20	8.40	7.30	8.88	7.82	
Matsukiyo, Kazuki (JPN) (1	time		11.88		22.86		34.62		48.12	48.12	8 / 7							
reaction time 0.214	interval				10.98		11.76		13.50		# of strides	11.88	10.98	11.76	13.50	22.86	25.26	2.40
	velocity		8.42		9.11		8.50		7.41	8.31	194.5	8.42	9.11	8.50	7.41	8.75	7.92	

Heat 1

date 08-Oct-17

(2017) - tfdata-store.com/2017/10/12/post-1100/

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kimura, Kazushi (JPN) (19	time		11.44		22.38		34.25		47.22	47.22	5 / 1							
reaction time 0.191	interval				10.94		11.87		12.97		# of strides	11.44	10.94	11.87	12.97	22.38	24.84	2.46
	velocity		8.74		9.14		8.42		7.71	8.47	186.7	8.74	9.14	8.42	7.71	8.94	8.05	
Obuchi, Mizuki (JPN) (1997	time		11.49		22.64		34.47		47.40	47.40	6 / 2							
reaction time 0.176	interval				11.15		11.83		12.93		# of strides	11.49	11.15	11.83	12.93	22.64	24.76	2.12
	velocity		8.70		8.97		8.45		7.73	8.44	192.0	8.70	8.97	8.45	7.73	8.83	8.08	
Kimura, Jun (JPN) (1991)	time				22.80		34.71		47.86	47.86	9 / 3							
reaction time 0.212	interval						11.91		13.15		# of strides			11.91	13.15	22.80	25.06	2.26
	velocity				8.77		8.40		7.60	8.36				8.40	7.60	8.77	7.98	
Kawabata, Kenta (JPN) (19	time		12.22		23.63		35.51		48.32	48.32	8 / 4							
reaction time 0.172	interval				11.41		11.88		12.81	PB	# of strides	12.22	11.41	11.88	12.81	23.63	24.69	1.06
	velocity		8.18		8.76		8.42		7.81	8.28	198.0	8.18	8.76	8.42	7.81	8.46	8.10	
Yano, Takuto (JPN) (1994)	time		11.43		22.45		34.85		48.41	48.41	2 / 5							
reaction time 0.166	interval				11.02		12.40		13.56		# of strides	11.43	11.02	12.40	13.56	22.45	25.96	3.51
	velocity		8.75		9.07		8.06		7.37	8.26	192.0	8.75	9.07	8.06	7.37	8.91	7.70	
Hirose, Hideyuki (JPN) (198	time		11.63		22.53		35.03		48.56	48.56	3 / 6							
reaction time 0.169	interval				10.90		12.50		13.53		# of strides	11.63	10.90	12.50	13.53	22.53	26.03	3.50
	velocity		8.60		9.17		8.00		7.39	8.24	185.5	8.60	9.17	8.00	7.39	8.88	7.68	
Kawauchi, Mitsuki (JPN) (1	time		11.57		22.34		34.73		48.63	48.63	7 / 7							
reaction time 0.211	interval				10.77		12.39		13.90		# of strides	11.57	10.77	12.39	13.90	22.34	26.29	3.95
	velocity		8.64		9.29		8.07		7.19	8.23	193.2	8.64	9.29	8.07	7.19	8.95	7.61	
Kudo, Taisei (JPN) (1996)	time		11.61		22.55		34.79		48.74	48.74	4 / 8							
reaction time 0.214	interval				10.94		12.24		13.95		# of strides	11.61	10.94	12.24	13.95	22.55	26.19	3.64
	velocity		8.61		9.14		8.17		7.17	8.21	188.0	8.61	9.14	8.17	7.17	8.87	7.64	

U19 Heat 1

date 08-Oct-17

(2017) - tfdata-store.com/2017/10/12/post-1100/

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Imoto, Yoshinobu (JPN) (1	time		11.09		21.96		33.73		47.28	47.28	6 / 1							
reaction time 0.158	interval				10.87		11.77		13.55		# of strides	11.09	10.87	11.77	13.55	21.96	25.32	3.36
	velocity		9.02		9.20		8.50		7.38	8.46	196.5	9.02	9.20	8.50	7.38	9.11	7.90	
Okawa, Noda (JPN) (1999)	time		11.62		22.86		35.11		48.27	48.27	5 / 2							
reaction time 0.168	interval				11.24		12.25		13.16		# of strides	11.62	11.24	12.25	13.16	22.86	25.41	2.55
	velocity		8.61		8.90		8.16		7.60	8.29	178.0	8.61	8.90	8.16	7.60	8.75	7.87	
Hashimoto, Yasushige (JPI	time		11.55		22.76		35.00		48.28	48.28	7 / 3							
reaction time 0.182	interval				11.21		12.24		13.28		# of strides	11.55	11.21	12.24	13.28	22.76	25.52	2.76
	velocity		8.66		8.92		8.17		7.53	8.29	181.0	8.66	8.92	8.17	7.53	8.79	7.84	
Nabeshima, Ebisu (JPN) (2	time		11.89		23.19		35.32		48.35	48.35	9 / 4							
reaction time 0.204	interval				11.30		12.13		13.03		# of strides	11.89	11.30	12.13	13.03	23.19	25.16	1.97
	velocity		8.41		8.85		8.24		7.67	8.27	185.2	8.41	8.85	8.24	7.67	8.62	7.95	
Tsunaga, Kanno (JPN) (19	time		11.71		23.34		35.47		48.72	48.72	3 / 5							
reaction time 0.186	interval				11.63		12.13		13.25		# of strides	11.71	11.63	12.13	13.25	23.34	25.38	2.04
	velocity		8.54		8.60		8.24		7.55	8.21	200.5	8.54	8.60	8.24	7.55	8.57	7.88	
Kajiyama, Kaitama (JPN) (1	time		11.92		23.41		35.62		48.91	48.91	4 / 6							
reaction time 0.183	interval				11.49		12.21		13.29		# of strides	11.92	11.49	12.21	13.29	23.41	25.50	2.09
	velocity		8.39		8.70		8.19		7.52	8.18	176.0	8.39	8.70	8.19	7.52	8.54	7.84	
Nakazawa, Shunsuke (JPN)	time		11.83		23.19		35.51		49.24	49.24	8 / 7							
reaction time 0.188	interval				11.36		12.32		13.73		# of strides	11.83	11.36	12.32	13.73	23.19	26.05	2.86
	velocity		8.45		8.80		8.12		7.28	8.12	185.2	8.45	8.80	8.12	7.28	8.62	7.68	

2017 All Japan Corporate Championships (Osaka, JPN)

FINAL

date 24-Sep-17

(2017) - tfdata-store.com/2017/10/05/post-1097/

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential

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

Azuma, Kaiki (JPN) (1993)	time	11.64	22.63	34.12	46.79	46.79	5 / 1								
reaction time	interval		10.99	11.49	12.67		# of strides	11.64	10.99	11.49	12.67	22.63	24.16	1.53	
	velocity	8.59	9.10	8.70	7.89	8.55	185.0	8.59	9.10	8.70	7.89	8.84	8.28		
Yamada, Atsushi (JPN) (19	time	11.28	22.06	33.73	46.93	46.93	4 / 2								
reaction time 0.145	interval		10.78	11.67	13.20	=PB	# of strides	11.28	10.78	11.67	13.20	22.06	24.87	2.81	
	velocity	8.87	9.28	8.57	7.58	8.52	188.0	8.87	9.28	8.57	7.58	9.07	8.04		
Itahana, Kohei (JPN) (1994)	time	11.29	22.17	33.98	47.03	47.03	8 / 3								
reaction time 0.163	interval		10.88	11.81	13.05		# of strides	11.29	10.88	11.81	13.05	22.17	24.86	2.69	
	velocity	8.86	9.19	8.47	7.66	8.51	176.5	8.86	9.19	8.47	7.66	9.02	8.05		
Kobayashi, Naoki (JPN) (19	time	11.42	22.29	34.10	47.04	47.04	6 / 4								
reaction time 0.161	interval		10.87	11.81	12.94		# of strides	11.42	10.87	11.81	12.94	22.29	24.75	2.46	
	velocity	8.76	9.20	8.47	7.73	8.50	183.0	8.76	9.20	8.47	7.73	8.97	8.08		
Kimura, Jun (JPN) (1991)	time	11.43	22.43	34.09	47.07	47.07	9 / 5								
reaction time 0.136	interval		11.00	11.66	12.98		# of strides	11.43	11.00	11.66	12.98	22.43	24.64	2.21	
	velocity	8.75	9.09	8.58	7.70	8.50	181.0	8.75	9.09	8.58	7.70	8.92	8.12		
Yagai, Hirofumi (JPN) (199	time	12.30	23.84	35.45	47.53	47.53	7 / 6								
reaction time 0.166	interval		11.54	11.61	12.08		# of strides	12.30	11.54	11.61	12.08	23.84	23.69	-0.15	
	velocity	8.13	8.67	8.61	8.28	8.42	181.0	8.13	8.67	8.61	8.28	8.39	8.44		
Yamazaki, Kengo (JPN) (19	time	11.78	22.71	34.60	47.60	47.60	2 / 7								
reaction time 0.153	interval		10.93	11.89	13.00		# of strides	11.78	10.93	11.89	13.00	22.71	24.89	2.18	
	velocity	8.49	9.15	8.41	7.69	8.40	189.0	8.49	9.15	8.41	7.69	8.81	8.04		
Kimura, Kazushi (JPN) (19	time	11.44	22.47	34.30	47.83	47.83	3 / 8								
reaction time 0.178	interval		11.03	11.83	13.53		# of strides	11.44	11.03	11.83	13.53	22.47	25.36	2.89	
	velocity	8.74	9.07	8.45	7.39	8.36	187.2	8.74	9.07	8.45	7.39	8.90	7.89		

2017 Chinese National Games (Tianjin, CHN)

FINAL

date 03-Sep-17

Xu (2018) - a comparative analysis of the kinematic characteristics of Guo Zhongze and Wayde van Niekerk

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Guo Zhongze (CHN) (1996	time		10.7		21.5		33.0		45.2	45.14	/ 1							
reaction time	interval				10.80		11.50		12.20	NR PB	# of strides	10.70	10.80	11.50	12.20	21.50	23.70	2.20
	velocity		9.35		9.26		8.70		8.20	8.86		9.35	9.26	8.70	8.20	9.30	8.44	

2017 IAAF World Championships (London, GBR)

FINAL

date 08-Aug-17

Yamanaka (2017) - male and female 400m analysis in the 2017 season

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
van Niekerk, Wayde (RSA)	time	6.02	10.81	15.67	20.80	26.15	31.64	37.46	43.98	43.98	6 / 1							
reaction time 0.157	interval		4.79	4.86	5.13	5.35	5.49	5.82	6.52		# of strides	10.81	9.99	10.84	12.34	20.80	23.18	2.38
	velocity	8.31	10.44	10.29	9.75	9.35	9.11	8.59	7.67	9.10	163.1	9.25	10.01	9.23	8.10	9.62	8.63	
Gardiner, Steven (BAH) (19	time	6.15	11.06	15.98	21.05	26.38	31.99	37.94	44.41	44.41	4 / 2							
reaction time 0.188	interval		4.91	4.92	5.07	5.33	5.61	5.95	6.47		# of strides	11.06	9.99	10.94	12.42	21.05	23.36	2.31
	velocity	8.13	10.18	10.16	9.86	9.38	8.91	8.40	7.73	9.01	162.2	9.04	10.01	9.14	8.05	9.50	8.56	
Haroun, Abdalelah (QAT) (	time	6.17	11.24	16.35	21.62	27.06	32.66	38.45	44.48	44.48	3 / 3							
reaction time 0.190	interval		5.07	5.11	5.27	5.44	5.60	5.79	6.03		# of strides	11.24	10.38	11.04	11.82	21.62	22.86	1.24
	velocity	8.10	9.86	9.78	9.49	9.19	8.93	8.64	8.29	8.99	167.4	8.90	9.63	9.06	8.46	9.25	8.75	
Thebe, Baboloki (BOT) (19	time	6.09	10.97	15.93	21.06	26.36	31.86	37.83	44.66	44.66	9 / 4							
reaction time 0.182	interval		4.88	4.96	5.13	5.30	5.50	5.97	6.83		# of strides	10.97	10.09	10.80	12.80	21.06	23.60	2.54
	velocity	8.21	10.25	10.08	9.75	9.43	9.09	8.38	7.32	8.96	182.2	9.12	9.91	9.26	7.81	9.50	8.47	
Allen, Nathon (JAM) (1995)	time	6.03	10.94	15.87	20.96	26.33	31.99	38.06	44.88	44.88	5 / 5							
reaction time 0.158	interval		4.91	4.93	5.09	5.37	5.66	6.07	6.82		# of strides	10.94	10.02	11.03	12.89	20.96	23.92	2.96
	velocity	8.29	10.18	10.14	9.82	9.31	8.83	8.24	7.33	8.91	167.2	9.14	9.98	9.07	7.76	9.54	8.36	
Gaye, Demish (JAM) (1993)	time	6.16	11.02	15.91	21.03	26.49	32.24	38.35	45.04	45.04	8 / 6							
reaction time 0.179	interval		4.86	4.89	5.12	5.46	5.75	6.11	6.69		# of strides	11.02	10.01	11.21	12.80	21.03	24.01	2.98
	velocity	8.12	10.29	10.22	9.77	9.16	8.70	8.18	7.47	8.88	182.4	9.07	9.99	8.92	7.81	9.51	8.33	
Kerley, Fred (USA) (1995)	time	6.09	11.01	16.02	21.19	26.63	32.35	38.47	45.23	45.23	2 / 7							
reaction time 0.142	interval		4.92	5.01	5.17	5.44	5.72	6.12	6.76		# of strides	11.01	10.18	11.16	12.88	21.19	24.04	2.85
	velocity	8.21	10.16	9.98	9.67	9.19	8.74	8.17	7.40	8.84	176.4	9.08	9.82	8.96	7.76	9.44	8.32	
Makwala, Isaac (BOT) (1986)										dns								

Semi-Final 3

date 06-Aug-17

Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 400m

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Makwala, Isaac (BOT) (1986	time		10.66		20.60		31.39	37.37	44.05	44.30	5 / 1							
reaction time 0.248	interval				9.94		10.79	5.98	6.68		# of strides	10.66	9.94	10.79	12.66	20.60	23.45	2.85
	velocity		9.38		10.06		9.27	8.36	7.49	9.03	178.4	9.38	10.06	9.27	7.90	9.71	8.53	
Gaye, Demish (JAM) (1993)	time		10.88		20.84		31.88	37.88	44.39	44.55	6 / 2							
reaction time 0.157	interval				9.96		11.04	6.00	6.51	PB	# of strides	10.88	9.96	11.04	12.51	20.84	23.55	2.71
	velocity		9.19		10.04		9.06	8.33	7.68	8.98	181.4	9.19	10.04	9.06	7.99	9.60	8.49	
Roberts, Gil (USA) (1989)	time		10.68		20.68		31.84	37.94	44.67	44.84	7 / 3							

reaction time 0.170	interval		10.00	11.16	6.10	6.73		# of strides	10.68	10.00	11.16	12.83	20.68	23.99	3.31
	velocity	9.36	10.00	8.96	8.20	7.43	8.92	184.1	9.36	10.00	8.96	7.79	9.67	8.34	
Walton, Jamal (CAY) (1998	time	10.98	21.21	32.25	38.37	45.01	45.16	9 / 4							
reaction time 0.153	interval		10.23	11.04	6.12	6.64		# of strides	10.98	10.23	11.04	12.76	21.21	23.80	2.59
	velocity	9.11	9.78	9.06	8.17	7.53	8.86	183.4	9.11	9.78	9.06	7.84	9.43	8.40	
Borlée, Jonathan (BEL) (19	time	10.91	21.19	32.47	38.55	45.03	45.23	3 / 5							
reaction time 0.203	interval		10.28	11.28	6.08	6.48		# of strides	10.91	10.28	11.28	12.56	21.19	23.84	2.65
	velocity	9.17	9.73	8.87	8.22	7.72	8.84	179.3	9.17	9.73	8.87	7.96	9.44	8.39	
Maslák, Pavel (CZE) (1991)	time	11.05	21.33	32.57	38.58	45.09	45.24	2 / 6							
reaction time 0.146	interval		10.28	11.24	6.01	6.51		# of strides	11.05	10.28	11.24	12.52	21.33	23.76	2.43
	velocity	9.05	9.73	8.90	8.32	7.68	8.84	182.8	9.05	9.73	8.90	7.99	9.38	8.42	
Cedenio, Machel (TTO) (19	time	10.83	21.01	32.37	38.56	45.69	45.91	8 / 7							
reaction time 0.221	interval		10.18	11.36	6.19	7.13		# of strides	10.83	10.18	11.36	13.32	21.01	24.68	3.67
	velocity	9.23	9.82	8.80	8.08	7.01	8.71	168.4	9.23	9.82	8.80	7.51	9.52	8.10	
Re, Davide (ITA) (1993)	time	11.13	21.80	33.13	39.19	45.76	45.95	4 / 8							
reaction time 0.186	interval		10.67	11.33	6.06	6.57		# of strides	11.13	10.67	11.33	12.63	21.80	23.96	2.16
	velocity	8.98	9.37	8.83	8.25	7.61	8.71	179.1	8.98	9.37	8.83	7.92	9.17	8.35	

Semi-Final 2

date 06-Aug-17

Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 400m

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
van Niekerk, Wayde (RSA) (time		10.74		20.82		29.20	34.97	44.05	44.22	6 / 1							
reaction time 0.168	interval			10.08		8.38	5.77	9.08		# of strides	10.74	10.08	8.38	14.85	20.82	23.23	2.41
	velocity	9.31		9.92		11.93	8.67	5.51	9.05	163.0	9.31	9.92	11.93	6.73	9.61	8.61	
Thebe, Baboloki (BOT) (19 time		10.85		21.02		31.82	37.68	44.15	44.33	5 / 2							
reaction time 0.178	interval			10.17		10.80	5.86	6.47		# of strides	10.85	10.17	10.80	12.33	21.02	23.13	2.11
	velocity	9.22		9.83		9.26	8.53	7.73	9.02	179.0	9.22	9.83	9.26	8.11	9.51	8.65	
Haroun, Abdalelah (QAT) (time		11.03		21.41		32.41	38.30	44.46	44.64	9 / 3							
reaction time 0.179	interval			10.38		11.00	5.89	6.16		# of strides	11.03	10.38	11.00	12.05	21.41	23.05	1.64
	velocity	9.07		9.63		9.09	8.49	8.12	8.96	168.1	9.07	9.63	9.09	8.30	9.34	8.68	
Hudson-Smith, Matthew (C time		10.81		21.03		32.09	38.14	44.60	44.74	2 / 4							
reaction time 0.142	interval			10.22		11.06	6.05	6.46		# of strides	10.81	10.22	11.06	12.51	21.03	23.57	2.54
	velocity	9.25		9.78		9.04	8.26	7.74	8.94	164.0	9.25	9.78	9.04	7.99	9.51	8.49	
Gordon, Lalonde (TTO) (19 time		10.84		20.88		32.04	38.25	45.06	45.20	4 / 5							
reaction time 0.151	interval			10.04		11.16	6.21	6.81		# of strides	10.84	10.04	11.16	13.02	20.88	24.18	3.30
	velocity	9.23		9.96		8.96	8.05	7.34	8.85	163.4	9.23	9.96	8.96	7.68	9.58	8.27	
Gregan, Brian (IRL) (1989) time		11.31		21.37		33.08	39.01	45.23	45.42	8 / 6							
reaction time 0.188	interval			10.06		11.71	5.93	6.22		# of strides	11.31	10.06	11.71	12.15	21.37	23.86	2.49
	velocity	8.84		9.94		8.54	8.43	8.04	8.81	166	8.84	9.94	8.54	8.23	9.36	8.38	
Merritt, LaShawn (USA) (1 time		10.85		21.03		32.18	38.35	45.32	45.52	7 / 7							
reaction time 0.195	interval			10.18		11.15	6.17	6.97		# of strides	10.85	10.18	11.15	13.14	21.03	24.29	3.26
	velocity	9.22		9.82		8.97	8.10	7.17	8.79	177.5	9.22	9.82	8.97	7.61	9.51	8.23	
Mweresa, Boniface (KEN) (time		10.76		21.26		32.72	38.92	45.70	45.93	3 / 8							
reaction time 0.234	interval			10.50		11.46	6.20	6.78		# of strides	10.76	10.50	11.46	12.98	21.26	24.44	3.18
	velocity	9.29		9.52		8.73	8.06	7.37	8.71	182.3	9.29	9.52	8.73	7.70	9.41	8.18	

Semi-Final 1

date 06-Aug-17

Pollitt (2018) - biomechanical report for the IAAF World Champs - London 2017 - Men's 400m

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Gardiner, Steven (BAH) (19 time		10.74		20.59		31.47	37.43	43.70	43.89	5 / 1							
reaction time 0.186	interval			9.85		10.88	5.96	6.27	NR	# of strides	10.74	9.85	10.88	12.23	20.59	23.11	2.52
	velocity	9.31		10.15		9.19	8.39	7.97	9.11	160.7	9.31	10.15	9.19	8.18	9.71	8.65	
Allen, Nathon (JAM) (1995) time		10.84		20.85		31.83	37.66	44.04	44.19	6 / 2							
reaction time 0.161	interval			10.01		10.98	5.83	6.38	PB	# of strides	10.84	10.01	10.98	12.21	20.85	23.19	2.34
	velocity	9.23		9.99		9.11	8.58	7.84	9.05	165.3	9.23	9.99	9.11	8.19	9.59	8.62	
Kerley, Fred (USA) (1995) time		10.73		20.64		31.63	37.72	44.37	44.51	7 / 3							
reaction time 0.137	interval			9.91		10.99	6.09	6.65		# of strides	10.73	9.91	10.99	12.74	20.64	23.73	3.09
	velocity	9.32		10.09		9.10	8.21	7.52	8.99	175.8	9.32	10.09	9.10	7.85	9.69	8.43	
Borlée, Kévin (BEL) (1988) time		11.20		21.56		32.65	38.60	44.95	45.10	9 / 4							
reaction time 0.146	interval			10.36		11.09	5.95	6.35		# of strides	11.20	10.36	11.09	12.30	21.56	23.39	1.83
	velocity	8.93		9.65		9.02	8.40	7.87	8.87	174.8	8.93	9.65	9.02	8.13	9.28	8.55	
London, Wil (USA) (1997) time		10.88		21.42		32.36	38.36	44.94	45.12	4 / 5							
reaction time 0.181	interval			10.54		10.94	6.00	6.58		# of strides	10.88	10.54	10.94	12.58	21.42	23.52	2.10
	velocity	9.19		9.49		9.14	8.33	7.60	8.87	182.2	9.19	9.49	9.14	7.95	9.34	8.50	
Husillos, Óscar (ESP) (1993 time		10.93		21.25		32.41	38.48	45.00	45.16	3 / 6							
reaction time 0.163	interval			10.32		11.16	6.07	6.52	PB	# of strides	10.93	10.32	11.16	12.59	21.25	23.75	2.50
	velocity	9.15		9.69		8.96	8.24	7.67	8.86	181.7	9.15	9.69	8.96	7.94	9.41	8.42	

Omelko, Rafał (POL) (1989)	time		11.05		21.45		32.61	38.57	45.17	45.37	2 / 7							
reaction time 0.201	interval				10.40		11.16	5.96	6.60		# of strides	11.05	10.40	11.16	12.56	21.45	23.72	2.27
	velocity		9.05		9.62		8.96	8.39	7.58	8.82	171.5	9.05	9.62	8.96	7.96	9.32	8.43	
Cowan, Dwayne (GBR) (19	time		10.80		21.18		32.64	38.89	45.82	45.96	8 / 8							
reaction time 0.144	interval				10.38		11.46	6.25	6.93		# of strides	10.80	10.38	11.46	13.18	21.18	24.64	3.46
	velocity		9.26		9.63		8.73	8.00	7.22	8.70	168.3	9.26	9.63	8.73	7.59	9.44	8.12	

2017 Japanese National High School Championships (Yamagata, JPN)

FINAL date 29-Jul-17

Kota (2017) - 70th high school championships: JAF scientific committee - biomechanics data collection

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Mori, Zhou (JPN)	time	6.54	11.79	17.15	22.79	28.61	34.71	41.06	47.50	47.50	5 / 1							
reaction time 0.174	interval		5.25	5.36	5.64	5.82	6.10	6.35	6.44		# of strides	11.79	11.00	11.92	12.79	22.79	24.71	1.92
	velocity	7.65	9.52	9.33	8.87	8.59	8.20	7.87	7.76	8.42		8.48	9.09	8.39	7.82	8.78	8.09	
Meldrum, Alan (JPN)	time	6.67	11.97	17.40	23.03	28.88	34.98	41.31	47.86	47.86	2 / 2							
reaction time 0.193	interval		5.30	5.43	5.63	5.85	6.10	6.33	6.55		# of strides	11.97	11.06	11.95	12.88	23.03	24.83	1.80
	velocity	7.50	9.43	9.21	8.88	8.55	8.20	7.90	7.63	8.36		8.35	9.04	8.37	7.76	8.68	8.05	
Matsuo, Shuhei (JPN) (199	time	6.52	12.05	17.83	23.80	29.87	35.93	41.93	47.87	47.87	7 / 3							
reaction time 0.182	interval		5.53	5.78	5.97	6.07	6.06	6.00	5.94		# of strides	12.05	11.75	12.13	11.94	23.80	24.07	0.27
	velocity	7.67	9.04	8.65	8.38	8.24	8.25	8.33	8.42	8.36		8.30	8.51	8.24	8.38	8.40	8.31	
Asanobu, Hiroto (JPN)	time	6.52	11.87	17.33	23.07	28.97	35.15	41.52	47.89	47.89	9 / 4							
reaction time 0.182	interval		5.35	5.46	5.74	5.90	6.18	6.37	6.37		# of strides	11.87	11.20	12.08	12.74	23.07	24.82	1.75
	velocity	7.67	9.35	9.16	8.71	8.47	8.09	7.85	7.85	8.35		8.42	8.93	8.28	7.85	8.67	8.06	
Hosoi, Brian (JPN)	time	6.52	11.99	17.60	23.32	29.22	35.36	41.63	48.00	48.00	8 / 5							
reaction time 0.176	interval		5.47	5.61	5.72	5.90	6.14	6.27	6.37		# of strides	11.99	11.33	12.04	12.64	23.32	24.68	1.36
	velocity	7.67	9.14	8.91	8.74	8.47	8.14	7.97	7.85	8.33		8.34	8.83	8.31	7.91	8.58	8.10	
Noda, Taiga (JPN) (1999)	time	6.44	11.81	17.32	23.24	29.39	35.73	42.10	48.44	48.44	3 / 6							
reaction time 0.178	interval		5.37	5.51	5.92	6.15	6.34	6.37	6.34		# of strides	11.81	11.43	12.49	12.71	23.24	25.20	1.96
	velocity	7.76	9.31	9.07	8.45	8.13	7.89	7.85	7.89	8.26		8.47	8.75	8.01	7.87	8.61	7.94	
Aieda, Kyoya (JPN)	time	6.90	12.76	18.70	25.03	31.22	37.12	43.05	49.18	49.18	6 / 7							
reaction time 0.273	interval		5.86	5.94	6.33	6.19	5.90	5.93	6.13		# of strides	12.76	12.27	12.09	12.06	25.03	24.15	-0.88
	velocity	7.25	8.53	8.42	7.90	8.08	8.47	8.43	8.16	8.13		7.84	8.15	8.27	8.29	7.99	8.28	

2017 Herculis Meeting International d'Athlétisme (Monaco, MON)

FINAL date 21-Jul-17

(2017.07.21) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
van Niekerk, Wayde (RSA)	time		10.78		20.91		31.91		43.73	43.73	5 / 1							
reaction time	interval				10.13		11.00		11.82		# of strides	10.78	10.13	11.00	11.82	20.91	22.82	1.91
	velocity		9.28		9.87		9.09		8.46	9.15	162.5	9.28	9.87	9.09	8.46	9.56	8.76	
Makwala, Isaac (BOT) (1986	time		11.02		21.29		31.95		43.84	43.84	6 / 2							
reaction time	interval				10.27		10.66		11.89		# of strides	11.02	10.27	10.66	11.89	21.29	22.55	1.26
	velocity		9.07		9.74		9.38		8.41	9.12		9.07	9.74	9.38	8.41	9.39	8.87	

2017 Nanbu Memorial Meeting (Sapporo, JPN)

A FINAL date 09-Jul-17

(2017) - tfdata-store.com/2017/07/11/post-1010/

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kanemaru, Yuzo (JPN) (19	time		11.21		21.97		33.71		46.39	46.39	5 / 1							
reaction time	interval				10.76		11.74		12.68		# of strides	11.21	10.76	11.74	12.68	21.97	24.42	2.45
	velocity		8.92		9.29		8.52		7.89	8.62	177.0	8.92	9.29	8.52	7.89	9.10	8.19	
Horii, Kosuke (JPN) (1994)	time		11.54		22.65		34.54		46.82	46.82	6 / 2							
reaction time	interval				11.11		11.89		12.28		# of strides	11.54	11.11	11.89	12.28	22.65	24.17	1.52
	velocity		8.67		9.00		8.41		8.14	8.54	184.0	8.67	9.00	8.41	8.14	8.83	8.27	
Mihara, Taiki (JPN) (1995)	time		11.98		23.26		34.98		46.93	46.93	3 / 3							
reaction time	interval				11.28		11.72		11.95		# of strides	11.98	11.28	11.72	11.95	23.26	23.67	0.41
	velocity		8.35		8.87		8.53		8.37	8.52	183.7	8.35	8.87	8.53	8.37	8.60	8.45	
Tamura, Tomoya (JPN) (19	time		11.32		22.12		33.80		46.99	46.99	4 / 4							
reaction time	interval				10.80		11.68		13.19		# of strides	11.32	10.80	11.68	13.19	22.12	24.87	2.75
	velocity		8.83		9.26		8.56		7.58	8.51	190.0	8.83	9.26	8.56	7.58	9.04	8.04	
Obuchi, Mizuki (JPN) (1997	time		11.83		23.16		35.18		47.76	47.76	7 / 5							
reaction time	interval				11.33		12.02		12.58		# of strides	11.83	11.33	12.02	12.58	23.16	24.60	1.44
	velocity		8.45		8.83		8.32		7.95	8.38	188.0	8.45	8.83	8.32	7.95	8.64	8.13	
Choshi, Mori (JPN)	time		11.77		22.74		34.86		47.92	47.92	8 / 6							
reaction time	interval				10.97		12.12		13.06		# of strides	11.77	10.97	12.12	13.06	22.74	25.18	2.44
	velocity		8.50		9.12		8.25		7.66	8.35	186.0	8.50	9.12	8.25	7.66	8.80	7.94	
Ishii, Yuto (JPN) (1990)	time		11.88		23.00		35.37		49.45	49.45	9 / 7							
reaction time	interval				11.12		12.37		14.08		# of strides	11.88	11.12	12.37	14.08	23.00	26.45	3.45
	velocity		8.42		8.99		8.08		7.10	8.09	201.2	8.42	8.99	8.08	7.10	8.70	7.56	

B FINAL date 09-Jul-17

(2017) - tfdata-store.com/2017/07/11/post-1010/

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kimura, Kazushi (JPN) (19	time		11.99		23.40		34.83		47.16	47.16	5 / 1							
reaction time	interval				11.41		11.43		12.33		# of strides	11.99	11.41	11.43	12.33	23.40	23.76	0.36
	velocity		8.34		8.76		8.75		8.11	8.48	186.0	8.34	8.76	8.75	8.11	8.55	8.42	
Nakagawa, Yuichiro (JPN)	time		11.75		23.33		35.45		48.68	48.68	3 / 2							
reaction time	interval				11.58		12.12		13.23		# of strides	11.75	11.58	12.12	13.23	23.33	25.35	2.02
	velocity		8.51		8.64		8.25		7.56	8.22	195.0	8.51	8.64	8.25	7.56	8.57	7.89	
Umeiuchi, Eiichi (JPN)	time		11.95		23.58		36.04		50.42	50.42	8 / 3							
reaction time	interval				11.63		12.46		14.38		# of strides	11.95	11.63	12.46	14.38	23.58	26.84	3.26
	velocity		8.37		8.60		8.03		6.95	7.93	189.7	8.37	8.60	8.03	6.95	8.48	7.45	

2017 Athletissima (Lausanne, SUI)

Vazel (2018) - historical analysis and coaching commentary - biomechanical report - London 2017 - Men's 400m

FINAL

date 06-Jul-17

Škraba (2017) - Wayde van Niekerk's 400m races in lausanne & monaco: splits & strides

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
van Niekerk, Wayde (RSA) (	time		10.9		20.9		31.7		43.62	43.62	5 / 1							*Škraba (2017)*
reaction time	interval				10.00		10.80		11.92		# of strides	10.90	10.00	10.80	11.92	20.90	22.72	1.82
	velocity		9.17		10.00		9.26		8.39	9.17	162.1	9.17	10.00	9.26	8.39	9.57	8.80	
Thebe, Baboloki (BOT) (19	time		10.9		21.1		32.0		44.02	44.02	3 / 2							*Vazel (2018)*
reaction time	interval				10.20		10.90		12.02	PB	# of strides	10.90	10.20	10.90	12.02	21.10	22.92	1.82
	velocity		9.17		9.80		9.17		8.32	9.09	173.7	9.17	9.80	9.17	8.32	9.48	8.73	

2017 Golden Spike (Ostrava, CZE) (300m)

FINAL

date 28-Jun-17

(2017.07.01) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en

		50m	100m	150m	200m	250m	300m	Official Time	Lane / Place	0-100m	100-200m	200-300m	0-200m	Differential
van Niekerk, Wayde (RSA) (	time		10.49		19.98		30.81	30.81	5 / 1					**100m-300m**
reaction time 0.152	interval				9.49		10.83	WR	# of strides	10.49	9.49	10.83	19.98	20.32
	velocity		9.53		10.54		9.23	9.74	121.2	9.53	10.54	9.23	10.01	9.84
Makwala, Isaac (BOT) (1986	time		10.64		20.39		31.44	31.44	6 / 2					
reaction time 0.217	interval				9.75		11.05	NR	# of strides	10.64	9.75	11.05	20.39	20.80
	velocity		9.40		10.26		9.05	9.54	133.0	9.40	10.26	9.05	9.81	9.62
Munyai, Clarence (RSA) (1	time		10.55		20.42		31.61	31.61	3 / 3					
reaction time 0.155	interval				9.87		11.19	WJR	# of strides	10.55	9.87	11.19	20.42	21.06
	velocity		9.48		10.13		8.94	9.49	136.2	9.48	10.13	8.94	9.79	9.50

2017 USATF National Championships (Sacramento, CA)

FINAL

date 24-Jun-17

Lee (& Ferrara) (2017) - speedendurance.com/2017/07/13/400m-splits-from-usa-national-championships/

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kerley, Fred (USA) (1995)	time		11.27		21.18		32.02		44.03	44.03	4 / 1							
reaction time	interval				9.91		10.84		12.01		# of strides	11.27	9.91	10.84	12.01	21.18	22.85	1.67
	velocity		8.87		10.09		9.23		8.33	9.08		8.87	10.09	9.23	8.33	9.44	8.75	
Roberts, Gil (USA) (1989)	time		10.98		20.86		31.92		44.22	44.22	6 / 2							
reaction time	interval				9.88		11.06		12.30	PB	# of strides	10.98	9.88	11.06	12.30	20.86	23.36	2.50
	velocity		9.11		10.12		9.04		8.13	9.05		9.11	10.12	9.04	8.13	9.59	8.56	
London, Wil (USA) (1997)	time		11.41		21.82		32.67		44.47	44.47	1 / 3							
reaction time	interval				10.41		10.85		11.80	PB	# of strides	11.41	10.41	10.85	11.80	21.82	22.65	0.83
	velocity		8.76		9.61		9.22		8.47	8.99		8.76	9.61	9.22	8.47	9.17	8.83	
Nellum, Bryshon (USA) (19	time		11.09		21.15		32.31		44.50	44.50	7 / 4							
reaction time	interval				10.06		11.16		12.19	PB	# of strides	11.09	10.06	11.16	12.19	21.15	23.35	2.20
	velocity		9.02		9.94		8.96		8.20	8.99		9.02	9.94	8.96	8.20	9.46	8.57	
McQuay, Tony (USA) (1990	time		11.04		21.04		32.04		44.51	44.51	2 / 5							
reaction time	interval				10.00		11.00		12.47		# of strides	11.04	10.00	11.00	12.47	21.04	23.47	2.43
	velocity		9.06		10.00		9.09		8.02	8.99		9.06	10.00	9.09	8.02	9.51	8.52	
Cherry, Michael (USA) (199	time		11.08		21.28		32.33		44.67	44.67	5 / 6							
reaction time	interval				10.20		11.05		12.34	PB	# of strides	11.08	10.20	11.05	12.34	21.28	23.39	2.11
	velocity		9.03		9.80		9.05		8.10	8.95		9.03	9.80	9.05	8.10	9.40	8.55	
Norman, Michael (USA) (19	time		11.05		21.25		32.52		44.80	44.80	3 / 7							
reaction time	interval				10.20		11.27		12.28		# of strides	11.05	10.20	11.27	12.28	21.25	23.55	2.30
	velocity		9.05		9.80		8.87		8.14	8.93		9.05	9.80	8.87	8.14	9.41	8.49	
Collins, Kyle (USA) (1994)	time		11.27		21.49		32.78		45.49	45.49	8 / 8							
reaction time	interval				10.22		11.29		12.71		# of strides	11.27	10.22	11.29	12.71	21.49	24.00	2.51
	velocity		8.87		9.78		8.86		7.87	8.79		8.87	9.78	8.86	7.87	9.31	8.33	

Semi-Final 1

date 23-Jun-17

Lee (& Ferrara) (2017) - speedendurance.com/2017/07/13/400m-splits-from-usa-national-championships/

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Roberts, Gil (USA) (1989)	time		11.24		21.52		32.40		44.33	44.33	/ 2							
reaction time	interval				10.28		10.88		11.93	PB	# of strides	11.24	10.28	10.88	11.93	21.52	22.81	1.29
	velocity		8.90		9.73		9.19		8.38	9.02		8.90	9.73	9.19	8.38	9.29	8.77	

Heat 2

date 22-Jun-17

Lee (& Ferrara) (2017) - speedendurance.com/2017/07/13/400m-splits-from-usa-national-championships/

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Roberts, Gil (USA) (1989)	time		11.08		21.19		32.32		44.63	44.63	/ 1							

reaction time	interval			10.11		11.13		12.31		# of strides	11.08	10.11	11.13	12.31	21.19	23.44	2.25
	velocity		9.03		9.89		8.98		8.12	8.96		9.03	9.89	8.98	8.12	9.44	8.53	

2017 Japanese National Championships (Osaka, JPN)

Yamanaka (2017) - male and female 400m analysis in the 2017 season

FINAL

date 24-Jun-17

(2017) - tfdata-store.com/2017/07/08/post-965/

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kitagawa, Takamasa (JPN)	time	6.14	11.23	16.39	21.76	27.31	33.09	39.17	45.76	45.76	4 / 1							*Yamanaka (2017)*
reaction time 0.147	interval		5.09	5.16	5.37	5.55	5.78	6.08	6.59		# of strides	11.23	10.53	11.33	12.67	21.76	24.00	2.24
	velocity	8.14	9.82	9.69	9.31	9.01	8.65	8.22	7.59	8.74	180.0	8.90	9.50	8.83	7.89	9.19	8.33	
Sato, Kentaro (JPN) (1994)	time	6.17	11.17	16.14	21.41	26.89	32.72	39.02	45.95	45.95	5 / 2							*Yamanaka (2017)*
reaction time 0.176	interval		5.00	4.97	5.27	5.48	5.83	6.30	6.93		# of strides	11.17	10.24	11.31	13.23	21.41	24.54	3.13
	velocity	8.10	10.00	10.06	9.49	9.12	8.58	7.94	7.22	8.71	183.0	8.95	9.77	8.84	7.56	9.34	8.15	
Kimura, Kazushi (JPN) (19	time	6.13	11.18	16.33	21.63	27.11	32.97	39.28	46.02	46.02	7 / 3							*Yamanaka (2017)*
reaction time 0.184	interval		5.05	5.15	5.30	5.48	5.86	6.31	6.74		# of strides	11.18	10.45	11.34	13.05	21.63	24.39	2.76
	velocity	8.16	9.90	9.71	9.43	9.12	8.53	7.92	7.42	8.69	186.0	8.94	9.57	8.82	7.66	9.25	8.20	
Horii, Kosuke (JPN) (1994)	time	6.23	11.46	16.77	22.25	27.85	33.81	39.83	46.42	46.42	2 / 4							*Yamanaka (2017)*
reaction time 0.170	interval		5.23	5.31	5.48	5.60	5.96	6.02	6.59		# of strides	11.46	10.79	11.56	12.61	22.25	24.17	1.92
	velocity	8.03	9.56	9.42	9.12	8.93	8.39	8.31	7.59	8.62	183.0	8.73	9.27	8.65	7.93	8.99	8.27	
Obuchi, Mizuki (JPN) (1997	time		11.47		22.30		33.91		46.69	46.69	3 / 5							*(2017) - tfdata-store.com*
reaction time 0.169	interval				10.83		11.61		12.78		# of strides	11.47	10.83	11.61	12.78	22.30	24.39	2.09
	velocity		8.72		9.23		8.61		7.82	8.57	194.0	8.72	9.23	8.61	7.82	8.97	8.20	
Mihara, Taiki (JPN) (1995)	time		11.52		22.19		33.69		46.86	46.86	8 / 6							*(2017) - tfdata-store.com*
reaction time 0.219	interval				10.67		11.50		13.17		# of strides	11.52	10.67	11.50	13.17	22.19	24.67	2.48
	velocity		8.68		9.37		8.70		7.59	8.54	180.5	8.68	9.37	8.70	7.59	9.01	8.11	
Kanemaru, Yuzo (JPN) (19	time	6.20	11.26	16.53	22.04	27.81	33.87	40.29	47.06	47.06	9 / 7							*Yamanaka (2017)*
reaction time 0.154	interval		5.06	5.27	5.51	5.77	6.06	6.42	6.77		# of strides	11.26	10.78	11.83	13.19	22.04	25.02	2.98
	velocity	8.06	9.88	9.49	9.07	8.67	8.25	7.79	7.39	8.50	177.0	8.88	9.28	8.45	7.58	9.07	7.99	
Tamura, Tomoya (JPN) (19	time	6.05	10.94	15.94	21.17	26.72	32.69	39.32	47.14	47.14	6 / 8							*Yamanaka (2017)*
reaction time 0.168	interval		4.89	5.00	5.23	5.55	5.97	6.63	7.82		# of strides	10.94	10.23	11.52	14.45	21.17	25.97	4.80
	velocity	8.26	10.22	10.00	9.56	9.01	8.38	7.54	6.39	8.49	191.0	9.14	9.78	8.68	6.92	9.45	7.70	

Heat 3

date 23-Jun-17

(2017) - tfdata-store.com/2017/07/08/post-965/

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Tamura, Tomoya (JPN) (19	time		11.39		21.69		32.84		45.84	45.84	8 / 1							
reaction time 0.161	interval				10.30		11.15		13.00	PB	# of strides	11.39	10.30	11.15	13.00	21.69	24.15	2.46
	velocity		8.78		9.71		8.97		7.69	8.73	187.0	8.78	9.71	8.97	7.69	9.22	8.28	
Mihara, Taiki (JPN) (1995)	time		11.59		21.83		33.04		45.88	45.88	5 / 2							
reaction time 0.212	interval				10.24		11.21		12.84	PB	# of strides	11.59	10.24	11.21	12.84	21.83	24.05	2.22
	velocity		8.63		9.77		8.92		7.79	8.72	183.0	8.63	9.77	8.92	7.79	9.16	8.32	
Kitakani, Naoki (JPN) (1998	time		11.38		21.80		33.27		46.15	46.15	4 / 3							
reaction time 0.170	interval				10.42		11.47		12.88	PB	# of strides	11.38	10.42	11.47	12.88	21.80	24.35	2.55
	velocity		8.79		9.60		8.72		7.76	8.67	177.7	8.79	9.60	8.72	7.76	9.17	8.21	
Kobayashi, Naoki (JPN) (19	time		11.26		21.63		33.09		46.16	46.16	7 / 4							
reaction time 0.144	interval				10.37		11.46		13.07		# of strides	11.26	10.37	11.46	13.07	21.63	24.53	2.90
	velocity		8.88		9.64		8.73		7.65	8.67	179.0	8.88	9.64	8.73	7.65	9.25	8.15	
Azuma, Kaiki (JPN) (1993)	time		11.38		21.66		32.82		46.33	46.33	6 / 5							
reaction time 0.178	interval				10.28		11.16		13.51	PB	# of strides	11.38	10.28	11.16	13.51	21.66	24.67	3.01
	velocity		8.79		9.73		8.96		7.40	8.63	186.2	8.79	9.73	8.96	7.40	9.23	8.11	
Kimura, Jun (JPN) (1991)	time		11.20		21.67		33.18		46.48	46.48	3 / 6							
reaction time 0.141	interval				10.47		11.51		13.30		# of strides	11.20	10.47	11.51	13.30	21.67	24.81	3.14
	velocity		8.93		9.55		8.69		7.52	8.61	180.2	8.93	9.55	8.69	7.52	9.23	8.06	

Heat 2

date 23-Jun-17

(2017) - tfdata-store.com/2017/07/08/post-965/

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kimura, Kazushi (JPN) (19	time		11.34		21.89		32.83		45.53	45.53	4 / 1							
reaction time 0.181	interval				10.55		10.94		12.70	PB	# of strides	11.34	10.55	10.94	12.70	21.89	23.64	1.75
	velocity		8.82		9.48		9.14		7.87	8.79	184.0	8.82	9.48	9.14	7.87	9.14	8.46	
Sato, Kentaro (JPN) (1994)	time		11.31		21.61		32.78		45.67	45.67	2 / 2							
reaction time 0.145	interval				10.30		11.17		12.89		# of strides	11.31	10.30	11.17	12.89	21.61	24.06	2.45
	velocity		8.84		9.71		8.95		7.76	8.76	180.0	8.84	9.71	8.95	7.76	9.25	8.31	
Wakabayashi, Kota (JPN) (	time		11.22		21.52		32.88		46.03	46.03	3 / 3							
reaction time 0.175	interval				10.30		11.36		13.15	PB	# of strides	11.22	10.30	11.36	13.15	21.52	24.51	2.99
	velocity		8.91		9.71		8.80		7.60	8.69	172.7	8.91	9.71	8.80	7.60	9.29	8.16	
Fujiwara, Takeshi (JPN) (19	time		11.57		22.34		33.72		46.41	46.41	5 / 4							
reaction time 0.199	interval				10.77		11.38		12.69		# of strides	11.57	10.77	11.38	12.69	22.34	24.07	1.73
	velocity		8.64		9.29		8.79		7.88	8.62	179.5	8.64	9.29	8.79	7.88	8.95	8.31	
Uike, Yuji (JPN) (1998)	time		11.27		21.80		33.27		46.59	46.59	6 / 5							

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

reaction time 0.194	interval		10.53	11.47	13.32	=PB	# of strides	11.27	10.53	11.47	13.32	21.80	24.79	2.99
	velocity	8.87	9.50	8.72	7.51	8.59	185.2	8.87	9.50	8.72	7.51	9.17	8.07	
Suzaki, Mitsuhiro (JPN) (19	time	11.47	21.93	33.40	47.13	47.13	8 / 6							
reaction time 0.158	interval		10.46	11.47	13.73		# of strides	11.47	10.46	11.47	13.73	21.93	25.20	3.27
	velocity	8.72	9.56	8.72	7.28	8.49	189.5	8.72	9.56	8.72	7.28	9.12	7.94	
Katayama, Yuto (JPN) (199	time	11.27	21.91	33.93	47.90	47.90	7 / 7							
reaction time 0.152	interval		10.64	12.02	13.97		# of strides	11.27	10.64	12.02	13.97	21.91	25.99	4.08
	velocity	8.87	9.40	8.32	7.16	8.35	192.2	8.87	9.40	8.32	7.16	9.13	7.70	

Heat 1

date 23-Jun-17

(2017) - tfdata-store.com/2017/07/08/post-965/

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kitagawa, Takamasa (JPN)	time		11.39		21.69		32.97		45.48	45.48	5 / 1							
reaction time 0.168	interval				10.30		11.28		12.51	PB	# of strides	11.39	10.30	11.28	12.51	21.69	23.79	2.10
	velocity		8.78		9.71		8.87		7.99	8.80	178.7	8.78	9.71	8.87	7.99	9.22	8.41	
Kanemaru, Yuzo (JPN) (19	time		11.21		21.50		33.20		45.76	45.76	4 / 2							
reaction time 0.144	interval				10.29		11.70		12.56		# of strides	11.21	10.29	11.70	12.56	21.50	24.26	2.76
	velocity		8.92		9.72		8.55		7.96	8.74	174.7	8.92	9.72	8.55	7.96	9.30	8.24	
Horii, Kosuke (JPN) (1994)	time		11.49		22.06		33.54		45.88	45.88	3 / 3							
reaction time 0.174	interval				10.57		11.48		12.34		# of strides	11.49	10.57	11.48	12.34	22.06	23.82	1.76
	velocity		8.70		9.46		8.71		8.10	8.72	185.2	8.70	9.46	8.71	8.10	9.07	8.40	
Obuchi, Mizuki (JPN) (1997	time		11.50		22.19		33.79		45.95	45.95	6 / 4							
reaction time 0.190	interval				10.69		11.60		12.16	PB	# of strides	11.50	10.69	11.60	12.16	22.19	23.76	1.57
	velocity		8.70		9.35		8.62		8.22	8.71	188.5	8.70	9.35	8.62	8.22	9.01	8.42	
Sato, Fuga (JPN) (1996)	time		11.37		21.84		33.23		45.99	45.99	7 / 5							
reaction time 0.193	interval				10.47		11.39		12.76	PB	# of strides	11.37	10.47	11.39	12.76	21.84	24.15	2.31
	velocity		8.80		9.55		8.78		7.84	8.70	178.2	8.80	9.55	8.78	7.84	9.16	8.28	
Kawauchi, Mitsuki (JPN) (1	time		11.29		21.69		33.15		46.06	46.06	8 / 6							
reaction time 0.181	interval				10.40		11.46		12.91	PB	# of strides	11.29	10.40	11.46	12.91	21.69	24.37	2.68
	velocity		8.86		9.62		8.73		7.75	8.68	184.5	8.86	9.62	8.73	7.75	9.22	8.21	
Matsukiyo, Kazuki (JPN) (1	time		11.71		22.58		33.97		46.78	46.78	2 / 7							
reaction time 0.185	interval				10.87		11.39		12.81		# of strides	11.71	10.87	11.39	12.81	22.58	24.20	1.62
	velocity		8.54		9.20		8.78		7.81	8.55	181.7	8.54	9.20	8.78	7.81	8.86	8.26	

2017 NCAA Championships (Eugene, OR)

FINAL

date 09-Jun-17

Track Newsletter (2017) - NCAA men's championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kerley, Fred (USA) (1995)	time				21.4		32.1		44.1	44.10	4 / 1							
reaction time	interval						10.70		12.00		# of strides			10.70	12.00	21.40	22.70	1.30
	velocity				9.35		9.35		8.33	9.07	170.2			9.35	8.33	9.35	8.81	
Allen, Nathon (JAM) (1995)	time				20.8		32.1		44.7	44.69	6 / 2							
reaction time	interval						11.30		12.60		# of strides			11.30	12.60	20.80	23.90	3.10
	velocity				9.62		8.85		7.94	8.95	165.2			8.85	7.94	9.62	8.37	
Cherry, Michael (USA) (199	time				22.0		33.0		44.8	44.77	3 / 3							
reaction time	interval						11.00		11.80		# of strides			11.00	11.80	22.00	22.80	0.80
	velocity				9.09		9.09		8.47	8.93	163.5			9.09	8.47	9.09	8.77	
Norman, Michael (USA) (19	time				20.8		32.4		44.9	44.88	7 / 4							
reaction time	interval						11.60		12.50	PB	# of strides			11.60	12.50	20.80	24.10	3.30
	velocity				9.62		8.62		8.00	8.91				8.62	8.00	9.62	8.30	
Bloomfield, Akeem (JAM) (	time				21.1		32.4		45.1	45.13	/ 5							
reaction time	interval						11.30		12.70		# of strides			11.30	12.70	21.10	24.00	2.90
	velocity				9.48		8.85		7.87	8.86				8.85	7.87	9.48	8.33	
Chambers, Marcus (USA) (	time				21.0		32.4		45.3	45.28	/ 6							
reaction time	interval						11.40		12.90		# of strides			11.40	12.90	21.00	24.30	3.30
	velocity				9.52		8.77		7.75	8.83				8.77	7.75	9.52	8.23	
Gayle, Steven (JAM) (1994)	time				21.5		33.0		45.6	45.59	/ 7							
reaction time	interval						11.50		12.60		# of strides			11.50	12.60	21.50	24.10	2.60
	velocity				9.30		8.70		7.94	8.77				8.70	7.94	9.30	8.30	
London, Wil (USA) (1997)	time				21.6		32.9		45.7	45.72	/ 8							
reaction time	interval						11.30		12.80		# of strides			11.30	12.80	21.60	24.10	2.50
	velocity				9.26		8.85		7.81	8.75				8.85	7.81	9.26	8.30	

2017 NCAA Championships - West Preliminary (Austin, TX)

Quarter-Final 1

date 26-May-17

Vazel (2018) - historical analysis and coaching commentary - biomechanical report - London 2017 - Men's 400m

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kerley, Fred (USA) (1995)	time		11.0		21.1		31.9		43.70	43.70	/ 1							
reaction time	interval				10.10		10.80		11.80	PB	# of strides	11.00	10.10	10.80	11.80	21.10	22.60	1.50
	velocity		9.09		9.90		9.26		8.47	9.15		9.09	9.90	9.26	8.47	9.48	8.85	

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

2017 Shimane High School Championships (Izumo, JPN)

FINAL

date 26-May-17

Shimizu (2018) - shimane high school championships 2018 - biomechanics data analysis

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kirihara, Yuto (JPN)	time		12.28		23.87		36.82		49.89	49.89	7 / 1							
reaction time	interval				11.59		12.95		13.07		# of strides	12.28	11.59	12.95	13.07	23.87	26.02	2.15
	velocity		8.14		8.63		7.72		7.65	8.02		8.14	8.63	7.72	7.65	8.38	7.69	
Ito, Chikki (JPN)	time		12.43		24.47		37.57		51.18	51.18	9 / 2							
reaction time	interval				12.04		13.10		13.61		# of strides	12.43	12.04	13.10	13.61	24.47	26.71	2.24
	velocity		8.05		8.31		7.63		7.35	7.82		8.05	8.31	7.63	7.35	8.17	7.49	
Adachi, Yuki (JPN)	time		12.53		24.27		37.73		51.56	51.56	5 / 3							
reaction time	interval				11.74		13.46		13.83		# of strides	12.53	11.74	13.46	13.83	24.27	27.29	3.02
	velocity		7.98		8.52		7.43		7.23	7.76		7.98	8.52	7.43	7.23	8.24	7.33	
Watanabe, Koki (JPN)	time		12.87		25.50		39.03		52.70	52.70	4 / 4							
reaction time	interval				12.63		13.53		13.67		# of strides	12.87	12.63	13.53	13.67	25.50	27.20	1.70
	velocity		7.77		7.92		7.39		7.32	7.59		7.77	7.92	7.39	7.32	7.84	7.35	
Miyazaki, Kanta (JPN)	time		12.47		24.87		38.63		52.73	52.73	6 / 5							
reaction time	interval				12.40		13.76		14.10		# of strides	12.47	12.40	13.76	14.10	24.87	27.86	2.99
	velocity		8.02		8.06		7.27		7.09	7.59		8.02	8.06	7.27	7.09	8.04	7.18	

2017 Kanto Collegiate Championships (Yokohama, JPN)

Division 1 FINAL

date 26-May-17

(2017) - tfdata-store.com/2017/06/01/post-786/

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kitagawa, Takamasa (JPN)	time		11.52		22.41		33.81		46.17	46.17	5 / 1							
reaction time	interval				10.89		11.40		12.36		# of strides	11.52	10.89	11.40	12.36	22.41	23.76	1.35
	velocity		8.68		9.18		8.77		8.09	8.66	180.0	8.68	9.18	8.77	8.09	8.92	8.42	
Obuchi, Mizuki (JPN) (1997	time		11.48		22.38		33.99		46.19	46.19	7 / 2							
reaction time	interval				10.90		11.61		12.20	PB	# of strides	11.48	10.90	11.61	12.20	22.38	23.81	1.43
	velocity		8.71		9.17		8.61		8.20	8.66	189.0	8.71	9.17	8.61	8.20	8.94	8.40	
Yamaki, Kakeru (JPN) (1998	time		11.33		22.16		33.79		46.92	46.92	6 / 3							
reaction time	interval				10.83		11.63		13.13		# of strides	11.33	10.83	11.63	13.13	22.16	24.76	2.60
	velocity		8.83		9.23		8.60		7.62	8.53	204.2	8.83	9.23	8.60	7.62	9.03	8.08	
Uike, Yuji (JPN) (1998)	time		11.68		22.74		34.54		47.02	47.02	4 / 4							
reaction time	interval				11.06		11.80		12.48		# of strides	11.68	11.06	11.80	12.48	22.74	24.28	1.54
	velocity		8.56		9.04		8.47		8.01	8.51	189.7	8.56	9.04	8.47	8.01	8.80	8.24	
Kitakani, Naoki (JPN) (1998	time		11.65		22.89		34.67		47.02	47.02	3 / 5							
reaction time	interval				11.24		11.78		12.35		# of strides	11.65	11.24	11.78	12.35	22.89	24.13	1.24
	velocity		8.58		8.90		8.49		8.10	8.51	175.5	8.58	8.90	8.49	8.10	8.74	8.29	
Someya, Sho (JPN) (1997)	time		11.95		23.18		34.76		47.66	47.66	8 / 6							
reaction time	interval				11.23		11.58		12.90		# of strides	11.95	11.23	11.58	12.90	23.18	24.48	1.30
	velocity		8.37		8.90		8.64		7.75	8.39	187.2	8.37	8.90	8.64	7.75	8.63	8.17	
Mashiko, Yuta (JPN) (1998)	time		11.60		22.84		34.82		47.74	47.74	9 / 7							
reaction time	interval				11.24		11.98		12.92		# of strides	11.60	11.24	11.98	12.92	22.84	24.90	2.06
	velocity		8.62		8.90		8.35		7.74	8.38	184.0	8.62	8.90	8.35	7.74	8.76	8.03	
Suzaki, Mitsuhiro (JPN) (19	time		11.77		22.91		34.86		48.72	48.72	2 / 8							
reaction time	interval				11.14		11.95		13.86		# of strides	11.77	11.14	11.95	13.86	22.91	25.81	2.90
	velocity		8.50		8.98		8.37		7.22	8.21	187.2	8.50	8.98	8.37	7.22	8.73	7.75	

Division 2 FINAL

date 26-May-17

(2017) - tfdata-store.com/2017/06/01/post-786/

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Sato, Fuga (JPN) (1996)	time		11.22		21.51		33.04		46.32	46.32	5 / 1							
reaction time	interval				10.29		11.53		13.28	PB	# of strides	11.22	10.29	11.53	13.28	21.51	24.81	3.30
	velocity		8.91		9.72		8.67		7.53	8.64	181.2	8.91	9.72	8.67	7.53	9.30	8.06	
Wakabayashi, Kota (JPN) (	time		11.62		22.24		34.02		46.70	46.70	7 / 2							
reaction time	interval				10.62		11.78		12.68	PB	# of strides	11.62	10.62	11.78	12.68	22.24	24.46	2.22
	velocity		8.61		9.42		8.49		7.89	8.57	172.2	8.61	9.42	8.49	7.89	8.99	8.18	
Nakagawa, Shigeki (JPN) (1	time		11.48		22.10		33.99		47.50	47.50	6 / 3							
reaction time	interval				10.62		11.89		13.51		# of strides	11.48	10.62	11.89	13.51	22.10	25.40	3.30
	velocity		8.71		9.42		8.41		7.40	8.42	186.5	8.71	9.42	8.41	7.40	9.05	7.87	
Yamazaki, Hiroki (JPN) (199	time		11.98		23.03		34.73		48.06	48.06	9 / 4							
reaction time	interval				11.05		11.70		13.33		# of strides	11.98	11.05	11.70	13.33	23.03	25.03	2.00
	velocity		8.35		9.05		8.55		7.50	8.32	182.0	8.35	9.05	8.55	7.50	8.68	7.99	
Kudo, Taisei (JPN) (1996)	time		12.02		23.55		35.27		48.34	48.34	4 / 5							
reaction time	interval				11.53		11.72		13.07		# of strides	12.02	11.53	11.72	13.07	23.55	24.79	1.24
	velocity		8.32		8.67		8.53		7.65	8.27	183.2	8.32	8.67	8.53	7.65	8.49	8.07	
Tomioka, Yuya (JPN) (1998	time		11.60		22.69		35.06		48.50	48.50	8 / 6							
reaction time	interval				11.09		12.37		13.44		# of strides	11.60	11.09	12.37	13.44	22.69	25.81	3.12
	velocity		8.62		9.02		8.08		7.44	8.25	181.2	8.62	9.02	8.08	7.44	8.81	7.75	

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

Suzuki, Yumeto (JPN)	time	11.98	23.50	35.72	48.60	48.60	2 / 7							
reaction time	interval		11.52	12.22	12.88		# of strides	11.98	11.52	12.22	12.88	23.50	25.10	1.60
	velocity	8.35	8.68	8.18	7.76	8.23	187.0	8.35	8.68	8.18	7.76	8.51	7.97	
Hoshino, Sota (JPN) (1998)	time	12.42	23.65	35.74	48.90	48.90	3 / 8							
reaction time	interval		11.23	12.09	13.16		# of strides	12.42	11.23	12.09	13.16	23.65	25.25	1.60
0.167	velocity	8.05	8.90	8.27	7.60	8.18	171.5	8.05	8.90	8.27	7.60	8.46	7.92	

Division 1 Semi-I

date 26-May-17

(2017) - tfdata-store.com/2017/06/02/post-835/

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kitagawa, Takamasa (JPN)	time		11.72		22.64		34.51		47.13	47.13	6 / 1							
reaction time	interval				10.92		11.87		12.62		# of strides	11.72	10.92	11.87	12.62	22.64	24.49	1.85
	velocity		8.53		9.16		8.42		7.92	8.49	180.2	8.53	9.16	8.42	7.92	8.83	8.17	
Obuchi, Mizuki (JPN) (1997	time		11.53		22.49		34.47		47.32	47.32	4 / 2							
reaction time	interval				10.96		11.98		12.85		# of strides	11.53	10.96	11.98	12.85	22.49	24.83	2.34
	velocity		8.67		9.12		8.35		7.78	8.45	190.0	8.67	9.12	8.35	7.78	8.89	8.05	
Mashiko, Yuta (JPN) (1998)	time		11.85		23.11		35.06		47.72	47.72	2 / 3							
reaction time	interval				11.26		11.95		12.66		# of strides	11.85	11.26	11.95	12.66	23.11	24.61	1.50
	velocity		8.44		8.88		8.37		7.90	8.38	183.5	8.44	8.88	8.37	7.90	8.65	8.13	
Suzaki, Mitsuhiro (JPN) (19	time		11.75		22.68		34.59		47.83	47.83	7 / 4							
reaction time	interval				10.93		11.91		13.24		# of strides	11.75	10.93	11.91	13.24	22.68	25.15	2.47
	velocity		8.51		9.15		8.40		7.55	8.36	189.0	8.51	9.15	8.40	7.55	8.82	7.95	
Kitakani, Naoki (JPN) (1998	time		11.52		22.46		34.86		47.99	47.99	8 / 5							
reaction time	interval				10.94		12.40		13.13		# of strides	11.52	10.94	12.40	13.13	22.46	25.53	3.07
	velocity		8.68		9.14		8.06		7.62	8.34	179.2	8.68	9.14	8.06	7.62	8.90	7.83	
Ito, Rikiya (JPN) (1998)	time		11.82		22.76		34.87		48.04	48.04	9 / 6							
reaction time	interval				10.94		12.11		13.17		# of strides	11.82	10.94	12.11	13.17	22.76	25.28	2.52
	velocity		8.46		9.14		8.26		7.59	8.33	198.7	8.46	9.14	8.26	7.59	8.79	7.91	
Matyama, Haruki (JPN) (19	time		11.48		22.44		34.66		48.44	48.44	5 / 7							
reaction time	interval				10.96		12.22		13.78		# of strides	11.48	10.96	12.22	13.78	22.44	26.00	3.56
	velocity		8.71		9.12		8.18		7.26	8.26	195.7	8.71	9.12	8.18	7.26	8.91	7.69	
Iwaki, Takuma (JPN) (1996)	time		11.67		22.75		35.14		48.49	48.49	3 / 8							
reaction time	interval				11.08		12.39		13.35		# of strides	11.67	11.08	12.39	13.35	22.75	25.74	2.99
	velocity		8.57		9.03		8.07		7.49	8.25	185.2	8.57	9.03	8.07	7.49	8.79	7.77	

Division 1 Semi-I

date 26-May-17

(2017) - tfdata-store.com/2017/06/02/post-835/

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Yamaki, Kakeru (JPN) (1998	time		11.45		22.22		33.96		47.18	47.18	7 / 1							
reaction time	interval				10.77		11.74		13.22		# of strides	11.45	10.77	11.74	13.22	22.22	24.96	2.74
	velocity		8.73		9.29		8.52		7.56	8.48	204.5	8.73	9.29	8.52	7.56	9.00	8.01	
Kishimoto, Kodai (JPN) (1	time		11.57		22.54		34.91		47.57	47.57	9 / ~~2~~							
reaction time	interval				10.97		12.37		12.66	DQ	# of strides	11.57	10.97	12.37	12.66	22.54	25.03	2.49
	velocity		8.64		9.12		8.08		7.90	8.41	189.7	8.64	9.12	8.08	7.90	8.87	7.99	
Uike, Yuji (JPN) (1998)	time		11.65		22.66		34.66		47.65	47.65	4 / ~~3~~ 2							
reaction time	interval				11.01		12.00		12.99		# of strides	11.65	11.01	12.00	12.99	22.66	24.99	2.33
	ATHLETISSIMA ME		8.58		9.08		8.33		7.70	8.39	192.0	8.58	9.08	8.33	7.70	8.83	8.00	
Someya, Sho (JPN) (1997)	time		11.98		23.07		34.79		47.65	47.65	5 / ~~4~~ 3							
reaction time	interval				11.09		11.72		12.86		# of strides	11.98	11.09	11.72	12.86	23.07	24.58	1.51
	velocity		8.35		9.02		8.53		7.78	8.39	193.0	8.35	9.02	8.53	7.78	8.67	8.14	
Sugue, Kohei (JPN) (1997)	time		12.08		23.48		35.24		48.03	48.03	3 / ~~5~~ 4							
reaction time	interval				11.40		11.76		12.79		# of strides	12.08	11.40	11.76	12.79	23.48	24.55	1.07
	velocity		8.28		8.77		8.50		7.82	8.33	187.7	8.28	8.77	8.50	7.82	8.52	8.15	
Sakurai, Naoya (JPN) (1996	time		11.70		22.81		34.93		48.30	48.30	6 / ~~6~~ 5							
reaction time	interval				11.11		12.12		13.37		# of strides	11.70	11.11	12.12	13.37	22.81	25.49	2.68
	velocity		8.55		9.00		8.25		7.48	8.28	185.2	8.55	9.00	8.25	7.48	8.77	7.85	
Shirahata, Daiki (JPN) (199	time		11.78		23.07		35.17		48.68	48.68	2 / ~~7~~ 6							
reaction time	interval				11.29		12.10		13.51		# of strides	11.78	11.29	12.10	13.51	23.07	25.61	2.54
	velocity		8.49		8.86		8.26		7.40	8.22	176.5	8.49	8.86	8.26	7.40	8.67	7.81	
Muraki, Daiki (JPN) (1996)	time		11.83		23.14		35.49		48.71	48.71	8 / ~~8~~ 7							
reaction time	interval				11.31		12.35		13.22		# of strides	11.83	11.31	12.35	13.22	23.14	25.57	2.43
	velocity		8.45		8.84		8.10		7.56	8.21	184.5	8.45	8.84	8.10	7.56	8.64	7.82	

Division 2 Semi-I

date 26-May-17

(2017) - tfdata-store.com/2017/06/02/post-835/

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Nakagawa, Shigeki (JPN) (1	time		11.40		21.93		33.69		47.45	47.45	6 / 1							
reaction time	interval				10.53		11.76		13.76	PB	# of strides	11.40	10.53	11.76	13.76	21.93	25.52	3.59
	velocity		8.77		9.50		8.50		7.27	8.43	187.0	8.77	9.50	8.50	7.27	9.12	7.84	

Wakabayashi, Kota (JPN) (	time	11.58	22.33	34.22	47.72	47.72	4 / 2							
reaction time	interval		10.75	11.89	13.50		# of strides	11.58	10.75	11.89	13.50	22.33	25.39	3.06
	velocity	8.64	9.30	8.41	7.41	8.38	169.7	8.64	9.30	8.41	7.41	8.96	7.88	
Yamazaki, Hiroki (JPN) (199	time	12.12	23.47	35.14	47.96	47.96	2 / 3							
reaction time	interval		11.35	11.67	12.82		# of strides	12.12	11.35	11.67	12.82	23.47	24.49	1.02
	velocity	8.25	8.81	8.57	7.80	8.34	181.0	8.25	8.81	8.57	7.80	8.52	8.17	
Suzuki, Yumeto (JPN)	time	11.83	23.23	35.31	48.17	48.17	5 / 4							
reaction time	interval		11.40	12.08	12.86		# of strides	11.83	11.40	12.08	12.86	23.23	24.94	1.71
	velocity	8.45	8.77	8.28	7.78	8.30	187.0	8.45	8.77	8.28	7.78	8.61	8.02	
Kitamura, Shuya (JPN) (19	time	11.76	22.89	35.07	48.62	48.62	9 / 5							
reaction time	interval		11.13	12.18	13.55		# of strides	11.76	11.13	12.18	13.55	22.89	25.73	2.84
	velocity	8.50	8.98	8.21	7.38	8.23	184.2	8.50	8.98	8.21	7.38	8.74	7.77	
Yamane, Kota (JPN)	time	12.05	23.30	35.46	49.22	49.22	3 / 6							
reaction time	interval		11.25	12.16	13.76		# of strides	12.05	11.25	12.16	13.76	23.30	25.92	2.62
	velocity	8.30	8.89	8.22	7.27	8.13	190.7	8.30	8.89	8.22	7.27	8.58	7.72	
Nishida, Takumitsu (JPN)	time	11.97	23.10	35.22	49.32	49.32	7 / 7							
reaction time	interval		11.13	12.12	14.10		# of strides	11.97	11.13	12.12	14.10	23.10	26.22	3.12
	velocity	8.35	8.98	8.25	7.09	8.11	190.2	8.35	8.98	8.25	7.09	8.66	7.63	
Yamade, Masaki (JPN)	time	11.68	22.64	35.21	49.53	49.53	8 / 8							
reaction time	interval		10.96	12.57	14.32		# of strides	11.68	10.96	12.57	14.32	22.64	26.89	4.25
	velocity	8.56	9.12	7.96	6.98	8.08	173.2	8.56	9.12	7.96	6.98	8.83	7.44	

Division 2 Semi-I

date 26-May-17

(2017) - tfdata-store.com/2017/06/02/post-835/

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Sato, Fuga (JPN) (1996)	time		11.45		22.10		33.57		47.08	47.08	7 / 1							
reaction time	interval				10.65		11.47		13.51		# of strides	11.45	10.65	11.47	13.51	22.10	24.98	2.88
	velocity		8.73		9.39		8.72		7.40	8.50	179.0	8.73	9.39	8.72	7.40	9.05	8.01	
Kudo, Taisei (JPN) (1996)	time		11.95		23.07		34.61		47.72	47.72	6 / 2							
reaction time	interval				11.12		11.54		13.11	PB	# of strides	11.95	11.12	11.54	13.11	23.07	24.65	1.58
	velocity		8.37		8.99		8.67		7.63	8.38	184.0	8.37	8.99	8.67	7.63	8.67	8.11	
Tomioka, Yuya (JPN) (1998	time		11.40		22.32		34.44		48.05	48.05	4 / 3							
reaction time	interval				10.92		12.12		13.61		# of strides	11.40	10.92	12.12	13.61	22.32	25.73	3.41
	velocity		8.77		9.16		8.25		7.35	8.32	182.0	8.77	9.16	8.25	7.35	8.96	7.77	
Hoshino, Sota (JPN) (1998)	time		12.20		23.36		35.26		48.11	48.11	8 / 4							
reaction time	interval				11.16		11.90		12.85		# of strides	12.20	11.16	11.90	12.85	23.36	24.75	1.39
	velocity		8.20		8.96		8.40		7.78	8.31	172.0	8.20	8.96	8.40	7.78	8.56	8.08	
Makabe, Shohei (JPN) (199	time		11.80		23.03		35.01		48.27	48.27	5 / 5							
reaction time	interval				11.23		11.98		13.26		# of strides	11.80	11.23	11.98	13.26	23.03	25.24	2.21
	velocity		8.47		8.90		8.35		7.54	8.29	187.2	8.47	8.90	8.35	7.54	8.68	7.92	
Yoshida, Yuto (JPN) (1998)	time		11.92		23.33		35.41		48.50	48.50	2 / 6							
reaction time	interval				11.41		12.08		13.09		# of strides	11.92	11.41	12.08	13.09	23.33	25.17	1.84
	velocity		8.39		8.76		8.28		7.64	8.25	192.2	8.39	8.76	8.28	7.64	8.57	7.95	
Arai, Yusuke (JPN)	time		11.83		23.23		35.36		48.56	48.56	3 / 7							
reaction time	interval				11.40		12.13		13.20		# of strides	11.83	11.40	12.13	13.20	23.23	25.33	2.10
	velocity		8.45		8.77		8.24		7.58	8.24	182.2	8.45	8.77	8.24	7.58	8.61	7.90	
Sakai, Yu (JPN)	time		12.23		23.61		35.67		48.92	48.92	9 / 8							
reaction time	interval				11.38		12.06		13.25		# of strides	12.23	11.38	12.06	13.25	23.61	25.31	1.70
	velocity		8.18		8.79		8.29		7.55	8.18	194.0	8.18	8.79	8.29	7.55	8.47	7.90	

2017 Kansai Regional University Championships (Osaka, JPN)

FINAL

date 11-May-17

(2017) - tfdata-store.com/2017/05/13/post-441/

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kawauchi, Mitsuki (JPN) (1	time		11.42		22.01		33.47		46.60	46.60	5 / 1							
reaction time	interval				10.59		11.46		13.13	PB	# of strides	11.42	10.59	11.46	13.13	22.01	24.59	2.58
	velocity		8.76		9.44		8.73		7.62	8.58	186.7	8.76	9.44	8.73	7.62	9.09	8.13	
Takahaski, Yumi (JPN) (199	time		11.39		22.09		33.60		46.90	46.90	7 / 2							
reaction time	interval				10.70		11.51		13.30		# of strides	11.39	10.70	11.51	13.30	22.09	24.81	2.72
	velocity		8.78		9.35		8.69		7.52	8.53	180.7	8.78	9.35	8.69	7.52	9.05	8.06	
Sato, Hiroki (JPN) (1995)	time		11.46				33.84		47.03	47.03	9 / 3							
reaction time	interval						22.38		13.19		# of strides	11.46			13.19			
	velocity		8.73				8.94		7.58	8.51	186.7	8.73			7.58			
Yoshimura, Kento (JPN) (1	time		11.49				33.73		47.20	47.20	8 / 4							
reaction time	interval						22.24		13.47		# of strides	11.49			13.47			
	velocity		8.70				8.99		7.42	8.47	189.2	8.70			7.42			
Mukushita, Genya (JPN)	time		11.81		22.64		34.12		47.42	47.42	2 / 5							
reaction time	interval				10.83		11.48		13.30	PB	# of strides	11.81	10.83	11.48	13.30	22.64	24.78	2.14

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

	velocity	8.47	9.23	8.71	7.52	8.44		8.47	9.23	8.71	7.52	8.83	8.07		
Minami, Syono (JPN)	time	11.68	22.43	33.92	47.61	47.61	3 / 6								
reaction time	interval		10.75	11.49	13.69		# of strides	11.68	10.75	11.49	13.69	22.43	25.18	2.75	
	velocity	8.56	9.30	8.70	7.30	8.40		8.56	9.30	8.70	7.30	8.92	7.94		
Inoue, Kakeru (JPN) (1996)	time	11.79	22.75	34.17	47.71	47.71	4 / 7								
reaction time	interval		10.96	11.42	13.54	PB	# of strides	11.79	10.96	11.42	13.54	22.75	24.96	2.21	
	velocity	8.48	9.12	8.76	7.39	8.38		8.48	9.12	8.76	7.39	8.79	8.01		
Kanamori, Reiya (JPN) (199	time	12.25	23.74	35.71	48.86	48.86	6 / 8								
reaction time	interval		11.49	11.97	13.15		# of strides	12.25	11.49	11.97	13.15	23.74	25.12	1.38	
	velocity	8.16	8.70	8.35	7.60	8.19		8.16	8.70	8.35	7.60	8.42	7.96		

2017 Shizuoka International Meeting (Fukuroi, JPN)

FINAL date 03-May-17

Yamanaka (2017) - male and female 400m analysis in the 2017 season

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kitagawa, Takamasa (JPN)	time	6.24	11.32	16.63	22.13	27.82	33.66	39.82	46.55	46.55	/ 1							
reaction time	interval		5.08	5.31	5.50	5.69	5.84	6.16	6.73		# of strides	11.32	10.81	11.53	12.89	22.13	24.42	2.29
	velocity	8.01	9.84	9.42	9.09	8.79	8.56	8.12	7.43	8.59		8.83	9.25	8.67	7.76	9.04	8.19	
Sato, Kentaro (JPN) (1994)	time	6.35	11.48	16.77	22.37	27.99	33.82	39.98	46.63	46.63	/ 2							
reaction time	interval		5.13	5.29	5.60	5.62	5.83	6.16	6.65		# of strides	11.48	10.89	11.45	12.81	22.37	24.26	1.89
	velocity	7.87	9.75	9.45	8.93	8.90	8.58	8.12	7.52	8.58		8.71	9.18	8.73	7.81	8.94	8.24	
Kanemaru, Yuzo (JPN) (19	time	6.21	11.31	16.62	22.17	27.98	34.04	40.42	47.08	47.08	/ 3							
reaction time	interval		5.10	5.31	5.55	5.81	6.06	6.38	6.66		# of strides	11.31	10.86	11.87	13.04	22.17	24.91	2.74
	velocity	8.05	9.80	9.42	9.01	8.61	8.25	7.84	7.51	8.50		8.84	9.21	8.42	7.67	9.02	8.03	
Kato, Nobuya (JPN) (1995)	time	6.47	11.69	17.08	22.64	28.32	34.20	40.42	47.23	47.23	/ 4							
reaction time	interval		5.22	5.39	5.56	5.68	5.88	6.22	6.81		# of strides	11.69	10.95	11.56	13.03	22.64	24.59	1.95
	velocity	7.73	9.58	9.28	8.99	8.80	8.50	8.04	7.34	8.47		8.55	9.13	8.65	7.67	8.83	8.13	
Fujiwara, Takeshi (JPN) (19	time	6.36	11.68	17.25	23.00	28.60	34.35	40.52	47.26	47.26	/ 5							
reaction time	interval		5.32	5.57	5.75	5.60	5.75	6.17	6.74		# of strides	11.68	11.32	11.35	12.91	23.00	24.26	1.26
	velocity	7.86	9.40	8.98	8.70	8.93	8.70	8.10	7.42	8.46		8.56	8.83	8.81	7.75	8.70	8.24	
Horii, Kosuke (JPN) (1994)	time	6.33	11.53	16.88	22.45	28.29	34.34	40.66	47.33	47.33	/ 6							
reaction time	interval		5.20	5.35	5.57	5.84	6.05	6.32	6.67		# of strides	11.53	10.92	11.89	12.99	22.45	24.88	2.43
	velocity	7.90	9.62	9.35	8.98	8.56	8.26	7.91	7.50	8.45		8.67	9.16	8.41	7.70	8.91	8.04	

2017 Izumo Athletics Games (Izumo, JPN) (300m)

FINAL date 23-Apr-17

(2017) - tfdata-store.com/2017/05/17/post-537/

		50m	100m	150m	200m	250m	300m	Official Time	Lane / Place	0-100m	100-200m	200-300m	0-200m	Differential
Fujimitsu, Kenji (JPN) (198	time		10.74		21.02		32.47	32.47	4 / 1					***100m-300m***
reaction time	interval				10.28		11.45		# of strides	10.74	10.28	11.45	21.02	*21.73*
	velocity		9.31		9.73		8.73	9.24	137.0	9.31	9.73	8.73	9.51	*9.20*
Azuma, Kaiki (JPN) (1993)	time		10.84		21.24		32.86	32.86	6 / 2					
reaction time	interval				10.40		11.62	PB	# of strides	10.84	10.40	11.62	21.24	*22.02*
	velocity		9.23		9.62		8.61	9.13	140.5	9.23	9.62	8.61	9.42	*9.08*
Kimura, Kazushi (JPN) (19	time		11.11		21.54		33.04	33.04	3 / 3					
reaction time	interval				10.43		11.50	PB	# of strides	11.11	10.43	11.50	21.54	*21.93*
	velocity		9.00		9.59		8.70	9.08	140.0	9.00	9.59	8.70	9.29	*9.12*
Kimura, Jun (JPN) (1991)	time		11.02		21.50		33.05	33.05	5 / 4					
reaction time	interval				10.48		11.55	PB	# of strides	11.02	10.48	11.55	21.50	*22.03*
	velocity		9.07		9.54		8.66	9.08	134.5	9.07	9.54	8.66	9.30	*9.08*
Takahashi, Yumi (JPN) (199	time		11.23		22.00		33.85	33.85	7 / 5					
reaction time	interval				10.77		11.85	PB	# of strides	11.23	10.77	11.85	22.00	*22.62*
	velocity		8.90		9.29		8.44	8.86	137.2	8.90	9.29	8.44	9.09	*8.84*
Hata, Keiichiro (JPN) (1995	time		11.14		21.91		33.92	33.92	2 / 6					
reaction time	interval				10.77		12.01	PB	# of strides	11.14	10.77	12.01	21.91	*22.78*
	velocity		8.98		9.29		8.33	8.84	126.0	8.98	9.29	8.33	9.13	*8.78*
Konishi, Yuta (JPN) (1990)	time		11.64		22.52		33.95	33.95	9 / 7					
reaction time	interval				10.88		11.43	PB	# of strides	11.64	10.88	11.43	22.52	*22.31*
	velocity		8.59		9.19		8.75	8.84	131.0	8.59	9.19	8.75	8.88	*8.96*
Kirihara, Yuuto (JPN)	time		11.83		22.81		34.44	34.44	1 / 8					
reaction time	interval				10.98		11.63		# of strides	11.83	10.98	11.63	22.81	*22.61*
	velocity		8.45		9.11		8.60	8.71	147.7	8.45	9.11	8.60	8.77	*8.85*

2017 Osaka University Athletics Championships (Osaka, JPN)

FINAL date 06-Apr-17

(2017) - tfdata-store.com/2017/04/07/post-249/

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ryota, Seto (JPN) (1996)	time		11.75		22.79		34.60		47.44	47.44	4 / 1							
reaction time	interval				11.04		11.81		12.84	PB	# of strides	11.75	11.04	11.81	12.84	22.79	24.65	1.86
	velocity		8.51		9.06		8.47		7.79	8.43	179.2	8.51	9.06	8.47	7.79	8.78	8.11	

Kawauchi, Mitsuki (JPN) (1	time	11.68	22.36	34.35	47.56	47.56	8 / 2								
reaction time	interval		10.68	11.99	13.21		# of strides	11.68	10.68	11.99	13.21	22.36	25.20	2.84	
	velocity	8.56	9.36	8.34	7.57	8.41	188.0	8.56	9.36	8.34	7.57	8.94	7.94		
Sato, Hiroki (JPN) (1995)	time	11.71	22.67	34.55	47.82	47.82	7 / 3								
reaction time	interval		10.96	11.88	13.27		# of strides	11.71	10.96	11.88	13.27	22.67	25.15	2.48	
	velocity	8.54	9.12	8.42	7.54	8.36	188.2	8.54	9.12	8.42	7.54	8.82	7.95		
Takahashi, Yumitsu (JPN)	time	11.80	22.79	34.92	48.41	48.41	6 / 4								
reaction time	interval		10.99	12.13	13.49		# of strides	11.80	10.99	12.13	13.49	22.79	25.62	2.83	
	velocity	8.47	9.10	8.24	7.41	8.26	184.5	8.47	9.10	8.24	7.41	8.78	7.81		
Ikeda, Shoki (JPN) (1996)	time	11.90	23.27	35.50	48.52	48.52	5 / 5								
reaction time	interval		11.37	12.23	13.02		# of strides	11.90	11.37	12.23	13.02	23.27	25.25	1.98	
	velocity	8.40	8.80	8.18	7.68	8.24	184.5	8.40	8.80	8.18	7.68	8.59	7.92		
Fujita, Shinya (JPN) (1993)	time	11.81	23.18	35.00	48.57	48.57	3 / 6								
reaction time	interval		11.37	11.82	13.57		# of strides	11.81	11.37	11.82	13.57	23.18	25.39	2.21	
	velocity	8.47	8.80	8.46	7.37	8.24	193.0	8.47	8.80	8.46	7.37	8.63	7.88		
Sasaki, Hayata (JPN)	time	11.93	22.92	35.22	48.79	48.79	9 / 7								
reaction time	interval		10.99	12.30	13.57		# of strides	11.93	10.99	12.30	13.57	22.92	25.87	2.95	
	velocity	8.38	9.10	8.13	7.37	8.20		8.38	9.10	8.13	7.37	8.73	7.73		
Yu, Satomi (JPN)	time		23.02	35.47	49.30	49.30	2 / 8								
reaction time	interval			12.45	13.83		# of strides			12.45	13.83	23.02	26.28	3.26	
	velocity		8.69	8.03	7.23	8.11				8.03	7.23	8.69	7.61		

2016 Japanese National Junior Championships (Mizuho, JPN)

FINAL date 21-Oct-16

Yamamoto (2016) - race analysis of male & female 400m runners at major competitions in 2016

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Uike, Yuji (JPN) (1998)	time	6.56	11.93	17.32	22.83	28.54	34.39	40.39	46.59	46.59	3 / 1							
reaction time	interval		5.37	5.39	5.51	5.71	5.85	6.00	6.20	PB	# of strides	11.93	10.90	11.56	12.20	22.83	23.76	0.93
	velocity	7.62	9.31	9.28	9.07	8.76	8.55	8.33	8.06	8.59		8.38	9.17	8.65	8.20	8.76	8.42	
Matsubara, Shuichiro (JPN	time	6.62	12.12	17.58	23.14	28.84	34.77	40.90	47.41	47.41	2 / 2							
reaction time	interval		5.50	5.46	5.56	5.70	5.93	6.13	6.51		# of strides	12.12	11.02	11.63	12.64	23.14	24.27	1.13
	velocity	7.55	9.09	9.16	8.99	8.77	8.43	8.16	7.68	8.44		8.25	9.07	8.60	7.91	8.64	8.24	
Ito, Rikiya (JPN) (1998)	time	6.50	11.92	17.28	22.96	28.85	34.81	40.95	47.51	47.51	4 / 3							
reaction time	interval		5.42	5.36	5.68	5.89	5.96	6.14	6.56		# of strides	11.92	11.04	11.85	12.70	22.96	24.55	1.59
	velocity	7.69	9.23	9.33	8.80	8.49	8.39	8.14	7.62	8.42		8.39	9.06	8.44	7.87	8.71	8.15	
Naoe, Kohei (JPN) (1997)	time	6.49	11.89	17.43	23.12	28.92	34.79	41.00	47.63	47.63	7 / 4							
reaction time	interval		5.40	5.54	5.69	5.80	5.87	6.21	6.63		# of strides	11.89	11.23	11.67	12.84	23.12	24.51	1.39
	velocity	7.70	9.26	9.03	8.79	8.62	8.52	8.05	7.54	8.40		8.41	8.90	8.57	7.79	8.65	8.16	
Kokubo, Tomohiro (JPN) (	time	6.62	12.13	17.75	23.63	29.72	35.75	41.79	47.93	47.93	6 / 5							
reaction time	interval		5.51	5.62	5.88	6.09	6.03	6.04	6.14		# of strides	12.13	11.50	12.12	12.18	23.63	24.30	0.67
	velocity	7.55	9.07	8.90	8.50	8.21	8.29	8.28	8.14	8.35		8.24	8.70	8.25	8.21	8.46	8.23	
Wakabayashi, Kota (JPN) (	time	6.50	11.96	17.50	23.27	29.20	35.24	41.50	48.07	48.07	5 / 6							
reaction time	interval		5.46	5.54	5.77	5.93	6.04	6.26	6.57		# of strides	11.96	11.31	11.97	12.83	23.27	24.80	1.53
	velocity	7.69	9.16	9.03	8.67	8.43	8.28	7.99	7.61	8.32		8.36	8.84	8.35	7.79	8.59	8.06	
Sofue, Takumi (JPN) (1998)	time	6.69	12.28	18.02	23.93	29.86	35.80	41.88	48.25	48.25	8 / 7							
reaction time	interval		5.59	5.74	5.91	5.93	5.94	6.08	6.37		# of strides	12.28	11.65	11.87	12.45	23.93	24.32	0.39
	velocity	7.47	8.94	8.71	8.46	8.43	8.42	8.22	7.85	8.29		8.14	8.58	8.42	8.03	8.36	8.22	
Yoshitsu, Takao (JPN)	time	6.59	12.17	17.82	23.59	29.55	35.68	42.02	48.92	48.92	1 / 8							
reaction time	interval		5.58	5.65	5.77	5.96	6.13	6.34	6.90		# of strides	12.17	11.42	12.09	13.24	23.59	25.33	1.74
	velocity	7.59	8.96	8.85	8.67	8.39	8.16	7.89	7.25	8.18		8.22	8.76	8.27	7.55	8.48	7.90	

2016 Japanese National Youth Championships (Mizuho, JPN)

FINAL date 21-Oct-16

Yamamoto (2016) - race analysis of male & female 400m runners at major competitions in 2016

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Inoue, Daichi (JPN) (1999)	time	6.60	11.88	17.28	22.99	28.74	34.54	40.60	46.99	46.99	4 / 1							
reaction time	interval		5.28	5.40	5.71	5.75	5.80	6.06	6.39		# of strides	11.88	11.11	11.55	12.45	22.99	24.00	1.01
	velocity	7.58	9.47	9.26	8.76	8.70	8.62	8.25	7.82	8.51		8.42	9.00	8.66	8.03	8.70	8.33	
Yukihiro, Koki (JPN)	time	6.46	11.84	17.35	22.90	28.62	34.50	40.73	47.40	47.40	5 / 2							
reaction time	interval		5.38	5.51	5.55	5.72	5.88	6.23	6.67		# of strides	11.84	11.06	11.60	12.90	22.90	24.50	1.60
	velocity	7.74	9.29	9.07	9.01	8.74	8.50	8.03	7.50	8.44		8.45	9.04	8.62	7.75	8.73	8.16	
Hanada, Shion (JPN) (1999	time	6.34	11.59	16.95	22.69	28.59	34.64	40.98	47.76	47.76	3 / 3							
reaction time	interval		5.25	5.36	5.74	5.90	6.05	6.34	6.78	PB	# of strides	11.59	11.10	11.95	13.12	22.69	25.07	2.38
	velocity	7.89	9.52	9.33	8.71	8.47	8.26	7.89	7.37	8.38		8.63	9.01	8.37	7.62	8.81	7.98	
Asano, Kurodo (JPN) (199	time	6.43	11.80	17.18	22.93	28.91	34.99	41.26	47.76	47.76	6 / 4							
reaction time	interval		5.37	5.38	5.75	5.98	6.08	6.27	6.50	PB	# of strides	11.80	11.13	12.06	12.77	22.93	24.83	1.90
	velocity	7.78	9.31	9.29	8.70	8.36	8.22	7.97	7.69	8.38		8.47	8.98	8.29	7.83	8.72	8.05	
Sawada, Natsuki (JPN) (200	time	6.79	12.47	18.25	24.14	29.83	35.61	41.61	47.95	47.95	1 / 5							

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

reaction time	interval		5.68	5.78	5.89	5.69	5.78	6.00	6.34		# of strides	12.47	11.67	11.47	12.34	24.14	23.81	-0.33
	velocity	7.36	8.80	8.65	8.49	8.79	8.65	8.33	7.89	8.34		8.02	8.57	8.72	8.10	8.29	8.40	
Sakaguchi, Amagi (JPN) (1	time	6.59	11.94	17.42	23.03	28.86	34.95	41.31	48.14	48.14	7 / 6							
reaction time	interval		5.35	5.48	5.61	5.83	6.09	6.36	6.83		# of strides	11.94	11.09	11.92	13.19	23.03	25.11	2.08
	velocity	7.59	9.35	9.12	8.91	8.58	8.21	7.86	7.32	8.31		8.38	9.02	8.39	7.58	8.68	7.96	
Nozaki, Tsuyoshi (JPN)	time	6.59	12.00	17.52	23.25	29.18	35.38	41.84	48.59	48.59	8 / 7							
reaction time	interval		5.41	5.52	5.73	5.93	6.20	6.46	6.75		# of strides	12.00	11.25	12.13	13.21	23.25	25.34	2.09
	velocity	7.59	9.24	9.06	8.73	8.43	8.06	7.74	7.41	8.23		8.33	8.89	8.24	7.57	8.60	7.89	
Umikawa, Shigeru (JPN)	time	6.53	11.86	17.32	22.93	28.85	35.13	41.71	48.60	48.60	2 / 8							
reaction time	interval		5.33	5.46	5.61	5.92	6.28	6.58	6.89		# of strides	11.86	11.07	12.20	13.47	22.93	25.67	2.74
	velocity	7.66	9.38	9.16	8.91	8.45	7.96	7.60	7.26	8.23		8.43	9.03	8.20	7.42	8.72	7.79	

2016 National Sports Festival (Kitakami, JPN)

U19 FINAL

date 10-Oct-16

Yamamoto (2016) - race analysis of male & female 400m runners at major competitions in 2016

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Inoue, Daichi (JPN) (1999)	time	6.73	12.35	18.03	23.88	29.70	35.46	41.23	47.33	47.33	7 / 1							
reaction time 0.227	interval		5.62	5.68	5.85	5.82	5.76	5.77	6.10		# of strides	12.35	11.53	11.58	11.87	23.88	23.45	-0.43
	velocity	7.43	8.90	8.80	8.55	8.59	8.68	8.67	8.20	8.45		8.10	8.67	8.64	8.42	8.38	8.53	
Kitakani, Naoki (JPN) (1998	time	6.41	11.73	17.33	23.22	29.31	35.25	41.28	47.61	47.61	4 / 2							
reaction time 0.205	interval		5.32	5.60	5.89	6.09	5.94	6.03	6.33		# of strides	11.73	11.49	12.03	12.36	23.22	24.39	1.17
	velocity	7.80	9.40	8.93	8.49	8.21	8.42	8.29	7.90	8.40		8.53	8.70	8.31	8.09	8.61	8.20	
Uike, Yuji (JPN) (1998)	time	6.63	12.23	17.92	23.66	29.49	35.38	41.32	47.64	47.64	6 / 3							
reaction time 0.212	interval		5.60	5.69	5.74	5.83	5.89	5.94	6.32		# of strides	12.23	11.43	11.72	12.26	23.66	23.98	0.32
	velocity	7.54	8.93	8.79	8.71	8.58	8.49	8.42	7.91	8.40		8.18	8.75	8.53	8.16	8.45	8.34	
Kokubo, Tomohiro (JPN) (	time	6.58	12.00	17.63	23.35	29.21	35.13	41.25	47.91	47.91	5 / 4							
reaction time 0.194	interval		5.42	5.63	5.72	5.86	5.92	6.12	6.66		# of strides	12.00	11.35	11.78	12.78	23.35	24.56	1.21
	velocity	7.60	9.23	8.88	8.74	8.53	8.45	8.17	7.51	8.35		8.33	8.81	8.49	7.82	8.57	8.14	
Ito, Rikiya (JPN) (1998)	time	6.71	12.15	17.67	23.42	29.35	35.36	41.51	48.08	48.08	2 / 5							
reaction time 0.191	interval		5.44	5.52	5.75	5.93	6.01	6.15	6.57		# of strides	12.15	11.27	11.94	12.72	23.42	24.66	1.24
	velocity	7.45	9.19	9.06	8.70	8.43	8.32	8.13	7.61	8.32		8.23	8.87	8.38	7.86	8.54	8.11	
Ibuka, Aisei (JPN) (1998)	time	6.54	12.19	17.92	23.80	29.90	36.05	42.20	48.52	48.52	8 / 6							
reaction time 0.182	interval		5.65	5.73	5.88	6.10	6.15	6.15	6.32		# of strides	12.19	11.61	12.25	12.47	23.80	24.72	0.92
	velocity	7.65	8.85	8.73	8.50	8.20	8.13	8.13	7.91	8.24		8.20	8.61	8.16	8.02	8.40	8.09	
Nakatsukue, Haruhiko (JPN	time	6.54	11.92	17.50	23.39	29.44	35.64	42.01	48.62	48.62	3 / 7							
reaction time 0.208	interval		5.38	5.58	5.89	6.05	6.20	6.37	6.61		# of strides	11.92	11.47	12.25	12.98	23.39	25.23	1.84
	velocity	7.65	9.29	8.96	8.49	8.26	8.06	7.85	7.56	8.23		8.39	8.72	8.16	7.70	8.55	7.93	
Matsuo, Ruhei (JPN)	time	6.63	12.26	18.00	23.92	30.16	36.52	42.76	49.21	49.21	9 / 8							
reaction time 0.172	interval		5.63	5.74	5.92	6.24	6.36	6.24	6.45		# of strides	12.26	11.66	12.60	12.69	23.92	25.29	1.37
	velocity	7.54	8.88	8.71	8.45	8.01	7.86	8.01	7.75	8.13		8.16	8.58	7.94	7.88	8.36	7.91	

FINAL

date 09-Oct-16

Yamamoto (2016) - race analysis of male & female 400m runners at major competitions in 2016

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kitagawa, Takamasa (JPN)	time	6.47	11.79	17.23	22.90	28.76	34.68	40.77	47.22	47.22	7 / 1							
reaction time 0.191	interval		5.32	5.44	5.67	5.86	5.92	6.09	6.45		# of strides	11.79	11.11	11.78	12.54	22.90	24.32	1.42
	velocity	7.73	9.40	9.19	8.82	8.53	8.45	8.21	7.75	8.47		8.48	9.00	8.49	7.97	8.73	8.22	
Kato, Nobuya (JPN) (1995)	time	6.63	12.01	17.43	23.18	29.16	35.08	41.03	47.30	47.30	9 / 2							
reaction time 0.189	interval		5.38	5.42	5.75	5.98	5.92	5.95	6.27		# of strides	12.01	11.17	11.90	12.22	23.18	24.12	0.94
	velocity	7.54	9.29	9.23	8.70	8.36	8.45	8.40	7.97	8.46		8.33	8.95	8.40	8.18	8.63	8.29	
Horii, Kosuke (JPN) (1994)	time	6.37	11.71	17.23	23.12	29.17	35.09	41.11	47.48	47.48	8 / 3							
reaction time 0.161	interval		5.34	5.52	5.89	6.05	5.92	6.02	6.37		# of strides	11.71	11.41	11.97	12.39	23.12	24.36	1.24
	velocity	7.85	9.36	9.06	8.49	8.26	8.45	8.31	7.85	8.42		8.54	8.76	8.35	8.07	8.65	8.21	
Kobayashi, Naoki (JPN) (19	time	6.39	11.58	16.98	22.63	28.35	34.32	40.61	47.51	47.51	3 / 4							
reaction time 0.212	interval		5.19	5.40	5.65	5.72	5.97	6.29	6.90		# of strides	11.58	11.05	11.69	13.19	22.63	24.88	2.25
	velocity	7.82	9.63	9.26	8.85	8.74	8.38	7.95	7.25	8.42		8.64	9.05	8.55	7.58	8.84	8.04	
Kimura, Kazushi (JPN) (19	time	6.45	11.83	17.35	23.02	28.85	34.86	41.06	47.64	47.64	4 / 5							
reaction time 0.231	interval		5.38	5.52	5.67	5.83	6.01	6.20	6.58		# of strides	11.83	11.19	11.84	12.78	23.02	24.62	1.60
	velocity	7.75	9.29	9.06	8.82	8.58	8.32	8.06	7.60	8.40		8.45	8.94	8.45	7.82	8.69	8.12	
Suzaki, Mitushiro (JPN) (19	time	6.63	11.99	17.45	23.16	29.02	35.06	41.22	47.65	47.65	5 / 6							
reaction time 0.216	interval		5.36	5.46	5.71	5.86	6.04	6.16	6.43		# of strides	11.99	11.17	11.90	12.59	23.16	24.49	1.33
	velocity	7.54	9.33	9.16	8.76	8.53	8.28	8.12	7.78	8.39		8.34	8.95	8.40	7.94	8.64	8.17	
Sato, Fuga (JPN) (1996)	time	6.62	12.16	17.83	23.67	29.38	35.20	41.25	47.72	47.72	6 / 7							
reaction time 0.226	interval		5.54	5.67	5.84	5.71	5.82	6.05	6.47		# of strides	12.16	11.51	11.53	12.52	23.67	24.05	0.38
	velocity	7.55	9.03	8.82	8.56	8.76	8.59	8.26	7.73	8.38		8.22	8.69	8.67	7.99	8.45	8.32	
Yamaki, Kakeru (JPN) (1996	time	6.52	11.76	17.30	23.08	29.06	35.10	41.27	47.80	47.80	2 / 8							
reaction time 0.173	interval		5.24	5.54	5.78	5.98	6.04	6.17	6.53		# of strides	11.76	11.32	12.02	12.70	23.08	24.72	1.64
	velocity	7.67	9.54	9.03	8.65	8.36	8.28	8.10	7.66	8.37		8.50	8.83	8.32	7.87	8.67	8.09	

2016 Olympic Games (Rio de Janeiro, BRA)

FINAL

date 14-Aug-16

Yamamoto (2016) - race analysis of male & female 400m runners at major competitions in 2016

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
van Niekerk, Wayde (RSA)	time	6.01	10.77	15.63	20.58	25.71	31.06	36.77	43.03	43.03	8 / 1							
reaction time 0.181	interval		4.76	4.86	4.95	5.13	5.35	5.71	6.26	WR	# of strides	10.77	9.81	10.48	11.97	20.58	22.45	1.87
	velocity	8.32	10.50	10.29	10.10	9.75	9.35	8.76	7.99	9.30	163.0	9.29	10.19	9.54	8.35	9.72	8.91	
James, Kirani (GRN) (1992)	time	6.03	10.78	15.58	20.61	25.79	31.27	37.20	43.76	43.76	6 / 2							
reaction time 0.134	interval		4.75	4.80	5.03	5.18	5.48	5.93	6.56		# of strides	10.78	9.83	10.66	12.49	20.61	23.15	2.54
	velocity	8.29	10.53	10.42	9.94	9.65	9.12	8.43	7.62	9.14	162.8	9.28	10.17	9.38	8.01	9.70	8.64	
Merritt, LaShawn (USA) (19	time	6.11	10.82	15.57	20.47	25.69	31.23	37.18	43.85	43.85	5 / 3							
reaction time 0.204	interval		4.71	4.75	4.90	5.22	5.54	5.95	6.67		# of strides	10.82	9.65	10.76	12.62	20.47	23.38	2.91
	velocity	8.18	10.62	10.53	10.20	9.58	9.03	8.40	7.50	9.12	171.9	9.24	10.36	9.29	7.92	9.77	8.55	
Cedenio, Machel (TTO) (19	time	6.08	10.87	15.80	20.86	26.18	31.88	37.70	44.01	44.01	3 / 4							
reaction time 0.203	interval		4.79	4.93	5.06	5.32	5.70	5.82	6.31	NR	# of strides	10.87	9.99	11.02	12.13	20.86	23.15	2.29
	velocity	8.22	10.44	10.14	9.88	9.40	8.77	8.59	7.92	9.09	161.5	9.20	10.01	9.07	8.24	9.59	8.64	
Sibanda, Karabo (BOT) (19	time	6.25	11.22	16.35	21.67	27.11	32.62	38.25	44.25	44.25	1 / 5							
reaction time 0.164	interval		4.97	5.13	5.32	5.44	5.51	5.63	6.00	PB	# of strides	11.22	10.45	10.95	11.63	21.67	22.58	0.91
	velocity	8.00	10.06	9.75	9.40	9.19	9.07	8.88	8.33	9.04	165.2	8.91	9.57	9.13	8.60	9.23	8.86	
Abbas, Ali Khamis (BRN) (	time	6.17	11.05	16.08	21.29	26.62	32.15	38.02	44.36	44.36	2 / 6							
reaction time 0.148	interval		4.88	5.03	5.21	5.33	5.53	5.87	6.34	NR	# of strides	11.05	10.24	10.86	12.21	21.29	23.07	1.78
	velocity	8.10	10.25	9.94	9.60	9.38	9.04	8.52	7.89	9.02	169.5	9.05	9.77	9.21	8.19	9.39	8.67	
Taplin, Bralon (GRN) (1992	time	6.16	11.08	16.07	21.15	26.44	31.99	37.87	44.45	44.45	4 / 7							
reaction time 0.181	interval		4.92	4.99	5.08	5.29	5.55	5.88	6.58		# of strides	11.08	10.07	10.84	12.46	21.15	23.30	2.15
	velocity	8.12	10.16	10.02	9.84	9.45	9.01	8.50	7.60	9.00	181.0	9.03	9.93	9.23	8.03	9.46	8.58	
Hudson-Smith, Matthew (C	time	6.20	11.19	16.25	21.53	26.98	32.50	38.28	44.61	44.61	7 / 8							
reaction time 0.138	interval		4.99	5.06	5.28	5.45	5.52	5.78	6.33		# of strides	11.19	10.34	10.97	12.11	21.53	23.08	1.55
	velocity	8.06	10.02	9.88	9.47	9.17	9.06	8.65	7.90	8.97	159.0	8.94	9.67	9.12	8.26	9.29	8.67	

Škraba (2016) - 45.07 - 400m analysis of Luka Janežič

Semi-Final 2

date 13-Aug-16

(2016.08.15) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
van Niekerk, Wayde (RSA)	time		10.88		21.09		32.36		44.45	44.45	3 / 2							*(2016.08.15)*
reaction time 0.156	interval				10.21		11.27		12.09		# of strides	10.88	10.21	11.27	12.09	21.09	23.36	2.27
	velocity		9.19		9.79		8.87		8.27	9.00		9.19	9.79	8.87	8.27	9.48	8.56	
Janežič, Luka (SLO) (1995)	time		11.3		21.5		32.8		45.07	45.07	/ 4							*Škraba (2016)*
reaction time 0.154	interval				10.20		11.30		12.27	NR	# of strides	11.30	10.20	11.30	12.27	21.50	23.57	2.07
	velocity		8.85		9.80		8.85		8.15	8.88	166.0	8.85	9.80	8.85	8.15	9.30	8.49	

Semi-Final 1

date 13-Aug-16

(2016.08.15) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
James, Kirani (GRN) (1992)	time		10.85		21.02		31.97		44.02	44.02	4 / 1							
reaction time 0.144	interval				10.17		10.95		12.05		# of strides	10.85	10.17	10.95	12.05	21.02	23.00	1.98
	velocity		9.22		9.83		9.13		8.30	9.09		9.22	9.83	9.13	8.30	9.51	8.70	
Merritt, LaShawn (USA) (19	time		11.18		21.42		32.28		44.21	44.21	6 / 2							
reaction time 0.271	interval				10.24		10.86		11.93		# of strides	11.18	10.24	10.86	11.93	21.42	22.79	1.37
	velocity		8.94		9.77		9.21		8.38	9.05		8.94	9.77	9.21	8.38	9.34	8.78	

Heat 7

date 12-Aug-16

Yamamoto (2016) - race analysis of male & female 400m runners at major competitions in 2016

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kanemaru, Yuzo (JPN) (19	time		11.34		22.22		34.73		48.38	48.38	8 / 1							
reaction time 0.144	interval				10.88		12.51		13.65		# of strides	11.34	10.88	12.51	13.65	22.22	26.16	3.94
	velocity		8.82		9.19		7.99		7.33	8.27		8.82	9.19	7.99	7.33	9.00	7.65	

Heat 4

date 12-Aug-16

Yamamoto (2016) - race analysis of male & female 400m runners at major competitions in 2016

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Walsh, Julian Jrummi (JPN	time		11.14		21.76		33.32		46.37	46.37	8 / 1							
reaction time 0.149	interval				10.62		11.56		13.05		# of strides	11.14	10.62	11.56	13.05	21.76	24.61	2.85
	velocity		8.98		9.42		8.65		7.66	8.63		8.98	9.42	8.65	7.66	9.19	8.13	

Heat 3

date 12-Aug-16

(2016.08.15) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
van Niekerk, Wayde (RSA)	time		11.04		22.02		33.04		45.26	45.26	7 / 1							
reaction time 0.147	interval				10.98		11.02		12.22		# of strides	11.04	10.98	11.02	12.22	22.02	23.24	1.22
	velocity		9.06		9.11		9.07		8.18	8.84		9.06	9.11	9.07	8.18	9.08	8.61	

2016 Japanese National High School Championships (Okayama, JPN)

FINAL

date 29-Jul-16

Yamamoto (2016) - race analysis of male & female 400m runners at major competitions in 2016

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kokubo, Tomohiro (JPN) (	time	6.53	11.97	17.40	23.02	28.79	34.61	40.51	46.67	46.67	5 / 1							
reaction time 0.160	interval		5.44	5.43	5.62	5.77	5.82	5.90	6.16	PB	# of strides	11.97	11.05	11.59	12.06	23.02	23.65	0.63
	velocity	7.66	9.19	9.21	8.90	8.67	8.59	8.47	8.12	8.57		8.35	9.05	8.63	8.29	8.69	8.46	
Inoue, Daichi (JPN) (1999)	time	6.54	11.88	17.30	22.88	28.51	34.36	40.43	46.91	46.91	6 / 2							

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

reaction time 0.217	interval		5.34	5.42	5.58	5.63	5.85	6.07	6.48	PB	# of strides	11.88	11.00	11.48	12.55	22.88	24.03	1.15
	velocity	7.65	9.36	9.23	8.96	8.88	8.55	8.24	7.72	8.53		8.42	9.09	8.71	7.97	8.74	8.32	
Uike, Yuji (JPN) (1998)	time	6.49	11.91	17.38	23.04	28.86	34.75	40.74	47.03	47.03	4 / 3							
reaction time 0.150	interval		5.42	5.47	5.66	5.82	5.89	5.99	6.29	PB	# of strides	11.91	11.13	11.71	12.28	23.04	23.99	0.95
	velocity	7.70	9.23	9.14	8.83	8.59	8.49	8.35	7.95	8.51		8.40	8.98	8.54	8.14	8.68	8.34	
Kitakani, Naoki (JPN) (1998	time	6.45	11.64	17.00	22.62	28.50	34.63	40.86	47.41	47.41	3 / 4							
reaction time 0.166	interval		5.19	5.36	5.62	5.88	6.13	6.23	6.55		# of strides	11.64	10.98	12.01	12.78	22.62	24.79	2.17
	velocity	7.75	9.63	9.33	8.90	8.50	8.16	8.03	7.63	8.44		8.59	9.11	8.33	7.82	8.84	8.07	
Nakatsukue, Haruhiko (JPN	time	6.45	11.67	17.07	22.68	28.58	34.74	40.98	47.54	47.54	2 / 5							
reaction time 0.171	interval		5.22	5.40	5.61	5.90	6.16	6.24	6.56		# of strides	11.67	11.01	12.06	12.80	22.68	24.86	2.18
	velocity	7.75	9.58	9.26	8.91	8.47	8.12	8.01	7.62	8.41		8.57	9.08	8.29	7.81	8.82	8.05	
Ito, Rikiya (JPN) (1998)	time	6.42	11.78	17.25	22.98	29.01	35.20	41.41	47.75	47.75	8 / 6							
reaction time 0.144	interval		5.36	5.47	5.73	6.03	6.19	6.21	6.34		# of strides	11.78	11.20	12.22	12.55	22.98	24.77	1.79
	velocity	7.79	9.33	9.14	8.73	8.29	8.08	8.05	7.89	8.38		8.49	8.93	8.18	7.97	8.70	8.07	
Ibuka, Aisei (JPN) (1998)	time	6.32	11.62	17.07	22.81	28.83	35.12	41.40	47.80	47.80	7 / 7							
reaction time 0.173	interval		5.30	5.45	5.74	6.02	6.29	6.28	6.40		# of strides	11.62	11.19	12.31	12.68	22.81	24.99	2.18
	velocity	7.91	9.43	9.17	8.71	8.31	7.95	7.96	7.81	8.37		8.61	8.94	8.12	7.89	8.77	8.00	
Yukihiro, Koki (JPN)	time	6.62	12.15	17.85	23.70	29.75	35.90	42.01	48.46	48.46	9 / 8							
reaction time 0.162	interval		5.53	5.70	5.85	6.05	6.15	6.11	6.45		# of strides	12.15	11.55	12.20	12.56	23.70	24.76	1.06
	velocity	7.55	9.04	8.77	8.55	8.26	8.13	8.18	7.75	8.25		8.23	8.66	8.20	7.96	8.44	8.08	

2016 IAAF World Junior Championships (Bydgoszcz, POL)

FINAL

date 22-Jul-16

Yamamoto (2016) - race analysis of male & female 400m runners at major competitions in 2016

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Haroun, Abdalelah (QAT) (	time	6.22	11.06	16.05	21.25	26.68	32.38	38.36	44.81	44.81	6 / 1							
reaction time 0.202	interval		4.84	4.99	5.20	5.43	5.70	5.98	6.45		# of strides	11.06	10.19	11.13	12.43	21.25	23.56	2.31
	velocity	8.04	10.33	10.02	9.62	9.21	8.77	8.36	7.75	8.93		9.04	9.81	8.98	8.05	9.41	8.49	
London, Wil (USA) (1997)	time	6.18	11.30	16.60	22.04	27.59	33.13	39.02	45.27	45.27	7 / 2							
reaction time 0.143	interval		5.12	5.30	5.44	5.55	5.54	5.89	6.25	PB	# of strides	11.30	10.74	11.09	12.14	22.04	23.23	1.19
	velocity	8.09	9.77	9.43	9.19	9.01	9.03	8.49	8.00	8.84		8.85	9.31	9.02	8.24	9.07	8.61	
Sibanda, Karabo (BOT) (19	time	6.08	10.92	15.88	21.08	26.50	32.38	38.60	45.45	45.45	5 / 3							
reaction time 0.149	interval		4.84	4.96	5.20	5.42	5.88	6.22	6.85		# of strides	10.92	10.16	11.30	13.07	21.08	24.37	3.29
	velocity	8.22	10.33	10.08	9.62	9.23	8.50	8.04	7.30	8.80		9.16	9.84	8.85	7.65	9.49	8.21	
Kiprotich, Geoffrey (KEN) (	time	6.42	11.45	16.55	21.76	27.21	33.02	39.07	45.64	45.64	4 / 4							
reaction time 0.192	interval		5.03	5.10	5.21	5.45	5.81	6.05	6.57		# of strides	11.45	10.31	11.26	12.62	21.76	23.88	2.12
	velocity	7.79	9.94	9.80	9.60	9.17	8.61	8.26	7.61	8.76		8.73	9.70	8.88	7.92	9.19	8.38	
Montgomery, Kahmari (US	time	6.24	11.49	16.82	22.28	27.88	33.62	39.71	46.48	46.48	8 / 5							
reaction time 0.203	interval		5.25	5.33	5.46	5.60	5.74	6.09	6.77		# of strides	11.49	10.79	11.34	12.86	22.28	24.20	1.92
	velocity	8.01	9.52	9.38	9.16	8.93	8.71	8.21	7.39	8.61		8.70	9.27	8.82	7.78	8.98	8.26	
Zambrano, Anthony (COL)	time	6.15	11.33	16.72	22.41	28.14	34.05	40.09	46.50	46.50	2 / 6							
reaction time 0.185	interval		5.18	5.39	5.69	5.73	5.91	6.04	6.41		# of strides	11.33	11.08	11.64	12.45	22.41	24.09	1.68
	velocity	8.13	9.65	9.28	8.79	8.73	8.46	8.28	7.80	8.60		8.83	9.03	8.59	8.03	8.92	8.30	
Matsukiyo, Kazuki (JPN) (1	time	6.49	11.72	17.15	22.66	28.34	34.16	40.19	46.69	46.69	9 / 7							
reaction time 0.196	interval		5.23	5.43	5.51	5.68	5.82	6.03	6.50	=PB	# of strides	11.72	10.94	11.50	12.53	22.66	24.03	1.37
	velocity	7.70	9.56	9.21	9.07	8.80	8.59	8.29	7.69	8.57		8.53	9.14	8.70	7.98	8.83	8.32	
Kitakani, Naoki (JPN) (1998	time	6.29	11.47	16.78	22.31	28.15	34.23	40.43	47.15	47.15	3 / 8							
reaction time 0.143	interval		5.18	5.31	5.53	5.84	6.08	6.20	6.72		# of strides	11.47	10.84	11.92	12.92	22.31	24.84	2.53
	velocity	7.95	9.65	9.42	9.04	8.56	8.22	8.06	7.44	8.48		8.72	9.23	8.39	7.74	8.96	8.05	

Semi-Final 2

date 21-Jul-16

Yamamoto (2016) - race analysis of male & female 400m runners at major competitions in 2016

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Matsukiyo, Kazuki (JPN) (1	time	6.36	11.56	17.00	22.58	28.27	34.06	40.11	46.69	46.69	5 / 2							
reaction time 0.139	interval		5.20	5.44	5.58	5.69	5.79	6.05	6.58	PB	# of strides	11.56	11.02	11.48	12.63	22.58	24.11	1.53
	velocity	7.86	9.62	9.19	8.96	8.79	8.64	8.26	7.60	8.57		8.65	9.07	8.71	7.92	8.86	8.30	

Semi-Final 1

date 21-Jul-16

Yamamoto (2016) - race analysis of male & female 400m runners at major competitions in 2016

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kitakani, Naoki (JPN) (1998	time	6.36	11.39	16.51	21.96	27.76	33.62	39.82	46.41	46.41	8 / 4							
reaction time 0.162	interval		5.03	5.12	5.45	5.80	5.86	6.20	6.59	PB	# of strides	11.39	10.57	11.66	12.79	21.96	24.45	2.49
	velocity	7.86	9.94	9.77	9.17	8.62	8.53	8.06	7.59	8.62		8.78	9.46	8.58	7.82	9.11	8.18	

Heat 3

date 20-Jul-16

Yamamoto (2016) - race analysis of male & female 400m runners at major competitions in 2016

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kitakani, Naoki (JPN) (1998	time	6.47	11.68	17.01	22.52	28.36	34.37	40.63	47.32	47.32	7 / 3							
reaction time 0.212	interval		5.21	5.33	5.51	5.84	6.01	6.26	6.69		# of strides	11.68	10.84	11.85	12.95	22.52	24.80	2.28
	velocity	7.73	9.60	9.38	9.07	8.56	8.32	7.99	7.47	8.45		8.56	9.23	8.44	7.72	8.88	8.06	

Heat 2

date 20-Jul-16

Yamamoto (2016) - race analysis of male & female 400m runners at major competitions in 2016

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Matsukiyo, Kazuki (JPN) (1	time	6.47	11.72	17.22	22.82	28.67	34.53	40.45	46.78	46.78	6 / 3							

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

reaction time 0.205	interval		5.25	5.50	5.60	5.85	5.86	5.92	6.33		# of strides	11.72	11.10	11.71	12.25	22.82	23.96	1.14
	velocity	7.73	9.52	9.09	8.93	8.55	8.53	8.45	7.90	8.55		8.53	9.01	8.54	8.16	8.76	8.35	

2016 USA Olympic Trials (Eugene, OR)

FINAL

date 03-Jul-16

Track Newsletter (2016) - US olympic trials men

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Merritt, LaShawn (USA) (1	time		10.9		21.2		32.1		44.0	43.97	5 / 1							
reaction time 0.210	interval				10.30		10.90		11.90		# of strides	10.90	10.30	10.90	11.90	21.20	22.80	1.60
	velocity		9.17		9.71		9.17		8.40	9.10		9.17	9.71	9.17	8.40	9.43	8.77	
Roberts, Gil (USA) (1989)	time		10.7		21.0		32.1		44.7	44.73	6 / 2							
reaction time 0.171	interval				10.30		11.10		12.60		# of strides	10.70	10.30	11.10	12.60	21.00	23.70	2.70
	velocity		9.35		9.71		9.01		7.94	8.94		9.35	9.71	9.01	7.94	9.52	8.44	
Verburg, David (USA) (199	time		11.1		21.6		32.6		44.8	44.82	4 / 3							
reaction time 0.203	interval				10.50		11.00		12.20		# of strides	11.10	10.50	11.00	12.20	21.60	23.20	1.60
	velocity		9.01		9.52		9.09		8.20	8.92		9.01	9.52	9.09	8.20	9.26	8.62	
Hall, Arman (USA) (1994)	time		11.2		22.0		33.0		45.0	45.09	3 / 4							
reaction time 0.174	interval				10.80		11.00		12.00		# of strides	11.20	10.80	11.00	12.00	22.00	23.00	1.00
	velocity		8.93		9.26		9.09		8.33	8.87		8.93	9.26	9.09	8.33	9.09	8.70	
McQuay, Tony (USA) (1990	time		11.1		21.6		32.6		45.3	45.30	7 / 5							
reaction time 0.203	interval				10.50		11.00		12.70		# of strides	11.10	10.50	11.00	12.70	21.60	23.70	2.10
	velocity		9.01		9.52		9.09		7.87	8.83		9.01	9.52	9.09	7.87	9.26	8.44	
Clemons, Kyle (USA) (1990	time		11.0		21.9		33.0		45.4	45.39	2 / 6							
reaction time 0.206	interval				10.90		11.10		12.40		# of strides	11.00	10.90	11.10	12.40	21.90	23.50	1.60
	velocity		9.09		9.17		9.01		8.06	8.81		9.09	9.17	9.01	8.06	9.13	8.51	
Glass, Najee (USA) (1994)	time		11.3		21.9		32.8		45.5	45.48	8 / 7							
reaction time 0.190	interval				10.60		10.90		12.70		# of strides	11.30	10.60	10.90	12.70	21.90	23.60	1.70
	velocity		8.85		9.43		9.17		7.87	8.80		8.85	9.43	9.17	7.87	9.13	8.47	
Berry, Mike (USA) (1991)	time		11.3		22.1		33.4		45.9	45.90	1 / 8							
reaction time 0.249	interval				10.80		11.30		12.50		# of strides	11.30	10.80	11.30	12.50	22.10	23.80	1.70
	velocity		8.85		9.26		8.85		8.00	8.71		8.85	9.26	8.85	8.00	9.05	8.40	

2016 Japanese National Championships (Nagoya, JPN)

FINAL

date 25-Jun-16

Yamamoto (2016) - race analysis of male & female 400m runners at major competitions in 2016

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Walsh, Julian Jrummi (JPN	time	6.01	10.97	16.07	21.44	27.02	32.84	38.92	45.35	45.35	5 / 1							
reaction time 0.170	interval		4.96	5.10	5.37	5.58	5.82	6.08	6.43	PB	# of strides	10.97	10.47	11.40	12.51	21.44	23.91	2.47
	velocity	8.32	10.08	9.80	9.31	8.96	8.59	8.22	7.78	8.82		9.12	9.55	8.77	7.99	9.33	8.36	
Kato, Nobuya (JPN) (1995)	time	6.34	11.44	16.63	22.08	27.74	33.51	39.40	45.71	45.71	4 / 2							
reaction time 0.170	interval		5.10	5.19	5.45	5.66	5.77	5.89	6.31	PB	# of strides	11.44	10.64	11.43	12.20	22.08	23.63	1.55
	velocity	7.89	9.80	9.63	9.17	8.83	8.67	8.49	7.92	8.75		8.74	9.40	8.75	8.20	9.06	8.46	
Kitagawa, Takamasa (JPN)	time	6.30	11.46	16.80	22.37	28.09	33.84	39.78	45.93	45.93	6 / 3							
reaction time 0.181	interval		5.16	5.34	5.57	5.72	5.75	5.94	6.15		# of strides	11.46	10.91	11.47	12.09	22.37	23.56	1.19
	velocity	7.94	9.69	9.36	8.98	8.74	8.70	8.42	8.13	8.71		8.73	9.17	8.72	8.27	8.94	8.49	
Tamura, Tomoya (JPN) (19	time	6.23	11.29	16.45	21.75	27.30	33.16	39.29	46.15	46.15	2 / 4							
reaction time 0.195	interval		5.06	5.16	5.30	5.55	5.86	6.13	6.86		# of strides	11.29	10.46	11.41	12.99	21.75	24.40	2.65
	velocity	8.03	9.88	9.69	9.43	9.01	8.53	8.16	7.29	8.67		8.86	9.56	8.76	7.70	9.20	8.20	
Sato, Kentaro (JPN) (1994)	time	6.24	11.27	16.42	21.79	27.47	33.40	39.64	46.30	46.30	8 / 5							
reaction time 0.158	interval		5.03	5.15	5.37	5.68	5.93	6.24	6.66		# of strides	11.27	10.52	11.61	12.90	21.79	24.51	2.72
	velocity	8.01	9.94	9.71	9.31	8.80	8.43	8.01	7.51	8.64		8.87	9.51	8.61	7.75	9.18	8.16	
Fujiwara, Takeshi (JPN) (19	time	6.41	11.53	16.78	22.21	27.72	33.58	39.79	46.41	46.41	3 / 6							
reaction time 0.208	interval		5.12	5.25	5.43	5.51	5.86	6.21	6.62		# of strides	11.53	10.68	11.37	12.83	22.21	24.20	1.99
	velocity	7.80	9.77	9.52	9.21	9.07	8.53	8.05	7.55	8.62		8.67	9.36	8.80	7.79	9.00	8.26	
Horii, Kosuke (JPN) (1994)	time	6.25	11.43	16.75	22.25	27.98	33.93	40.06	46.52	46.52	7 / 7							
reaction time 0.167	interval		5.18	5.32	5.50	5.73	5.95	6.13	6.46		# of strides	11.43	10.82	11.68	12.59	22.25	24.27	2.02
	velocity	8.00	9.65	9.40	9.09	8.73	8.40	8.16	7.74	8.60		8.75	9.24	8.56	7.94	8.99	8.24	
Hirose, Hideyuki (JPN) (198	time	6.34	11.53	16.78	22.20	27.87	33.79	39.98	46.64	46.64	1 / 8							
reaction time 0.176	interval		5.19	5.25	5.42	5.67	5.92	6.19	6.66		# of strides	11.53	10.67	11.59	12.85	22.20	24.44	2.24
	velocity	7.89	9.63	9.52	9.23	8.82	8.45	8.08	7.51	8.58		8.67	9.37	8.63	7.78	9.01	8.18	

Heat 2

date 24-Jun-16

Yamamoto (2016) - race analysis of male & female 400m runners at major competitions in 2016

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Watanabe, Kazuya (JPN) (1	time	6.24	11.44	16.65	22.13	27.83	33.87	40.34	47.38	47.38	3 / 4							
reaction time 0.170	interval		5.20	5.21	5.48	5.70	6.04	6.47	7.04		# of strides	11.44	10.69	11.74	13.51	22.13	25.25	3.12
	velocity	8.01	9.62	9.60	9.12	8.77	8.28	7.73	7.10	8.44		8.74	9.35	8.52	7.40	9.04	7.92	
Aikyo, Shotaro (JPN) (1994	time	6.27	11.37	16.70	22.25	28.02	34.13	40.71	47.85	47.85	8 / 5							
reaction time 0.196	interval		5.10	5.33	5.55	5.77	6.11	6.58	7.14		# of strides	11.37	10.88	11.88	13.72	22.25	25.60	3.35
	velocity	7.97	9.80	9.38	9.01	8.67	8.18	7.60	7.00	8.36		8.80	9.19	8.42	7.29	8.99	7.81	

Heat 1

date 24-Jun-16

Yamamoto (2016) - race analysis of male & female 400m runners at major competitions in 2016

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kobayashi, Naoki (JPN) (19	time	6.43	11.55	16.80	22.14	27.65	33.55	39.89	46.87	46.87	3 / 3							
reaction time 0.153	interval		5.12	5.25	5.34	5.51	5.90	6.34	6.98		# of strides	11.55	10.59	11.41	13.32	22.14	24.73	2.59
	velocity	7.78	9.77	9.52	9.36	9.07	8.47	7.89	7.16	8.53		8.66	9.44	8.76	7.51	9.03	8.09	
Yui, Kaisei (JPN) (1996)	time	6.35	11.48	16.73	22.25	27.95	33.97	40.41	47.47	47.47	5 / 4							
reaction time 0.172	interval		5.13	5.25	5.52	5.70	6.02	6.44	7.06		# of strides	11.48	10.77	11.72	13.50	22.25	25.22	2.97
	velocity	7.87	9.75	9.52	9.06	8.77	8.31	7.76	7.08	8.43		8.71	9.29	8.53	7.41	8.99	7.93	

2016 China Perfecture High School Championships (Okayama, JPN)

FINAL

date 17-Jun-16

(2016.06.20) - https://twitter.com/touchdown_time/media?lang=en&lang=en&lang=en&lang=en

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Fujimoto, Masaru (JPN)	time		12.16		23.20		34.95		48.04	48.04	9 / 1							
reaction time	interval				11.04		11.75		13.09		# of strides	12.16	11.04	11.75	13.09	23.20	24.84	1.64
	velocity		8.22		9.06		8.51		7.64	8.33		8.22	9.06	8.51	7.64	8.62	8.05	
Amano, Iori (JPN) (2000)	time		11.90		22.65		34.75		48.14	48.14	7 / 2							
reaction time	interval				10.75		12.10		13.39		# of strides	11.90	10.75	12.10	13.39	22.65	25.49	2.84
	velocity		8.40		9.30		8.26		7.47	8.31		8.40	9.30	8.26	7.47	8.83	7.85	
Sanada, Tadahi (JPN)	time		12.27		23.24		35.04		48.25	48.25	4 / 3							
reaction time	interval				10.97		11.80		13.21		# of strides	12.27	10.97	11.80	13.21	23.24	25.01	1.77
	velocity		8.15		9.12		8.47		7.57	8.29		8.15	9.12	8.47	7.57	8.61	8.00	
Horinouchi, Yorito (JPN)	time		12.23		23.37		35.19		48.52	48.52	5 / 4							
reaction time	interval				11.14		11.82		13.33		# of strides	12.23	11.14	11.82	13.33	23.37	25.15	1.78
	velocity		8.18		8.98		8.46		7.50	8.24		8.18	8.98	8.46	7.50	8.56	7.95	
Sumitani, Toshiaki (JPN)	time		11.74		22.85		34.93		48.54	48.54	8 / 5							
reaction time	interval				11.11		12.08		13.61		# of strides	11.74	11.11	12.08	13.61	22.85	25.69	2.84
	velocity		8.52		9.00		8.28		7.35	8.24		8.52	9.00	8.28	7.35	8.75	7.79	
Miki, Kondo (JPN)	time		12.35		23.60		35.51		48.64	48.64	6 / 6							
reaction time	interval				11.25		11.91		13.13		# of strides	12.35	11.25	11.91	13.13	23.60	25.04	1.44
	velocity		8.10		8.89		8.40		7.62	8.22		8.10	8.89	8.40	7.62	8.47	7.99	

2016 NCAA Championships (Eugene, OR)

FINAL

date 10-Jun-16

Track Newsletter (2016) - NCAA men's championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hall, Arman (USA) (1994)	time				21.8		32.8		44.8	44.82	5 / 1							
reaction time	interval						11.00		12.00	=PB	# of strides			11.00	12.00	21.80	23.00	1.20
	velocity				9.17		9.09		8.33	8.92				9.09	8.33	9.17	8.70	
Dunkley, Fitzroy (JAM) (19	time				21.7		32.9		45.1	45.06	2 / 2							
reaction time	interval						11.20		12.20	PB	# of strides			11.20	12.20	21.70	23.40	1.70
	velocity				9.22		8.93		8.20	8.88				8.93	8.20	9.22	8.55	
Cherry, Michael (USA) (199	time				21.6		32.8		45.1	45.11	6 / 3							
reaction time	interval						11.20		12.30	PB	# of strides			11.20	12.30	21.60	23.50	1.90
	velocity				9.26		8.93		8.13	8.87				8.93	8.13	9.26	8.51	
Chambers, Marcus (USA) (	time				21.7		33.0		45.3	45.27	/ 4							
reaction time	interval						11.30		12.30		# of strides			11.30	12.30	21.70	23.60	1.90
	velocity				9.22		8.85		8.13	8.84				8.85	8.13	9.22	8.47	
Glass, Najee (USA) (1994)	time				21.8		32.9		45.6	45.61	/ ~~5~~							
reaction time	interval						11.10		12.70	DQ	# of strides			11.10	12.70	21.80	23.80	2.00
	velocity				9.17		9.01		7.87	8.77				9.01	7.87	9.17	8.40	
Strother, Nathan (USA) (19	time				21.7		33.0		45.7	45.72	/ ~~6~~ 5							
reaction time	interval						11.30		12.70		# of strides			11.30	12.70	21.70	24.00	2.30
	velocity				9.22		8.85		7.87	8.75				8.85	7.87	9.22	8.33	
Fasasi, Kunle (NGR) (1996)	time				21.9		33.4		46.1	46.10	/ ~~7~~ 6							
reaction time	interval						11.50		12.70		# of strides			11.50	12.70	21.90	24.20	2.30
	velocity				9.13		8.70		7.87	8.68				8.70	7.87	9.13	8.26	
Morgan, Ricky (USA) (1996	time				21.6		33.4		46.6	46.63	/ ~~8~~ 7							
reaction time	interval						11.80		13.20		# of strides			11.80	13.20	21.60	25.00	3.40
	velocity				9.26		8.47		7.58	8.58				8.47	7.58	9.26	8.00	

2016 Seiko Golden Grand Prix (Kawaskai, JPN)

FINAL

date 08-May-16

Yamamoto (2016) - race analysis of male & female 400m runners at major competitions in 2016

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Walsh, Julian Jrummi (JPN	time	6.05	11.07	16.24	21.58	27.10	32.90	39.09	45.68	45.68	1 / 1							
reaction time 0.155	interval		5.02	5.17	5.34	5.52	5.80	6.19	6.59	PB	# of strides	11.07	10.51	11.32	12.78	21.58	24.10	2.52
	velocity	8.26	9.96	9.67	9.36	9.06	8.62	8.08	7.59	8.76	172.5	9.03	9.51	8.83	7.82	9.27	8.30	
Solomon, Jarrin (TTO) (198	time	6.29	11.34	16.52	21.91	27.48	33.21	39.30	45.77	45.77	7 / 2							
reaction time 0.192	interval		5.05	5.18	5.39	5.57	5.73	6.09	6.47		# of strides	11.34	10.57	11.30	12.56	21.91	23.86	1.95
	velocity	7.95	9.90	9.65	9.28	8.98	8.73	8.21	7.73	8.74	181.2	8.82	9.46	8.85	7.96	9.13	8.38	

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

Wariner, Jeremy (USA) (19	time	6.20	11.21	16.42	21.79	27.36	33.08	39.29	46.04	46.04	4 / 3							
reaction time 0.157	interval		5.01	5.21	5.37	5.57	5.72	6.21	6.75		# of strides	11.21	10.58	11.29	12.96	21.79	24.25	2.46
	velocity	8.06	9.98	9.60	9.31	8.98	8.74	8.05	7.41	8.69	175.0	8.92	9.45	8.86	7.72	9.18	8.25	
Quow, Rennie (TTO) (1987)	time	6.24	11.26	16.45	21.78	27.35	33.15	39.49	46.73	46.73	5 / 4							
reaction time 0.226	interval		5.02	5.19	5.33	5.57	5.80	6.34	7.24		# of strides	11.26	10.52	11.37	13.58	21.78	24.95	3.17
	velocity	8.01	9.96	9.63	9.38	8.98	8.62	7.89	6.91	8.56	189.7	8.88	9.51	8.80	7.36	9.18	8.02	
Sato, Kentaro (JPN) (1994)	time	6.31	11.35	16.52	21.92	27.54	33.49	39.86	46.75	46.75	2 / 5							
reaction time 0.151	interval		5.04	5.17	5.40	5.62	5.95	6.37	6.89		# of strides	11.35	10.57	11.57	13.26	21.92	24.83	2.91
	velocity	7.92	9.92	9.67	9.26	8.90	8.40	7.85	7.26	8.56	184	8.81	9.46	8.64	7.54	9.12	8.05	
Williams, Conrad (GBR) (1	time	6.30	11.41	16.63	22.00	27.55	33.40	39.79	46.78	46.78	6 / 6							
reaction time 0.174	interval		5.11	5.22	5.37	5.55	5.85	6.39	6.99		# of strides	11.41	10.59	11.40	13.38	22.00	24.78	2.78
	velocity	7.94	9.78	9.58	9.31	9.01	8.55	7.82	7.15	8.55	172.2	8.76	9.44	8.77	7.47	9.09	8.07	
Kitagawa, Takamasa (JPN)	time	6.40	11.52	16.83	22.33	28.02	33.95	40.24	46.82	46.82	3 / 7							
reaction time 0.177	interval		5.12	5.31	5.50	5.69	5.93	6.29	6.58		# of strides	11.52	10.81	11.62	12.87	22.33	24.49	2.16
	velocity	7.81	9.77	9.42	9.09	8.79	8.43	7.95	7.60	8.54	176.2	8.68	9.25	8.61	7.77	8.96	8.17	
Kimura, Kazushi (JPN) (19	time	6.32	11.50	16.83	22.47	28.28	34.21	40.52	47.39	47.39	8 / 8							
reaction time 0.185	interval		5.18	5.33	5.64	5.81	5.93	6.31	6.87		# of strides	11.50	10.97	11.74	13.18	22.47	24.92	2.45
	velocity	7.91	9.65	9.38	8.87	8.61	8.43	7.92	7.28	8.44	187.5	8.70	9.12	8.52	7.59	8.90	8.03	

2016 Shizuoka International Meeting (Fukuroi, JPN)

FINAL

date 03-May-16

Yamamoto (2016) - race analysis of male & female 400m runners at major competitions in 2016

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Walsh, Julian Jrummi (JPN	time	6.16	11.18	16.32	21.62	27.27	33.24	39.44	46.06	46.06	/ 1							
reaction time	interval		5.02	5.14	5.30	5.65	5.97	6.20	6.62		# of strides	11.18	10.44	11.62	12.82	21.62	24.44	2.82
	velocity	8.12	9.96	9.73	9.43	8.85	8.38	8.06	7.55	8.68		8.94	9.58	8.61	7.80	9.25	8.18	
Sato, Kentaro (JPN) (1994)	time	6.25	11.34	16.68	22.20	27.89	33.85	40.12	46.77	46.77	/ 2							
reaction time	interval		5.09	5.34	5.52	5.69	5.96	6.27	6.65		# of strides	11.34	10.86	11.65	12.92	22.20	24.57	2.37
	velocity	8.00	9.82	9.36	9.06	8.79	8.39	7.97	7.52	8.55		8.82	9.21	8.58	7.74	9.01	8.14	
Yui, Kaisei (JPN) (1996)	time	6.35	11.54	17.00	22.57	28.27	34.16	40.41	47.07	47.07	/ 3							
reaction time	interval		5.19	5.46	5.57	5.70	5.89	6.25	6.66		# of strides	11.54	11.03	11.59	12.91	22.57	24.50	1.93
	velocity	7.87	9.63	9.16	8.98	8.77	8.49	8.00	7.51	8.50		8.67	9.07	8.63	7.75	8.86	8.16	
Park Bong-Ko (KOR) (1991	time	6.23	11.50	16.98	22.53	28.22	34.07	40.26	47.07	47.07	/ 4							
reaction time	interval		5.27	5.48	5.55	5.69	5.85	6.19	6.81		# of strides	11.50	11.03	11.54	13.00	22.53	24.54	2.01
	velocity	8.03	9.49	9.12	9.01	8.79	8.55	8.08	7.34	8.50		8.70	9.07	8.67	7.69	8.88	8.15	
Kimura, Kazushi (JPN) (19	time	6.28	11.62	17.13	22.74	28.43	34.31	40.44	47.07	47.07	/ 5							
reaction time	interval		5.34	5.51	5.61	5.69	5.88	6.13	6.63		# of strides	11.62	11.12	11.57	12.76	22.74	24.33	1.59
	velocity	7.96	9.36	9.07	8.91	8.79	8.50	8.16	7.54	8.50		8.61	8.99	8.64	7.84	8.80	8.22	
Watanabe, Kazuya (JPN) (1	time	6.24	11.45	16.72	22.18	27.87	33.91	40.33	47.08	47.08	/ 6							
reaction time	interval		5.21	5.27	5.46	5.69	6.04	6.42	6.75		# of strides	11.45	10.73	11.73	13.17	22.18	24.90	2.72
	velocity	8.01	9.60	9.49	9.16	8.79	8.28	7.79	7.41	8.50		8.73	9.32	8.53	7.59	9.02	8.03	
Ishitsuka, Yusuke (JPN) (19	time	6.17	11.40	16.77	22.32	28.05	34.08	40.45	47.30	47.30	/ 7							
reaction time	interval		5.23	5.37	5.55	5.73	6.03	6.37	6.85		# of strides	11.40	10.92	11.76	13.22	22.32	24.98	2.66
	velocity	8.10	9.56	9.31	9.01	8.73	8.29	7.85	7.30	8.46		8.77	9.16	8.50	7.56	8.96	8.01	
Hirose, Hideyuki (JPN) (198	time	6.31	11.55	16.87	22.44	28.25	34.29	40.62	47.43	47.43	/ 8							
reaction time	interval		5.24	5.32	5.57	5.81	6.04	6.33	6.81		# of strides	11.55	10.89	11.85	13.14	22.44	24.99	2.55
	velocity	7.92	9.54	9.40	8.98	8.61	8.28	7.90	7.34	8.43		8.66	9.18	8.44	7.61	8.91	8.00	

Race B

date 03-May-16

Yamamoto (2016) - race analysis of male & female 400m runners at major competitions in 2016

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Uozato, Yusuke (JPN) (199	time	6.23	11.40	16.68	22.12	27.82	33.79	40.01	46.65	46.65	/ 1							
reaction time	interval		5.17	5.28	5.44	5.70	5.97	6.22	6.64	PB	# of strides	11.40	10.72	11.67	12.86	22.12	24.53	2.41
	velocity	8.03	9.67	9.47	9.19	8.77	8.38	8.04	7.53	8.57		8.77	9.33	8.57	7.78	9.04	8.15	
Obuchi, Mizuki (JPN) (1997	time	6.42	11.68	17.03	22.37	28.03	34.13	40.31	47.00	47.00	/ 2							
reaction time	interval		5.26	5.35	5.34	5.66	6.10	6.18	6.69		# of strides	11.68	10.69	11.76	12.87	22.37	24.63	2.26
	velocity	7.79	9.51	9.35	9.36	8.83	8.20	8.09	7.47	8.51		8.56	9.35	8.50	7.77	8.94	8.12	

Race C

date 03-May-16

Yamamoto (2016) - race analysis of male & female 400m runners at major competitions in 2016

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Azuma, Kaiki (JPN) (1993)	time	6.41	11.70	17.15	22.60	28.07	33.90	40.17	47.00	47.00	/ 1							
reaction time	interval		5.29	5.45	5.45	5.47	5.83	6.27	6.83		# of strides	11.70	10.90	11.30	13.10	22.60	24.40	1.80
	velocity	7.80	9.45	9.17	9.17	9.14	8.58	7.97	7.32	8.51		8.55	9.17	8.85	7.63	8.85	8.20	
Aikyo, Shota (JPN) (1994)	time	6.24	11.36	16.72	22.27	28.05	34.16	40.71	47.80	47.80	/ 5							
reaction time	interval		5.12	5.36	5.55	5.78	6.11	6.55	7.09		# of strides	11.36	10.91	11.89	13.64	22.27	25.53	3.26
	velocity	8.01	9.77	9.33	9.01	8.65	8.18	7.63	7.05	8.37		8.80	9.17	8.41	7.33	8.98	7.83	

2015 Japanese National Junior Championships (Nagoya, JPN)

FINAL

date 16-Oct-15

Kohei (2015) - 400m race analysis of male & female at major 2015 competitions

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Walsh, Julian Jrummi (JPN	time	6.24	11.35	16.60	22.05	27.68	33.66	39.94	46.54	46.54	/ 1							

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

reaction time	interval		5.11	5.25	5.45	5.63	5.98	6.28	6.60		# of strides	11.35	10.70	11.61	12.88	22.05	24.49	2.44
	velocity	8.01	9.78	9.52	9.17	8.88	8.36	7.96	7.58	8.59		8.81	9.35	8.61	7.76	9.07	8.17	
Matsubara, Shuichiro (JPN	time	6.38	11.63	16.97	22.71	28.63	34.61	40.69	47.00	47.00	/ 2							
reaction time	interval		5.25	5.34	5.74	5.92	5.98	6.08	6.31		# of strides	11.63	11.08	11.90	12.39	22.71	24.29	1.58
	velocity	7.84	9.52	9.36	8.71	8.45	8.36	8.22	7.92	8.51		8.60	9.03	8.40	8.07	8.81	8.23	
Obuchi, Mizuki (JPN) (1997	time	6.52	11.85	17.33	23.00	28.78	34.72	40.78	47.36	47.36	/ 3							
reaction time	interval		5.33	5.48	5.67	5.78	5.94	6.06	6.58		# of strides	11.85	11.15	11.72	12.64	23.00	24.36	1.36
	velocity	7.67	9.38	9.12	8.82	8.65	8.42	8.25	7.60	8.45		8.44	8.97	8.53	7.91	8.70	8.21	
Yamamoto, Yoshihiro (JPN	time	6.38	11.54	16.77	22.36	28.16	34.25	40.63	47.46	47.46	/ 4							
reaction time	interval		5.16	5.23	5.59	5.80	6.09	6.38	6.83		# of strides	11.54	10.82	11.89	13.21	22.36	25.10	2.74
	velocity	7.84	9.69	9.56	8.94	8.62	8.21	7.84	7.32	8.43		8.67	9.24	8.41	7.57	8.94	7.97	
Ota, Kazuki (JPN) (1996)	time	6.21	11.46	16.82	22.55	28.50	34.63	40.93	47.51	47.51	/ 5							
reaction time	interval		5.25	5.36	5.73	5.95	6.13	6.30	6.58		# of strides	11.46	11.09	12.08	12.88	22.55	24.96	2.41
	velocity	8.05	9.52	9.33	8.73	8.40	8.16	7.94	7.60	8.42		8.73	9.02	8.28	7.76	8.87	8.01	
Katayama, Yuto (JPN) (199	time	6.34	11.57	16.97	22.68	28.52	34.55	40.83	47.62	47.62	/ 6							
reaction time	interval		5.23	5.40	5.71	5.84	6.03	6.28	6.79		# of strides	11.57	11.11	11.87	13.07	22.68	24.94	2.26
	velocity	7.89	9.56	9.26	8.76	8.56	8.29	7.96	7.36	8.40		8.64	9.00	8.42	7.65	8.82	8.02	
Miura, Ayuma (JPN) (1997)	time	6.43	11.65	17.18	22.93	28.83	35.08	41.51	48.11	48.11	/ 7							
reaction time	interval		5.22	5.53	5.75	5.90	6.25	6.43	6.60		# of strides	11.65	11.28	12.15	13.03	22.93	25.18	2.25
	velocity	7.78	9.58	9.04	8.70	8.47	8.00	7.78	7.58	8.31		8.58	8.87	8.23	7.67	8.72	7.94	
Yoshioka, Fumiya (JPN) (1!	time	6.49	11.78	17.32	23.09	28.99	35.19	41.66	48.93	48.93	/ 8							
reaction time	interval		5.29	5.54	5.77	5.90	6.20	6.47	7.27		# of strides	11.78	11.31	12.10	13.74	23.09	25.84	2.75
	velocity	7.70	9.45	9.03	8.67	8.47	8.06	7.73	6.88	8.17		8.49	8.84	8.26	7.28	8.66	7.74	

2015 Japanese National Youth Championships (Nagoya, JPN)

FINAL date 16-Oct-15

Kohei (2015) - 400m race analysis of male & female at major 2015 competitions

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ito, Akio (JPN)	time	6.35	11.60	17.00	22.73	28.71	34.81	41.00	47.48	47.48	3 / 1							
reaction time	interval		5.25	5.40	5.73	5.98	6.10	6.19	6.48		# of strides	11.60	11.13	12.08	12.67	22.73	24.75	2.02
	velocity	7.87	9.52	9.26	8.73	8.36	8.20	8.08	7.72	8.42		8.62	8.98	8.28	7.89	8.80	8.08	
Natkatsukue, Haruhiko (JPI	time	6.63	11.90	17.27	22.96	28.91	34.98	41.15	47.74	47.74	4 / 2							
reaction time	interval		5.27	5.37	5.69	5.95	6.07	6.17	6.59		# of strides	11.90	11.06	12.02	12.76	22.96	24.78	1.82
	velocity	7.54	9.49	9.31	8.79	8.40	8.24	8.10	7.59	8.38		8.40	9.04	8.32	7.84	8.71	8.07	
Ito, Rikiya (JPN) (1998)	time	6.54	11.79	17.17	22.89	28.86	35.02	41.25	47.96	47.96	5 / 3							
reaction time	interval		5.25	5.38	5.72	5.97	6.16	6.23	6.71		# of strides	11.79	11.10	12.13	12.94	22.89	25.07	2.18
	velocity	7.65	9.52	9.29	8.74	8.38	8.12	8.03	7.45	8.34		8.48	9.01	8.24	7.73	8.74	7.98	
Nomura, Yuki (JPN) (1998)	time	6.46	11.75	17.28	23.11	29.25	35.48	41.74	48.09	48.09	7 / 4							
reaction time	interval		5.29	5.53	5.83	6.14	6.23	6.26	6.35		# of strides	11.75	11.36	12.37	12.61	23.11	24.98	1.87
	velocity	7.74	9.45	9.04	8.58	8.14	8.03	7.99	7.87	8.32		8.51	8.80	8.08	7.93	8.65	8.01	
Kitahara, Ryota (JPN) (199	time	6.55	11.70	17.07	22.76	28.69	34.81	41.18	48.22	48.22	1 / 5							
reaction time	interval		5.15	5.37	5.69	5.93	6.12	6.37	7.04		# of strides	11.70	11.06	12.05	13.41	22.76	25.46	2.70
	velocity	7.63	9.71	9.31	8.79	8.43	8.17	7.85	7.10	8.30		8.55	9.04	8.30	7.46	8.79	7.86	
Kitakani, Naoki (JPN) (1998	time	6.43	11.68	17.00	22.70	28.78	35.03	41.43	48.23	48.23	8 / 6							
reaction time	interval		5.25	5.32	5.70	6.08	6.25	6.40	6.80		# of strides	11.68	11.02	12.33	13.20	22.70	25.53	2.83
	velocity	7.78	9.52	9.40	8.77	8.22	8.00	7.81	7.35	8.29		8.56	9.07	8.11	7.58	8.81	7.83	
Furuta, Shinya (JPN) (1998	time	6.56	11.90	17.27	22.98	29.01	35.18	41.57	48.32	48.32	6 / 7							
reaction time	interval		5.34	5.37	5.71	6.03	6.17	6.39	6.75		# of strides	11.90	11.08	12.20	13.14	22.98	25.34	2.36
	velocity	7.62	9.36	9.31	8.76	8.29	8.10	7.82	7.41	8.28		8.40	9.03	8.20	7.61	8.70	7.89	
Takao, Yoshitsu (JPN)	time	6.54	11.91	17.37	23.15	29.08	35.17	41.62	48.53	48.53	2 / 8							
reaction time	interval		5.37	5.46	5.78	5.93	6.09	6.45	6.91		# of strides	11.91	11.24	12.02	13.36	23.15	25.38	2.23
	velocity	7.65	9.31	9.16	8.65	8.43	8.21	7.75	7.24	8.24		8.40	8.90	8.32	7.49	8.64	7.88	

2015 National Sports Festival (Wakayama, JPN)

U19 FINAL date 05-Oct-15

Kohei (2015) - 400m race analysis of male & female at major 2015 competitions

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Someya, Sho (JPN) (1997)	time	6.65	12.37	18.03	23.73	29.62	35.48	41.47	47.64	47.64	/ 1							
reaction time	interval		5.72	5.66	5.70	5.89	5.86	5.99	6.17		# of strides	12.37	11.36	11.75	12.16	23.73	23.91	0.18
	velocity	7.52	8.74	8.83	8.77	8.49	8.53	8.35	8.10	8.40		8.08	8.80	8.51	8.22	8.43	8.36	
Ibuka, Aisei (JPN) (1998)	time	6.53	12.01	17.63	23.51	29.52	35.55	41.53	47.68	47.68	/ 2							
reaction time	interval		5.48	5.62	5.88	6.01	6.03	5.98	6.15		# of strides	12.01	11.50	12.04	12.13	23.51	24.17	0.66
	velocity	7.66	9.12	8.90	8.50	8.32	8.29	8.36	8.13	8.39		8.33	8.70	8.31	8.24	8.51	8.27	
Matsukiyo, Kazuki (JPN) (1	time	6.57	11.99	17.63	23.48	29.42	35.31	41.32	47.74	47.74	/ 3							
reaction time	interval		5.42	5.64	5.85	5.94	5.89	6.01	6.42		# of strides	11.99	11.49	11.83	12.43	23.48	24.26	0.78
	velocity	7.61	9.23	8.87	8.55	8.42	8.49	8.32	7.79	8.38		8.34	8.70	8.45	8.05	8.52	8.24	
Nakatsukue, Haruhiko (JPN	time	6.61	12.02	17.55	23.39	29.38	35.50	41.58	47.93	47.93	/ 4							
reaction time	interval		5.41	5.53	5.84	5.99	6.12	6.08	6.35		# of strides	12.02	11.37	12.11	12.43	23.39	24.54	1.15

	velocity	7.56	9.24	9.04	8.56	8.35	8.17	8.22	7.87	8.35		8.32	8.80	8.26	8.05	8.55	8.15	
Eto, Takuto (JPN) (1997)	time	6.65	12.16	17.77	23.51	29.45	35.37	41.54	48.06	48.06	/ 5							
reaction time	interval		5.51	5.61	5.74	5.94	5.92	6.17	6.52		# of strides	12.16	11.35	11.86	12.69	23.51	24.55	1.04
	velocity	7.52	9.07	8.91	8.71	8.42	8.45	8.10	7.67	8.32		8.22	8.81	8.43	7.88	8.51	8.15	
Higuchi, Kazuma (JPN) (19	time	6.62	12.00	17.58	23.34	29.27	35.48	41.73	48.26	48.26	/ 6							
reaction time	interval		5.38	5.58	5.76	5.93	6.21	6.25	6.53		# of strides	12.00	11.34	12.14	12.78	23.34	24.92	1.58
	velocity	7.55	9.29	8.96	8.68	8.43	8.05	8.00	7.66	8.29		8.33	8.82	8.24	7.82	8.57	8.03	
Kawauchi, Mitsuki (JPN) (1	time	6.66	12.10	17.63	23.39	29.44	35.63	42.22	49.38	49.38	/ 7							
reaction time	interval		5.44	5.53	5.76	6.05	6.19	6.59	7.16		# of strides	12.10	11.29	12.24	13.75	23.39	25.99	2.60
	velocity	7.51	9.19	9.04	8.68	8.26	8.08	7.59	6.98	8.10		8.26	8.86	8.17	7.27	8.55	7.70	

FINAL

date 04-Oct-15

Kohei (2015) - 400m race analysis of male & female at major 2015 competitions

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kobayashi, Naoki (JPN) (19	time	6.33	11.61	17.15	22.93	28.72	34.53	40.54	46.87	46.87	/ 1							
reaction time	interval		5.28	5.54	5.78	5.79	5.81	6.01	6.33		# of strides	11.61	11.32	11.60	12.34	22.93	23.94	1.01
	velocity	7.90	9.47	9.03	8.65	8.64	8.61	8.32	7.90	8.53		8.61	8.83	8.62	8.10	8.72	8.35	
Tamura, Tomoya (JPN) (19	time	6.23	11.41	16.98	22.88	28.60	34.33	40.37	46.92	46.92	/ 2							
reaction time	interval		5.18	5.57	5.90	5.72	5.73	6.04	6.55		# of strides	11.41	11.47	11.45	12.59	22.88	24.04	1.16
	velocity	8.03	9.65	8.98	8.47	8.74	8.73	8.28	7.63	8.53		8.76	8.72	8.73	7.94	8.74	8.32	
Kimura, Kenta (JPN) (1993)	time	6.39	11.52	16.92	22.63	28.43	34.30	40.44	47.11	47.11	/ 3							
reaction time	interval		5.13	5.40	5.71	5.80	5.87	6.14	6.67		# of strides	11.52	11.11	11.67	12.81	22.63	24.48	1.85
	velocity	7.82	9.75	9.26	8.76	8.62	8.52	8.14	7.50	8.49		8.68	9.00	8.57	7.81	8.84	8.17	
Watanabe, Kazuya (JPN) (1	time	6.27	11.49	17.00	22.82	28.66	34.61	40.76	47.17	47.17	/ 4							
reaction time	interval		5.22	5.51	5.82	5.84	5.95	6.15	6.41		# of strides	11.49	11.33	11.79	12.56	22.82	24.35	1.53
	velocity	7.97	9.58	9.07	8.59	8.56	8.40	8.13	7.80	8.48		8.70	8.83	8.48	7.96	8.76	8.21	
Kato, Nobuya (JPN) (1995)	time	6.63	12.10	17.73	23.64	29.57	35.38	41.21	47.28	47.28	/ 5							
reaction time	interval		5.47	5.63	5.91	5.93	5.81	5.83	6.07		# of strides	12.10	11.54	11.74	11.90	23.64	23.64	0.00
	velocity	7.54	9.14	8.88	8.46	8.43	8.61	8.58	8.24	8.46		8.26	8.67	8.52	8.40	8.46	8.46	
Yano, Takuto (JPN) (1994)	time	6.44	11.65	17.15	22.95	28.87	34.92	41.14	47.68	47.68	/ 6							
reaction time	interval		5.21	5.50	5.80	5.92	6.05	6.22	6.54		# of strides	11.65	11.30	11.97	12.76	22.95	24.73	1.78
	velocity	7.76	9.60	9.09	8.62	8.45	8.26	8.04	7.65	8.39		8.58	8.85	8.35	7.84	8.71	8.09	
Horii, Kosuke (JPN) (1994)	time	6.30	11.64	17.30	23.28	29.31	35.34	41.42	47.80	47.80	/ 7							
reaction time	interval		5.34	5.66	5.98	6.03	6.03	6.08	6.38		# of strides	11.64	11.64	12.06	12.46	23.28	24.52	1.24
	velocity	7.94	9.36	8.83	8.36	8.29	8.29	8.22	7.84	8.37		8.59	8.59	8.29	8.03	8.59	8.16	
Ishitsuka, Yusuke (JPN) (19	time	6.30	11.56	17.13	23.02	29.06	35.25	41.55	48.31	48.31	/ 8							
reaction time	interval		5.26	5.57	5.89	6.04	6.19	6.30	6.76		# of strides	11.56	11.46	12.23	13.06	23.02	25.29	2.27
	velocity	7.94	9.51	8.98	8.49	8.28	8.08	7.94	7.40	8.28		8.65	8.73	8.18	7.66	8.69	7.91	

2015 IAAF World Championships (Beijing, CHN)

FINAL

date 26-Aug-15

Kohei (2015) - 400m race analysis of male & female at major 2015 competitions

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
van Niekerk, Wayde (RSA)	time	6.02	10.73	15.65	20.76	25.95	31.36	37.17	43.48	43.48	6 / 1							
reaction time 0.156	interval		4.71	4.92	5.11	5.19	5.41	5.81	6.31	AR	# of strides	10.73	10.03	10.60	12.12	20.76	22.72	1.96
	velocity	8.31	10.62	10.16	9.78	9.63	9.24	8.61	7.92	9.20	162.5	9.32	9.97	9.43	8.25	9.63	8.80	
Merritt, LaShawn (USA) (1	time	6.06	10.73	15.68	20.87	26.21	31.65	37.40	43.65	43.65	8 / 2							
reaction time 0.195	interval		4.67	4.95	5.19	5.34	5.44	5.75	6.25	PB	# of strides	10.73	10.14	10.78	12.00	20.87	22.78	1.91
	velocity	8.25	10.71	10.10	9.63	9.36	9.19	8.70	8.00	9.16	170.7	9.32	9.86	9.28	8.33	9.58	8.78	
James, Kirani (GRN) (1992)	time	6.21	10.99	15.90	21.00	26.26	31.73	37.50	43.78	43.78	5 / 3							
reaction time 0.152	interval		4.78	4.91	5.10	5.26	5.47	5.77	6.28		# of strides	10.99	10.01	10.73	12.05	21.00	22.78	1.78
	velocity	8.05	10.46	10.18	9.80	9.51	9.14	8.67	7.96	9.14	158.7	9.10	9.99	9.32	8.30	9.52	8.78	
Santos, Luguelin (DOM) (1	time	6.36	11.23	16.23	21.32	26.56	32.05	37.89	44.11	44.11	7 / 4							
reaction time 0.188	interval		4.87	5.00	5.09	5.24	5.49	5.84	6.22	NR	# of strides	11.23	10.09	10.73	12.06	21.32	22.79	1.47
	velocity	7.86	10.27	10.00	9.82	9.54	9.11	8.56	8.04	9.07	187.2	8.90	9.91	9.32	8.29	9.38	8.78	
Makwala, Isaac (BOT) (1986	time	6.14	10.91	15.85	20.98	26.22	31.71	37.80	44.63	44.63	4 / 5							
reaction time 0.218	interval		4.77	4.94	5.13	5.24	5.49	6.09	6.83		# of strides	10.91	10.07	10.73	12.92	20.98	23.65	2.67
	velocity	8.14	10.48	10.12	9.75	9.54	9.11	8.21	7.32	8.96		9.17	9.93	9.32	7.74	9.53	8.46	
Yousif, Rabah (GBR) (1986	time	6.28	11.35	16.47	21.74	27.21	32.80	38.64	44.68	44.68	3 / 6							
reaction time 0.134	interval		5.07	5.12	5.27	5.47	5.59	5.84	6.04		# of strides	11.35	10.39	11.06	11.88	21.74	22.94	1.20
	velocity	7.96	9.86	9.77	9.49	9.14	8.94	8.56	8.28	8.95		8.81	9.62	9.04	8.42	9.20	8.72	
Cedenio, Machel (TTO) (19	time	6.34	11.41	16.52	21.84	27.32	33.03	38.88	45.06	45.06	2 / 7							
reaction time 0.206	interval		5.07	5.11	5.32	5.48	5.71	5.85	6.18		# of strides	11.41	10.43	11.19	12.03	21.84	23.22	1.38
	velocity	7.89	9.86	9.78	9.40	9.12	8.76	8.55	8.09	8.88		8.76	9.59	8.94	8.31	9.16	8.61	
Al-Masrahi, Yousef Ahmed	time	6.25	11.11	16.15	21.41	26.90	32.63	38.55	45.15	45.15	9 / 8							
reaction time 0.163	interval		4.86	5.04	5.26	5.49	5.73	5.92	6.60		# of strides	11.11	10.30	11.22	12.52	21.41	23.74	2.33
	velocity	8.00	10.29	9.92	9.51	9.11	8.73	8.45	7.58	8.86		9.00	9.71	8.91	7.99	9.34	8.42	

Semi-Final 3

date 24-Aug-15

Yamamoto (2015) - race analysis of 15th World Championships 400m- focusing on men's semis and women's prelims

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
van Niekerk, Wayde (RSA)	time	6.04	10.89	15.97	21.36	26.93	32.38	38.15	44.31	44.31	7 / 1							
reaction time 0.155	interval		4.85	5.08	5.39	5.57	5.45	5.77	6.16		# of strides	10.89	10.47	11.02	11.93	21.36	22.95	1.59
	velocity	8.28	10.31	9.84	9.28	8.98	9.17	8.67	8.12	9.03	163.7	9.18	9.55	9.07	8.38	9.36	8.71	
Merritt, LaShawn (USA) (19	time	6.17	11.02	16.05	21.37	26.92	32.44	38.22	44.34	44.34	6 / 2							
reaction time 0.187	interval		4.85	5.03	5.32	5.55	5.52	5.78	6.12		# of strides	11.02	10.35	11.07	11.90	21.37	22.97	1.60
	velocity	8.10	10.31	9.94	9.40	9.01	9.06	8.65	8.17	9.02	171.0	9.07	9.66	9.03	8.40	9.36	8.71	
Cedenio, Machel (TTO) (19	time	6.23	11.20	16.23	21.47	27.00	32.54	38.37	44.64	44.64	5 / 3							
reaction time 0.219	interval		4.97	5.03	5.24	5.53	5.54	5.83	6.27		# of strides	11.20	10.27	11.07	12.10	21.47	23.17	1.70
	velocity	8.03	10.06	9.94	9.54	9.04	9.03	8.58	7.97	8.96	162.0	8.93	9.74	9.03	8.26	9.32	8.63	
Francis, Javon (JAM) (1994	time	6.26	11.19	16.22	21.50	27.09	32.62	38.46	44.77	44.77	4 / 4							
reaction time 0.177	interval		4.93	5.03	5.28	5.59	5.53	5.84	6.31		# of strides	11.19	10.31	11.12	12.15	21.50	23.27	1.77
	velocity	7.99	10.14	9.94	9.47	8.94	9.04	8.56	7.92	8.93	170.0	8.94	9.70	8.99	8.23	9.30	8.59	
Borlée, Jonathan (BEL) (19	time	6.18	11.16	16.28	21.59	27.08	32.64	38.47	44.85	44.85	9 / 5							
reaction time 0.158	interval		4.98	5.12	5.31	5.49	5.56	5.83	6.38		# of strides	11.16	10.43	11.05	12.21	21.59	23.26	1.67
	velocity	8.09	10.04	9.77	9.42	9.11	8.99	8.58	7.84	8.92	170.2	8.96	9.59	9.05	8.19	9.26	8.60	
Rooney, Martyn (GBR) (19	time	6.23	11.21	16.33	21.65	27.18	32.69	38.66	45.29	45.29	8 / 6							
reaction time 0.153	interval		4.98	5.12	5.32	5.53	5.51	5.97	6.63		# of strides	11.21	10.44	11.04	12.60	21.65	23.64	1.99
	velocity	8.03	10.04	9.77	9.40	9.04	9.07	8.38	7.54	8.83	161.2	8.92	9.58	9.06	7.94	9.24	8.46	
Mathieu, Michael (BAH) (19	time	6.03	10.98	16.07	21.40	26.96	32.58	38.73	45.43	45.43	3 / 7							
reaction time 0.157	interval		4.95	5.09	5.33	5.56	5.62	6.15	6.70		# of strides	10.98	10.42	11.18	12.85	21.40	24.03	2.63
	velocity	8.29	10.10	9.82	9.38	8.99	8.90	8.13	7.46	8.80	182.2	9.11	9.60	8.94	7.78	9.35	8.32	
Bonevacia, Liemarvin (NED	time	6.24	11.30	16.43	21.83	27.40	33.10	39.12	45.65	45.65	2 / 8							
reaction time 0.170	interval		5.06	5.13	5.40	5.57	5.70	6.02	6.53		# of strides	11.30	10.53	11.27	12.55	21.83	23.82	1.99
	velocity	8.01	9.88	9.75	9.26	8.98	8.77	8.31	7.66	8.76	182.7	8.85	9.50	8.87	7.97	9.16	8.40	

Semi-Final 2

date 24-Aug-15

Yamamoto (2015) - race analysis of 15th World Championships 400m- focusing on men's semis and women's prelims

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Makwala, Isaac (BOT) (1986	time	5.98	10.79	15.68	20.83	26.19	31.63	37.51	44.11	44.11	9 / 1							
reaction time 0.212	interval		4.81	4.89	5.15	5.36	5.44	5.88	6.60		# of strides	10.79	10.04	10.80	12.48	20.83	23.28	2.45
	velocity	8.36	10.40	10.22	9.71	9.33	9.19	8.50	7.58	9.07	179.0	9.27	9.96	9.26	8.01	9.60	8.59	
Al-Masrahi, Yousef Ahmed	time	6.15	11.09	16.17	21.44	26.82	32.35	38.19	44.40	44.40	7 / 2							
reaction time 0.144	interval		4.94	5.08	5.27	5.38	5.53	5.84	6.21		# of strides	11.09	10.35	10.91	12.05	21.44	22.96	1.52
	velocity	8.13	10.12	9.84	9.49	9.29	9.04	8.56	8.05	9.01	166.7	9.02	9.66	9.17	8.30	9.33	8.71	
Yousif, Rabah (GBR) (1986	time	6.18	11.32	16.45	21.75	27.14	32.68	38.51	44.54	44.54	4 / 3							
reaction time 0.142	interval		5.14	5.13	5.30	5.39	5.54	5.83	6.03	PB	# of strides	11.32	10.43	10.93	11.86	21.75	22.79	1.04
	velocity	8.09	9.73	9.75	9.43	9.28	9.03	8.58	8.29	8.98	162.5	8.83	9.59	9.15	8.43	9.20	8.78	
Gordon, Lalonde (TTO) (19	time	6.24	11.19	16.17	21.45	26.94	32.45	38.36	44.70	44.70	3 / 4							
reaction time 0.150	interval		4.95	4.98	5.28	5.49	5.51	5.91	6.34		# of strides	11.19	10.26	11.00	12.25	21.45	23.25	1.80
	velocity	8.01	10.10	10.04	9.47	9.11	9.07	8.46	7.89	8.95	160.7	8.94	9.75	9.09	8.16	9.32	8.60	
Nellum, Bryshon (USA) (19	time	6.09	11.04	16.13	21.40	26.90	32.50	38.47	44.77	44.77	8 / 5							
reaction time 0.169	interval		4.95	5.09	5.27	5.50	5.60	5.97	6.30		# of strides	11.04	10.36	11.10	12.27	21.40	23.37	1.97
	velocity	8.21	10.10	9.82	9.49	9.09	8.93	8.38	7.94	8.93	172.2	9.06	9.65	9.01	8.15	9.35	8.56	
McDonald, Rusheen (JAM)	time	6.34	11.41	16.53	21.87	27.46	32.99	38.73	44.86	44.86	5 / 6							
reaction time 0.208	interval		5.07	5.12	5.34	5.59	5.53	5.74	6.13		# of strides	11.41	10.46	11.12	11.87	21.87	22.99	1.12
	velocity	7.89	9.86	9.77	9.36	8.94	9.04	8.71	8.16	8.92	182.0	8.76	9.56	8.99	8.42	9.14	8.70	
Gardiner, Steven (BAH) (19	time	6.57	11.71	16.83	22.15	27.63	33.11	38.92	44.98	44.98	6 / 7							
reaction time 0.204	interval		5.14	5.12	5.32	5.48	5.48	5.81	6.06		# of strides	11.71	10.44	10.96	11.87	22.15	22.83	0.68
	velocity	7.61	9.73	9.77	9.40	9.12	9.12	8.61	8.25	8.89	159.0	8.54	9.58	9.12	8.42	9.03	8.76	
Brenes, Nery (CRC) (1985)	time	6.09	10.98	15.97	21.23	26.77	32.39	38.55	45.41	45.41	2 / 8							
reaction time 0.168	interval		4.89	4.99	5.26	5.54	5.62	6.16	6.86		# of strides	10.98	10.25	11.16	13.02	21.23	24.18	2.95
	velocity	8.21	10.22	10.02	9.51	9.03	8.90	8.12	7.29	8.81		9.11	9.76	8.96	7.68	9.42	8.27	

Semi-Final 1

date 24-Aug-15

Yamamoto (2015) - race analysis of 15th World Championships 400m- focusing on men's semis and women's prelims

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
James, Kirani (GRN) (1992)	time	6.18	11.04	16.03	21.21	26.60	32.18	38.00	44.16	44.16	7 / 1							
reaction time 0.143	interval		4.86	4.99	5.18	5.39	5.58	5.82	6.16		# of strides	11.04	10.17	10.97	11.98	21.21	22.95	1.74
	velocity	8.09	10.29	10.02	9.65	9.28	8.96	8.59	8.12	9.06	158.0	9.06	9.83	9.12	8.35	9.43	8.71	
Santos, Luguelin (DOM) (1	time	6.31	11.37	16.48	21.65	26.93	32.38	38.12	44.26	44.26	6 / 2							
reaction time 0.175	interval		5.06	5.11	5.17	5.28	5.45	5.74	6.14	NR / PB	# of strides	11.37	10.28	10.73	11.88	21.65	22.61	0.96
	velocity	7.92	9.88	9.78	9.67	9.47	9.17	8.71	8.14	9.04	186.0	8.80	9.73	9.32	8.42	9.24	8.85	
Verburg, David (USA) (199	time	6.03	11.01	16.08	21.35	26.76	32.43	38.37	44.71	44.71	5 / 3							
reaction time 0.178	interval		4.98	5.07	5.27	5.41	5.67	5.94	6.34		# of strides	11.01	10.34	11.08	12.28	21.35	23.36	2.01
	velocity	8.29	10.04	9.86	9.49	9.24	8.82	8.42	7.89	8.95	183.7	9.08	9.67	9.03	8.14	9.37	8.56	
Borlée, Kevin (BEL) (1988)	time	6.07	11.10	16.20	21.44	26.91	32.51	38.41	44.74	44.74	8 / 4							

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

reaction time 0.158	interval		5.03	5.10	5.24	5.47	5.60	5.90	6.33		# of strides	11.10	10.34	11.07	12.23	21.44	23.30	1.86
	velocity	8.24	9.94	9.80	9.54	9.14	8.93	8.47	7.90	8.94	174.7	9.01	9.67	9.03	8.18	9.33	8.58	
Quow, Rennie (TTO) (1987)	time	6.17	11.18	16.27	21.44	26.76	32.40	38.39	44.98	44.98	4 / 5							
reaction time 0.189	interval		5.01	5.09	5.17	5.32	5.64	5.99	6.59		# of strides	11.18	10.26	10.96	12.58	21.44	23.54	2.10
	velocity	8.10	9.98	9.82	9.67	9.40	8.87	8.35	7.59	8.89	188.0	8.94	9.75	9.12	7.95	9.33	8.50	
Norwood, Vernon (USA) (1	time	6.13	11.01	16.00	21.24	26.76	32.49	38.52	45.07	45.07	9 / 6							
reaction time 0.182	interval		4.88	4.99	5.24	5.52	5.73	6.03	6.55		# of strides	11.01	10.23	11.25	12.58	21.24	23.83	2.59
	velocity	8.16	10.25	10.02	9.54	9.06	8.73	8.29	7.63	8.88		9.08	9.78	8.89	7.95	9.42	8.39	
Brown, Chris (BAH) (1978)	time	5.99	10.85	15.87	21.14	26.71	32.45	38.51	45.07	45.07	2 / 7							
reaction time 0.178	interval		4.86	5.02	5.27	5.57	5.74	6.06	6.56		# of strides	10.85	10.29	11.31	12.62	21.14	23.93	2.79
	velocity	8.35	10.29	9.96	9.49	8.98	8.71	8.25	7.62	8.88		9.22	9.72	8.84	7.92	9.46	8.36	
Matthews, Peter (JAM) (19	time	6.04	10.85	15.82	21.04	26.61	32.44	38.67	45.42	45.42	3 / 8							
reaction time 0.178	interval		4.81	4.97	5.22	5.57	5.83	6.23	6.75		# of strides	10.85	10.19	11.40	12.98	21.04	24.38	3.34
	velocity	8.28	10.40	10.06	9.58	8.98	8.58	8.03	7.41	8.81		9.22	9.81	8.77	7.70	9.51	8.20	

Heat 3

date 23-Aug-15

Kohei (2015) - 400m race analysis of male & female at major 2015 competitions

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kanemaru, Yuzo (JPN) (19 time	6.15	11.13	16.25	21.60	27.21	33.02	39.20	45.65	45.65	9 / 6							
reaction time 0.156 interval		4.98	5.12	5.35	5.61	5.81	6.18	6.45		# of strides	11.13	10.47	11.42	12.63	21.60	24.05	2.45
velocity	8.13	10.04	9.77	9.35	8.91	8.61	8.09	7.75	8.76		8.98	9.55	8.76	7.92	9.26	8.32	

2015 Japanese National High School Championships (Wakayama, JPN)

FINAL

date 29-Jul-15

Kohei (2015) - 400m race analysis of male & female at major 2015 competitions

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Funato, Daisuke (JPN) (199 time	6.50	11.56	16.80	22.29	28.12	34.14	40.41	47.06	47.06	/ 1							
reaction time interval		5.06	5.24	5.49	5.83	6.02	6.27	6.65	PB	# of strides	11.56	10.73	11.85	12.92	22.29	24.77	2.48
velocity	7.69	9.88	9.54	9.11	8.58	8.31	7.97	7.52	8.50		8.65	9.32	8.44	7.74	8.97	8.07	
Tsujiyoko, Shotaro (JPN) (time	6.59	11.81	17.18	22.81	28.63	34.75	40.96	47.32	47.32	/ 2							
reaction time interval		5.22	5.37	5.63	5.82	6.12	6.21	6.36		# of strides	11.81	11.00	11.94	12.57	22.81	24.51	1.70
velocity	7.59	9.58	9.31	8.88	8.59	8.17	8.05	7.86	8.45		8.47	9.09	8.38	7.96	8.77	8.16	
Eto, Takuto (JPN) (1997) time	6.57	11.95	17.52	23.23	29.06	34.97	41.04	47.46	47.46	/ 3							
reaction time interval		5.38	5.57	5.71	5.83	5.91	6.07	6.42		# of strides	11.95	11.28	11.74	12.49	23.23	24.23	1.00
velocity	7.61	9.29	8.98	8.76	8.58	8.46	8.24	7.79	8.43		8.37	8.87	8.52	8.01	8.61	8.25	
Sasaki, Manato (JPN) (1998 time	6.40	11.74	17.32	23.19	29.12	35.08	41.18	47.55	47.55	/ 4							
reaction time interval		5.34	5.58	5.87	5.93	5.96	6.10	6.37		# of strides	11.74	11.45	11.89	12.47	23.19	24.36	1.17
velocity	7.81	9.36	8.96	8.52	8.43	8.39	8.20	7.85	8.41		8.52	8.73	8.41	8.02	8.62	8.21	
Someya, Sho (JPN) (1997) time	6.71	12.12	17.68	23.48	29.39	35.38	41.59	48.29	48.29	/ 5							
reaction time interval		5.41	5.56	5.80	5.91	5.99	6.21	6.70		# of strides	12.12	11.36	11.90	12.91	23.48	24.81	1.33
velocity	7.45	9.24	8.99	8.62	8.46	8.35	8.05	7.46	8.28		8.25	8.80	8.40	7.75	8.52	8.06	
Ino, Yoshihiko (JPN) time	6.64	12.05	17.70	23.72	29.82	36.10	42.49	49.03	49.03	/ 6							
reaction time interval		5.41	5.65	6.02	6.10	6.28	6.39	6.54		# of strides	12.05	11.67	12.38	12.93	23.72	25.31	1.59
velocity	7.53	9.24	8.85	8.31	8.20	7.96	7.82	7.65	8.16		8.30	8.57	8.08	7.73	8.43	7.90	
Miura, Ayumu (JPN) (1997) time	6.69	12.21	17.88	23.81	29.88	36.16	42.62	49.10	49.10	/ 7							
reaction time interval		5.52	5.67	5.93	6.07	6.28	6.46	6.48		# of strides	12.21	11.60	12.35	12.94	23.81	25.29	1.48
velocity	7.47	9.06	8.82	8.43	8.24	7.96	7.74	7.72	8.15		8.19	8.62	8.10	7.73	8.40	7.91	
Matsubara, Shuichiro (JPN time	6.55	12.04	17.72	23.65	29.93	36.59	43.58	50.98	50.98	/ 8							
reaction time interval		5.49	5.68	5.93	6.28	6.66	6.99	7.40		# of strides	12.04	11.61	12.94	14.39	23.65	27.33	3.68
velocity	7.63	9.11	8.80	8.43	7.96	7.51	7.15	6.76	7.85		8.31	8.61	7.73	6.95	8.46	7.32	

2015 Résisprint International (La Chaux-de-Fonds, SUI)

Vazel (2018) - historical analysis and coaching commentary - biomechanical report - London 2017 - Men's 400m

FINAL

date 05-Jul-15

Vazel (2015) - Van Niekerk and Merritt were on for the record at 300m

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Makwala, Isaac (BOT) (1986 time						31.5		43.73	43.72	/ 1							*Vazel (2015)*
reaction time interval								12.2	AR / PB	# of strides				12.23			
velocity						9.52		8.18	9.15					8.18			
Haroun, Abdalelah (QAT) (time		11.3		21.4		32.2		44.27	44.27	/ 2							*Vazel (2018)*
reaction time interval				10.10		10.80		12.07	AR / AJR	# of strides	11.30	10.10	10.80	12.07	21.40	22.87	1.47
velocity		8.85		9.90		9.26		8.29	9.04		8.85	9.90	9.26	8.29	9.35	8.75	

2015 Japanese National Championships (Niigata, JPN)

FINAL

date 28-Jun-15

Kohei (2015) - 400m race analysis of male & female at major 2015 competitions

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kanemaru, Yuzo (JPN) (19 time	6.17	11.20	16.42	21.84	27.58	33.41	39.55	46.10	46.10	7 / 1							
reaction time 0.172 interval		5.03	5.22	5.42	5.74	5.83	6.14	6.55		# of strides	11.20	10.64	11.57	12.69	21.84	24.26	2.42
velocity	8.10	9.94	9.58	9.23	8.71	8.58	8.14	7.63	8.68	180.0	8.93	9.40	8.64	7.88	9.16	8.24	
Sato, Kentaro (JPN) (1994) time	6.36	11.32	16.38	21.72	27.29	33.16	39.35	46.12	46.12	3 / 2							
reaction time 0.151 interval		4.96	5.06	5.34	5.57	5.87	6.19	6.77		# of strides	11.32	10.40	11.44	12.96	21.72	24.40	2.68
velocity	7.86	10.08	9.88	9.36	8.98	8.52	8.08	7.39	8.67		8.83	9.62	8.74	7.72	9.21	8.20	
Tamura, Tomoya (JPN) (19 time	6.36	11.64	17.08	22.54	28.19	33.81	39.86	46.58	46.58	9 / 3							

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

reaction time 0.205	interval		5.28	5.44	5.46	5.65	5.62	6.05	6.72		# of strides	11.64	10.90	11.27	12.77	22.54	24.04	1.50
	velocity	7.86	9.47	9.19	9.16	8.85	8.90	8.26	7.44	8.59	186.2	8.59	9.17	8.87	7.83	8.87	8.32	
Kitagawa, Takamasa (JPN)	time	6.24	11.34	16.58	22.16	27.89	33.73	40.00	46.67	46.67	6 / 4							
reaction time 0.167	interval		5.10	5.24	5.58	5.73	5.84	6.27	6.67		# of strides	11.34	10.82	11.57	12.94	22.16	24.51	2.35
	velocity	8.01	9.80	9.54	8.96	8.73	8.56	7.97	7.50	8.57	177.5	8.82	9.24	8.64	7.73	9.03	8.16	
Horii, Kosuke (JPN) (1994)	time	6.26	11.25	16.38	21.94	27.80	33.74	39.98	46.74	46.74	2 / 5							
reaction time 0.158	interval		4.99	5.13	5.56	5.86	5.94	6.24	6.76		# of strides	11.25	10.69	11.80	13.00	21.94	24.80	2.86
	velocity	7.99	10.02	9.75	8.99	8.53	8.42	8.01	7.40	8.56		8.89	9.35	8.47	7.69	9.12	8.06	
Kobayashi, Noaki (JPN) (19	time	6.31	11.33	16.52	21.95	27.59	33.58	40.14	47.11	47.11	5 / 6							
reaction time 0.169	interval		5.02	5.19	5.43	5.64	5.99	6.56	6.97		# of strides	11.33	10.62	11.63	13.53	21.95	25.16	3.21
	velocity	7.92	9.96	9.63	9.21	8.87	8.35	7.62	7.17	8.49	185.5	8.83	9.42	8.60	7.39	9.11	7.95	
Kimura, Kazushi (JPN) (19	time	6.44	11.73	17.05	22.55	28.05	33.81	40.17	47.35	47.35	8 / 7							
reaction time 0.190	interval		5.29	5.32	5.50	5.50	5.76	6.36	7.18		# of strides	11.73	10.82	11.26	13.54	22.55	24.80	2.25
	velocity	7.76	9.45	9.40	9.09	9.09	8.68	7.86	6.96	8.45	189.0	8.53	9.24	8.88	7.39	8.87	8.06	
Hirose, Hidyuki (JPN) (1989	time	6.24	11.28	16.43	21.93	27.62	33.66	40.16	47.49	47.49	4 / 8							
reaction time 0.174	interval		5.04	5.15	5.50	5.69	6.04	6.50	7.33		# of strides	11.28	10.65	11.73	13.83	21.93	25.56	3.63
	velocity	8.01	9.92	9.71	9.09	8.79	8.28	7.69	6.82	8.42	184.5	8.87	9.39	8.53	7.23	9.12	7.82	

Heat 3

date 27-Jun-15

Kohei (2015) - 400m race analysis of male & female at major 2015 competitions

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hirose, Hidyuki (JPN) (1989 time	6.29	11.28	16.42	21.76	27.42	33.23	39.32	45.94	45.94	7 / 1							
reaction time 0.151 interval		4.99	5.14	5.34	5.66	5.81	6.09	6.62		# of strides	11.28	10.48	11.47	12.71	21.76	24.18	2.42
velocity	7.95	10.02	9.73	9.36	8.83	8.61	8.21	7.55	8.71	179.0	8.87	9.54	8.72	7.87	9.19	8.27	
Kimura, Kazushi (JPN) (19 time	6.57	11.75	17.12	22.53	28.10	33.61	39.47	45.96	45.96	8 / 2							
reaction time 0.181 interval		5.18	5.37	5.41	5.57	5.51	5.86	6.49	PB	# of strides	11.75	10.78	11.08	12.35	22.53	23.43	0.90
velocity	7.61	9.65	9.31	9.24	8.98	9.07	8.53	7.70	8.70	184.0	8.51	9.28	9.03	8.10	8.88	8.54	
Watanabe, Kazuya (JPN) (1 time	6.25	11.42	16.60	21.96	27.57	33.33	39.45	46.03	46.03	2 / 3							
reaction time 0.166 interval		5.17	5.18	5.36	5.61	5.76	6.12	6.58		# of strides	11.42	10.54	11.37	12.70	21.96	24.07	2.11
velocity	8.00	9.67	9.65	9.33	8.91	8.68	8.17	7.60	8.69		8.76	9.49	8.80	7.87	9.11	8.31	
Ishitsuka, Yusuke (JPN) (19 time	6.18	11.29	16.43	21.81	27.49	33.36	39.57	46.30	46.30	4 / 4							
reaction time 0.175 interval		5.11	5.14	5.38	5.68	5.87	6.21	6.73		# of strides	11.29	10.52	11.55	12.94	21.81	24.49	2.68
velocity	8.09	9.78	9.73	9.29	8.80	8.52	8.05	7.43	8.64	178.2	8.86	9.51	8.66	7.73	9.17	8.17	

Heat 2

date 27-Jun-15

Kohei (2015) - 400m race analysis of male & female at major 2015 competitions

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kanemaru, Yuzo (JPN) (19 time	6.32	11.42	16.58	21.92	27.53	33.13	39.18	45.91	45.91	9 / 1							
reaction time 0.187 interval		5.10	5.16	5.34	5.61	5.60	6.05	6.73		# of strides	11.42	10.50	11.21	12.78	21.92	23.99	2.07
velocity	7.91	9.80	9.69	9.36	8.91	8.93	8.26	7.43	8.71	182.0	8.76	9.52	8.92	7.82	9.12	8.34	
Tamura, Tomoya (JPN) (19 time	6.17	11.18	16.25	21.48	27.15	32.89	39.12	46.07	46.07	3 / 2							
reaction time 0.216 interval		5.01	5.07	5.23	5.67	5.74	6.23	6.95	PB	# of strides	11.18	10.30	11.41	13.18	21.48	24.59	3.11
velocity	8.10	9.98	9.86	9.56	8.82	8.71	8.03	7.19	8.68		8.94	9.71	8.76	7.59	9.31	8.13	
Walsh, Julian Jrummi (JPN time	6.24	11.34	16.53	21.77	27.23	33.17	39.40	46.11	46.11	1 / 3							
reaction time 0.177 interval		5.10	5.19	5.24	5.46	5.94	6.23	6.71	PB	# of strides	11.34	10.43	11.40	12.94	21.77	24.34	2.57
velocity	8.01	9.80	9.63	9.54	9.16	8.42	8.03	7.45	8.67		8.82	9.59	8.77	7.73	9.19	8.22	
Yui, Kaisei (JPN) (1996) time	6.39	11.54	16.70	22.04	27.59	33.43	39.59	46.36	46.36	8 / 4							
reaction time 0.145 interval		5.15	5.16	5.34	5.55	5.84	6.16	6.77	PB	# of strides	11.54	10.50	11.39	12.93	22.04	24.32	2.28
velocity	7.82	9.71	9.69	9.36	9.01	8.56	8.12	7.39	8.63	183.0	8.67	9.52	8.78	7.73	9.07	8.22	

Heat 1

date 27-Jun-15

Kohei (2015) - 400m race analysis of male & female at major 2015 competitions

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kobayashi, Noaki (JPN) (19 time	6.37	11.39	16.49	21.69	27.17	32.87	38.89	45.22	45.22	5 / 1							
reaction time 0.167 interval		5.02	5.10	5.20	5.48	5.70	6.02	6.33		# of strides	11.39	10.30	11.18	12.35	21.69	23.53	1.84
velocity	7.85	9.96	9.80	9.62	9.12	8.77	8.31	7.90	8.85	179.2	8.78	9.71	8.94	8.10	9.22	8.50	
Kitagawa, Takamasa (JPN) time	6.32	11.36	16.59	21.97	27.51	33.13	39.11	45.52	45.52	9 / 2							
reaction time 0.158 interval		5.04	5.23	5.38	5.54	5.62	5.98	6.41	PB	# of strides	11.36	10.61	11.16	12.39	21.97	23.55	1.58
velocity	7.91	9.92	9.56	9.29	9.03	8.90	8.36	7.80	8.79		8.80	9.43	8.96	8.07	9.10	8.49	
Sato, Kentaro (JPN) (1994) time	6.35	11.50	16.59	21.78	27.18	32.89	39.01	45.58	45.58	4 / 3							
reaction time 0.174 interval		5.15	5.09	5.19	5.40	5.71	6.12	6.57	PB	# of strides	11.50	10.28	11.11	12.69	21.78	23.80	2.02
velocity	7.87	9.71	9.82	9.63	9.26	8.76	8.17	7.61	8.78	180.5	8.70	9.73	9.00	7.88	9.18	8.40	
Horii, Kosuke (JPN) (1994) time	6.29	11.48	16.75	22.29	28.11	33.81	39.67	45.85	45.85	7 / 4							
reaction time 0.172 interval		5.19	5.27	5.54	5.82	5.70	5.86	6.18	PB	# of strides	11.48	10.81	11.52	12.04	22.29	23.56	1.27
velocity	7.95	9.63	9.49	9.03	8.59	8.77	8.53	8.09	8.72	183.2	8.71	9.25	8.68	8.31	8.97	8.49	

2015 USATF National Championships (Eugene, OR)

FINAL

date 27-Jun-15

Track Newsletter (2015) - USATF men's championships

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Verburg, David (USA) (199 time				21.6		32.8		44.6	44.63	/ 1							
reaction time interval						11.2		11.8		# of strides			11.20	11.80	21.60	23.00	1.40
velocity				9.26		8.93		8.47	8.96				8.93	8.47	9.26	8.70	

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

Merritt, LaShawn (USA) (1	time		21.4		32.7		44.7	44.66	/ 2					
reaction time	interval				11.3		12.0		# of strides		11.30	12.00	21.40	23.30	1.90
	velocity		9.35		8.85		8.33	8.96			8.85	8.33	9.35	8.58	
Norwood, Vernon (USA) (1	time		22.0		33.0		44.8	44.80	/ 3					
reaction time	interval				11.0		11.8		# of strides		11.00	11.80	22.00	22.80	0.80
	velocity		9.09		9.09		8.47	8.93			9.09	8.47	9.09	8.77	
Nellum, Bryshon (USA) (19	time		22.0		33.3		45.2	45.18	/ 4					
reaction time	interval				11.3		11.9		# of strides		11.30	11.90	22.00	23.20	1.20
	velocity		9.09		8.85		8.40	8.85			8.85	8.40	9.09	8.62	
Clemons, Kyle (USA) (1990	time		22.1		33.5		45.4	45.35	/ 5					
reaction time	interval				11.4		11.9		# of strides		11.40	11.90	22.10	23.30	1.20
	velocity		9.05		8.77		8.40	8.82			8.77	8.40	9.05	8.58	
Chambers, Marcus (USA) (	time		23.1		34.3		45.4	45.38	/ 6					
reaction time	interval				11.2		11.1		# of strides		11.20	11.10	23.10	22.30	-0.80
	velocity		8.66		8.93		9.01	8.81			8.93	9.01	8.66	8.97	
Harris, James (USA) (1991)	time		22.2		33.8		46.0	46.02	/ 7					
reaction time	interval				11.6		12.2		# of strides		11.60	12.20	22.20	23.80	1.60
	velocity		9.01		8.62		8.20	8.69			8.62	8.20	9.01	8.40	

2015 NCAA Championships (Eugene, OR)

FINAL

date 12-Jun-15

Track Newsletter (2015) - NCAA men's championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Norwood, Vernon (USA) (1	time				22.2				45.1	45.10	4 / 1							
reaction time	interval								22.90		# of strides					22.20	22.90	0.70
	velocity				9.01				8.73	8.87						9.01	8.73	
Chambers, Marcus (USA) (	time				22.6				45.6	45.59	/ 2							
reaction time	interval								23.00		# of strides					22.60	23.00	0.40
	velocity				8.85				8.70	8.77						8.85	8.70	
Zhan, DJ (USA) (1993)	time				22.2				46.0	45.97	/ 3							
reaction time	interval								23.80		# of strides					22.20	23.80	1.60
	velocity				9.01				8.40	8.70						9.01	8.40	
Glass, Najee (USA) (1994)	time				21.4				46.3	46.31	/ 4							
reaction time	interval								24.90		# of strides					21.40	24.90	3.50
	velocity				9.35				8.03	8.64						9.35	8.03	

2014 Asian Games (Incheon, KOR)

Decathlon - Heat

date 30-Sep-14

Takeo (2014) - decathletes sprint ability and the relationship of the individual event performance

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Nakamura, Akihiko (JPN) (	time	6.33	11.62	17.22	23.02	29.04	35.19	41.47	48.19	48.19	/ 1							
reaction time	interval		5.29	5.60	5.80	6.02	6.15	6.28	6.72		# of strides	11.62	11.40	12.17	13.00	23.02	25.17	2.15
	velocity	7.90	9.45	8.93	8.62	8.31	8.13	7.96	7.44	8.30		8.61	8.77	8.22	7.69	8.69	7.95	
Ushiro, Keisuke (JPN) (198	time	6.52	11.88	17.63	23.82	30.12	36.58	43.23	50.25	50.25	/ 4							
reaction time	interval		5.36	5.75	6.19	6.30	6.46	6.65	7.02		# of strides	11.88	11.94	12.76	13.67	23.82	26.43	2.61
	velocity	7.67	9.33	8.70	8.08	7.94	7.74	7.52	7.12	7.96		8.42	8.38	7.84	7.32	8.40	7.57	

FINAL

date 28-Sep-14

Maho (2014) - race analysis of men's 400m run in the 2014 season

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Al-Masrahi, Youssef (KSA)	time	6.15	11.01	16.08	21.22	26.64	32.37	38.16	44.46	44.46	/ 1							
reaction time 0.166	interval		4.86	5.07	5.14	5.42	5.73	5.79	6.30		# of strides	11.01	10.21	11.15	12.09	21.22	23.24	2.02
	velocity	8.13	10.29	9.86	9.73	9.23	8.73	8.64	7.94	9.00		9.08	9.79	8.97	8.27	9.43	8.61	
Kanemaru, Yuzo (JPN) (19	time	6.19	11.35	16.52	21.92	27.58	33.57	39.60	46.04	46.04	/ 4							
reaction time 0.167	interval		5.16	5.17	5.40	5.66	5.99	6.03	6.44		# of strides	11.35	10.57	11.65	12.47	21.92	24.12	2.20
	velocity	8.08	9.69	9.67	9.26	8.83	8.35	8.29	7.76	8.69		8.81	9.46	8.58	8.02	9.12	8.29	
Kato, Nobuya (JPN) (1995)	time	6.46	11.75	17.10	22.65	28.37	34.31	40.13	46.13	46.13	/ 5							
reaction time 0.231	interval		5.29	5.35	5.55	5.72	5.94	5.82	6.00		# of strides	11.75	10.90	11.66	11.82	22.65	23.48	0.83
	velocity	7.74	9.45	9.35	9.01	8.74	8.42	8.59	8.33	8.67		8.51	9.17	8.58	8.46	8.83	8.52	

2014 Japanese National High School Championships (Kofu, JPN)

FINAL

date 30-Jul-14

Yanagiya (2014) - research on athlete performance and technique- 2014 data book

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kitagawa, Takamasa (JPN)	time	6.50	11.79	17.05	22.42	27.91	33.79	40.08	46.57	46.57	/ 1							
reaction time	interval		5.29	5.26	5.37	5.49	5.88	6.29	6.49		# of strides	11.79	10.63	11.37	12.78	22.42	24.15	1.73
	velocity	7.69	9.45	9.51	9.31	9.11	8.50	7.95	7.70	8.59		8.48	9.41	8.80	7.82	8.92	8.28	
Yamamoto, Satoshi (JPN) (	time	6.48	11.55	16.65	21.94	27.38	33.34	39.83	46.61	46.61	/ 2							
reaction time	interval		5.07	5.10	5.29	5.44	5.96	6.49	6.78		# of strides	11.55	10.39	11.40	13.27	21.94	24.67	2.73
	velocity	7.72	9.86	9.80	9.45	9.19	8.39	7.70	7.37	8.58		8.66	9.62	8.77	7.54	9.12	8.11	
Sasaki, Manato (JPN) (1998	time	6.30	11.59	16.88	22.35	27.99	34.10	40.54	47.37	47.37	/ 3							
reaction time	interval		5.29	5.29	5.47	5.64	6.11	6.44	6.83		# of strides	11.59	10.76	11.75	13.27	22.35	25.02	2.67
	velocity	7.94	9.45	9.45	9.14	8.87	8.18	7.76	7.32	8.44		8.63	9.29	8.51	7.54	8.95	7.99	

Ota, Kazuki (JPN) (1996)	time	6.25	11.43	16.75	22.21	27.98	34.22	40.83	47.71	47.71	/ 4							
reaction time	interval		5.18	5.32	5.46	5.77	6.24	6.61	6.88		# of strides	11.43	10.78	12.01	13.49	22.21	25.50	3.29
	velocity	8.00	9.65	9.40	9.16	8.67	8.01	7.56	7.27	8.38		8.75	9.28	8.33	7.41	9.00	7.84	
Iwamoto, Takeshi (JPN) (19	time	6.59	11.83	17.18	22.73	28.56	34.68	41.24	47.79	47.79	/ 5							
reaction time	interval		5.24	5.35	5.55	5.83	6.12	6.56	6.55		# of strides	11.83	10.90	11.95	13.11	22.73	25.06	2.33
	velocity	7.59	9.54	9.35	9.01	8.58	8.17	7.62	7.63	8.37		8.45	9.17	8.37	7.63	8.80	7.98	
Terai, Shota (JPN) (1997)	time	6.68	12.14	17.58	23.23	29.11	35.21	41.31	47.93	47.93	/ 6							
reaction time	interval		5.46	5.44	5.65	5.88	6.10	6.10	6.62		# of strides	12.14	11.09	11.98	12.72	23.23	24.70	1.47
	velocity	7.49	9.16	9.19	8.85	8.50	8.20	8.20	7.55	8.35		8.24	9.02	8.35	7.86	8.61	8.10	
Asakawa, Yuto (JPN) (1996	time	6.61	11.96	17.28	22.82	28.64	34.88	41.49	48.28	48.28	/ 7							
reaction time	interval		5.35	5.32	5.54	5.82	6.24	6.61	6.79		# of strides	11.96	10.86	12.06	13.40	22.82	25.46	2.64
	velocity	7.56	9.35	9.40	9.03	8.59	8.01	7.56	7.36	8.29		8.36	9.21	8.29	7.46	8.76	7.86	
Nomura, Kazuki (JPN) (199	time	6.64	11.92	17.18	22.67	28.29	34.54	41.29	48.44	48.44	/ 8							
reaction time	interval		5.28	5.26	5.49	5.62	6.25	6.75	7.15		# of strides	11.92	10.75	11.87	13.90	22.67	25.77	3.10
	velocity	7.53	9.47	9.51	9.11	8.90	8.00	7.41	6.99	8.26		8.39	9.30	8.42	7.19	8.82	7.76	

2014 IAAF World Junior Championships (Eugene, OR)

FINAL

date 24-Jul-14

Maho (2014) - race analysis of men's 400m run in the 2014 season

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Cedenio, Machel (TTO) (19	time	6.11	11.22	16.45	21.86	27.55	33.35	39.10	45.13	45.13	4 / 1							
reaction time 0.204	interval		5.11	5.23	5.41	5.69	5.80	5.75	6.03	NJR / PB	# of strides	11.22	10.64	11.49	11.78	21.86	23.27	1.41
	velocity	8.18	9.78	9.56	9.24	8.79	8.62	8.70	8.29	8.86		8.91	9.40	8.70	8.49	9.15	8.59	
Kato, Nobuya (JPN) (1995)	time	6.45	11.85	17.25	22.71	28.48	34.22	40.01	46.17	46.17	3 / 2							
reaction time 0.178	interval		5.40	5.40	5.46	5.77	5.74	5.79	6.16		# of strides	11.85	10.86	11.51	11.95	22.71	23.46	0.75
	velocity	7.75	9.26	9.26	9.16	8.67	8.71	8.64	8.12	8.66		8.44	9.21	8.69	8.37	8.81	8.53	
Yui, Kasaei (JPN) (1996)	time	6.33	11.54	16.85	22.48	28.34	34.29	40.44	47.08	47.08	2 / 7							
reaction time 0.150	interval		5.21	5.31	5.63	5.86	5.95	6.15	6.64		# of strides	11.54	10.94	11.81	12.79	22.48	24.60	2.12
	velocity	7.90	9.60	9.42	8.88	8.53	8.40	8.13	7.53	8.50		8.67	9.14	8.47	7.82	8.90	8.13	

Semi-Final 2

date 23-Jul-14

Maho (2014) - race analysis of men's 400m run in the 2014 season

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kato, Nobuya (JPN) (1995)	time	6.41	11.82	17.25	22.71	28.36	34.10	39.97	46.26	46.26	3 / 1							
reaction time 0.172	interval		5.41	5.43	5.46	5.65	5.74	5.87	6.29		# of strides	11.82	10.89	11.39	12.16	22.71	23.55	0.84
	velocity	7.80	9.24	9.21	9.16	8.85	8.71	8.52	7.95	8.65		8.46	9.18	8.78	8.22	8.81	8.49	

Semi-Final 1

date 23-Jul-14

Maho (2014) - race analysis of men's 400m run in the 2014 season

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Yui, Kasaei (JPN) (1996)	time	6.46	11.72	16.98	22.45	28.27	34.15	40.28	46.68	46.68	3 / 3							
reaction time 0.170	interval		5.26	5.26	5.47	5.82	5.88	6.13	6.40	PB	# of strides	11.72	10.73	11.70	12.53	22.45	24.23	1.78
	velocity	7.74	9.51	9.51	9.14	8.59	8.50	8.16	7.81	8.57		8.53	9.32	8.55	7.98	8.91	8.25	

2014 adidas (New York, NY)

FINAL

date 14-Jun-14

Vazel (2016) - How van Niekerk broke the 400m world record

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
van Niekerk, Wayde (RSA)	time		10.8		20.7		31.4		43.5	44.38	/ 2							
reaction time 0.181	interval				9.9		10.7		12.1	NR	# of strides	10.80	9.90	10.70	12.10	20.70	22.80	2.10
	velocity		9.26		10.10		9.35		8.26	9.01		9.26	10.10	9.35	8.26	9.66	8.77	

2014 USATF National Championships (Sacramento, CA)

FINAL

date 28-Jun-14

Track Newsletter (2014) - USATF men's championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Roberts, Gil (USA) (1989)	time		11.0		21.5		32.8		44.5	44.53	/ 1							
reaction time	interval				10.5		11.3		11.7	PB	# of strides	11.00	10.50	11.30	11.70	21.50	23.00	1.50
	velocity		9.09		9.52		8.85		8.55	8.98		9.09	9.52	8.85	8.55	9.30	8.70	
Mance, Josh (USA) (1992)	time		11.4		22.0		33.1		44.9	44.89	/ 2							
reaction time	interval				10.6		11.1		11.8		# of strides	11.40	10.60	11.10	11.80	22.00	22.90	0.90
	velocity		8.77		9.43		9.01		8.47	8.91		8.77	9.43	9.01	8.47	9.09	8.73	
Clemons, Kyle (USA) (1990	time		11.5		22.0		33.0		45.0	45.00	/ 3							
reaction time	interval				10.5		11.0		12.0	PB	# of strides	11.50	10.50	11.00	12.00	22.00	23.00	1.00
	velocity		8.70		9.52		9.09		8.33	8.89		8.70	9.52	9.09	8.33	9.09	8.70	
Norwood, Vernon (USA) (1	time		11.5		22.1		33.2		45.0	45.02	/ 4							
reaction time	interval				10.6		11.1		11.8	PB	# of strides	11.50	10.60	11.10	11.80	22.10	22.90	0.80
	velocity		8.70		9.43		9.01		8.47	8.88		8.70	9.43	9.01	8.47	9.05	8.73	
Mitchell, Manteo (USA) (19	time		11.4		22.2		33.4		45.1	45.09	/ 5							
reaction time	interval				10.8		11.2		11.7		# of strides	11.40	10.80	11.20	11.70	22.20	22.90	0.70
	velocity		8.77		9.26		8.93		8.55	8.87		8.77	9.26	8.93	8.55	9.01	8.73	
Berry, Mike (USA) (1991)	time		11.5		22.4		33.5		45.1	45.12	/ 6							
reaction time	interval				10.9		11.1		11.6		# of strides	11.50	10.90	11.10	11.60	22.40	22.70	0.30
	velocity		8.70		9.17		9.01		8.62	8.87		8.70	9.17	9.01	8.62	8.93	8.81	

Spratling, Brycan (USA) (1	time	11.4	22.2	33.5	45.9	45.90	/ 7								
reaction time	interval		10.8	11.3	12.4		# of strides	11.40	10.80	11.30	12.40	22.20	23.70	1.50	
	velocity	8.77	9.26	8.85	8.06	8.71		8.77	9.26	8.85	8.06	9.01	8.44		
Alexander, Akeem (USA) (1	time	11.5	22.5	33.9			/ 8								
reaction time	interval		11.0	11.4		DQ	# of strides	11.50	11.00	11.40					
	velocity	8.70	9.09	8.77				8.70	9.09	8.77					

2014 NCAA Championships (Eugene, OR)

FINAL date 13-Jun-14

Track Newsletter (2014) - NCAA men's championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Lendore, Deon (TTO) (1992	time				21.6		32.7		45.0	45.02	4 / 1							
reaction time	interval						11.10		12.30		# of strides			11.10	12.30	21.60	23.40	1.80
	velocity				9.26		9.01		8.13	8.88				9.01	8.13	9.26	8.55	
Berry, Mike (USA) (1991)	time				21.9		32.9		45.1	45.07	6 / 2							
reaction time	interval						11.00		12.20		# of strides			11.00	12.20	21.90	23.20	1.30
	velocity				9.13		9.09		8.20	8.88				9.09	8.20	9.13	8.62	
Norwood, Vernon (USA) (1	time				21.8		33.1		45.5	45.45	3 / 3							
reaction time	interval						11.30		12.40		# of strides			11.30	12.40	21.80	23.70	1.90
	velocity				9.17		8.85		8.06	8.80				8.85	8.06	9.17	8.44	
Spratling, Brycen (USA) (1	time				22.0		33.1		45.5	45.49	/ 4							
reaction time	interval						11.10		12.40		# of strides			11.10	12.40	22.00	23.50	1.50
	velocity				9.09		9.01		8.06	8.79				9.01	8.06	9.09	8.51	
Glass, Najee (USA) (1994)	time				21.7		32.9		45.6	45.63	/ 5							
reaction time	interval						11.20		12.70		# of strides			11.20	12.70	21.70	23.90	2.20
	velocity				9.22		8.93		7.87	8.77				8.93	7.87	9.22	8.37	
Harris, James (USA) (1991)	time				21.5		32.8		45.6	45.64	/ 6							
reaction time	interval						11.30		12.80		# of strides			11.30	12.80	21.50	24.10	2.60
	velocity				9.30		8.85		7.81	8.76				8.85	7.81	9.30	8.30	
Giesting, Chris (USA) (199	time				21.9				46.1	46.10	/ 7							
reaction time	interval								24.20		# of strides					21.90	24.20	2.30
	velocity				9.13				8.26	8.68						9.13	8.26	
Graham, Hugh (JAM) (1992	time				21.8				46.6	46.65	/ 8							
reaction time	interval								24.80		# of strides					21.80	24.80	3.00
	velocity				9.17				8.06	8.57						9.17	8.06	

2014 Japanese National Championships (Fukushima, JPN)

FINAL date 08-Jun-14

Maho (2014) - race analysis of men's 400m run in the 2014 season

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kanemaru, Yuzo (JPN) (199	time	6.18	11.21	16.28	21.70	27.32	33.18	39.25	45.69	45.69	7 / 1							
reaction time	interval		5.03	5.07	5.42	5.62	5.86	6.07	6.44		# of strides	11.21	10.49	11.48	12.51	21.70	23.99	2.29
	velocity	8.09	9.94	9.86	9.23	8.90	8.53	8.24	7.76	8.75	178.0	8.92	9.53	8.71	7.99	9.22	8.34	
Watanabe, Kazuya (JPN) (1	time	6.21	11.25	16.38	21.86	27.55	33.37	39.66	46.30	46.30	4 / 2							
reaction time	interval		5.04	5.13	5.48	5.69	5.82	6.29	6.64		# of strides	11.25	10.61	11.51	12.93	21.86	24.44	2.58
	velocity	8.05	9.92	9.75	9.12	8.79	8.59	7.95	7.53	8.64	185.7	8.89	9.43	8.69	7.73	9.15	8.18	
Kobayashi, Naoki (JPN) (19	time	6.14	11.36	16.45	21.83	27.56	33.45	39.65	46.38	46.38	6 / 3							
reaction time	interval		5.22	5.09	5.38	5.73	5.89	6.20	6.73		# of strides	11.36	10.47	11.62	12.93	21.83	24.55	2.72
	velocity	8.14	9.58	9.82	9.29	8.73	8.49	8.06	7.43	8.62	184.7	8.80	9.55	8.61	7.73	9.16	8.15	
Kato Nobuya (JPN) (1995)	time	6.44	11.65	16.95	22.35	27.93	33.79	39.89	46.49	46.49	8 / 4							
reaction time	interval		5.21	5.30	5.40	5.58	5.86	6.10	6.60		# of strides	11.65	10.70	11.44	12.70	22.35	24.14	1.79
	velocity	7.76	9.60	9.43	9.26	8.96	8.53	8.20	7.58	8.60	170.0	8.58	9.35	8.74	7.87	8.95	8.29	
Ishitsuka, Yusuke (JPN) (19	time	6.15	11.25	16.48	21.91	27.58	33.52	39.81	46.69	46.69	9 / 5							
reaction time	interval		5.10	5.23	5.43	5.67	5.94	6.29	6.88		# of strides	11.25	10.66	11.61	13.17	21.91	24.78	2.87
	velocity	8.13	9.80	9.56	9.21	8.82	8.42	7.95	7.27	8.57	180.7	8.89	9.38	8.61	7.59	9.13	8.07	

2014 Japanese National Multi-Event Championships (Nagano, JPN)

Decathlon - Heat date 31-May-14

Takeo (2014) - decathletes sprint ability and the relationship of the individual event performance

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ushiro, Keisuke (JPN) (198	time	6.45	11.90	17.55	23.38	29.51	35.98	42.57	49.66	49.66	4 / 3							
reaction time	interval		5.45	5.65	5.83	6.13	6.47	6.59	7.09	PB	# of strides	11.90	11.48	12.60	13.68	23.38	26.28	2.90
	velocity	7.75	9.17	8.85	8.58	8.16	7.73	7.59	7.05	8.05		8.40	8.71	7.94	7.31	8.55	7.61	

Decathlon - Heat date 31-May-14

Takeo (2014) - decathletes sprint ability and the relationship of the individual event performance

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Nakamura, Akihiko (JPN) (1	time	6.40	11.82	17.35	23.09	28.93	34.95	41.05	47.48	47.48	5 / 1							
reaction time	interval		5.42	5.53	5.74	5.84	6.02	6.10	6.43		# of strides	11.82	11.27	11.86	12.53	23.09	24.39	1.30
	velocity	7.81	9.23	9.04	8.71	8.56	8.31	8.20	7.78	8.42		8.46	8.87	8.43	7.98	8.66	8.20	

2014 Shizuoka International Athletics Meeting (Fukuroi, JPN)

FINAL date 03-May-14

Maho (2014) - race analysis of men's 400m run in the 2014 season

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential

Kanemaru, Yuzo (JPN) (19	time	6.18	11.25	16.35	21.63	27.22	33.08	39.11	45.46	45.46	/ 1							
reaction time	interval		5.07	5.10	5.28	5.59	5.86	6.03	6.35		# of strides	11.25	10.38	11.45	12.38	21.63	23.83	2.20
	velocity	8.09	9.86	9.80	9.47	8.94	8.53	8.29	7.87	8.80		8.89	9.63	8.73	8.08	9.25	8.39	
Ishitsuka, Yusuke (JPN) (19	time	6.12	11.24	16.35	21.72	27.32	33.20	39.37	45.98	45.98	/ 2							
reaction time	interval		5.12	5.11	5.37	5.60	5.88	6.17	6.61		# of strides	11.24	10.48	11.48	12.78	21.72	24.26	2.54
	velocity	8.17	9.77	9.78	9.31	8.93	8.50	8.10	7.56	8.70		8.90	9.54	8.71	7.82	9.21	8.24	
Kobayashi, Naoki (JPN) (19	time	6.32	11.44	16.67	21.98	27.61	33.52	39.64	46.20	46.20	/ 3							
reaction time	interval		5.12	5.23	5.31	5.63	5.91	6.12	6.56	PB	# of strides	11.44	10.54	11.54	12.68	21.98	24.22	2.24
	velocity	7.91	9.77	9.56	9.42	8.88	8.46	8.17	7.62	8.66		8.74	9.49	8.67	7.89	9.10	8.26	
Kato Nobuya (JPN) (1995)	time	6.58	11.96	17.28	22.57	28.13	33.88	39.86	46.21	46.21	/ 4							
reaction time	interval		5.38	5.32	5.29	5.56	5.75	5.98	6.35		# of strides	11.96	10.61	11.31	12.33	22.57	23.64	1.07
	velocity	7.60	9.29	9.40	9.45	8.99	8.70	8.36	7.87	8.66		8.36	9.43	8.84	8.11	8.86	8.46	
Kimura, Kazushi (JPN) (19	time	6.51	11.93	17.42	22.88	28.40	34.07	40.01	46.29	46.29	/ 5							
reaction time	interval		5.42	5.49	5.46	5.52	5.67	5.94	6.28	PB	# of strides	11.93	10.95	11.19	12.22	22.88	23.41	0.53
	velocity	7.68	9.23	9.11	9.16	9.06	8.82	8.42	7.96	8.64		8.38	9.13	8.94	8.18	8.74	8.54	
Watanabe, Kazuya (JPN) (1	time	6.29	11.52	16.75	22.12	27.69	33.61	39.87	46.53	46.53	/ 6							
reaction time	interval		5.23	5.23	5.37	5.57	5.92	6.26	6.66		# of strides	11.52	10.60	11.49	12.92	22.12	24.41	2.29
	velocity	7.95	9.56	9.56	9.31	8.98	8.45	7.99	7.51	8.60		8.68	9.43	8.70	7.74	9.04	8.19	
Yui, Kaisei (JPN) (1996)	time	6.33	11.54	16.72	22.07	27.71	33.60	39.88	46.78	46.78	/ 7							
reaction time	interval		5.21	5.18	5.35	5.64	5.89	6.28	6.90	PB	# of strides	11.54	10.53	11.53	13.18	22.07	24.71	2.64
	velocity	7.90	9.60	9.65	9.35	8.87	8.49	7.96	7.25	8.55		8.67	9.50	8.67	7.59	9.06	8.09	
Kimura, Jun (JPN) (1991)	time	6.31	11.35	16.52	22.02	27.77	33.72	40.09	47.11	47.11	/ 8							
reaction time	interval		5.04	5.17	5.50	5.75	5.95	6.37	7.02		# of strides	11.35	10.67	11.70	13.39	22.02	25.09	3.07
	velocity	7.92	9.92	9.67	9.09	8.70	8.40	7.85	7.12	8.49		8.81	9.37	8.55	7.47	9.08	7.97	
Hirose, Hideyuki (JPN) (198	time	6.32	11.47	16.60	22.05	27.71	33.69	40.15	47.31	47.31	/ 9							
reaction time	interval		5.15	5.13	5.45	5.66	5.98	6.46	7.16		# of strides	11.47	10.58	11.64	13.62	22.05	25.26	3.21
	velocity	7.91	9.71	9.75	9.17	8.83	8.36	7.74	6.98	8.45		8.72	9.45	8.59	7.34	9.07	7.92	

2014 Nittai University Distance Meeting (Wakayama, JPN)

Matsuo (2014) - research on athlete performance and technique- 2014 data book

Decathlon - Heat

date 26-Apr-14

Takeo (2014) - decathletes sprint ability and the relationship of the individual event performance

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Nakamura, Akihiko (JPN) (1	time	6.39	11.69	17.15	22.83	28.73	34.81	41.06	47.79	47.79	6 / 1							*Takeo (2014)*
reaction time	interval		5.30	5.46	5.68	5.90	6.08	6.25	6.73		# of strides	11.69	11.14	11.98	12.98	22.83	24.96	2.13
	velocity	7.82	9.43	9.16	8.80	8.47	8.22	8.00	7.43	8.37		8.55	8.98	8.35	7.70	8.76	8.01	
Otobe, Takumi (JPN) (1989	time	6.34	11.78	17.52	23.48	29.68	36.02	42.58	49.75	49.75	5 / 3							*Matsuo (2014)*
reaction time	interval		5.44	5.74	5.96	6.20	6.34	6.56	7.17		# of strides	11.78	11.70	12.54	13.73	23.48	26.27	2.79
	velocity	7.89	9.19	8.71	8.39	8.06	7.89	7.62	6.97	8.04		8.49	8.55	7.97	7.28	8.52	7.61	

Decathlon - Heat

date 26-Apr-14

Takeo (2014) - decathletes sprint ability and the relationship of the individual event performance

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ushiro, Keisuke (JPN) (198	time	6.55	12.00	17.65	23.55	29.68	36.09	42.69	49.84	49.84	5 / 3							
reaction time	interval		5.45	5.65	5.90	6.13	6.41	6.60	7.15	PB	# of strides	12.00	11.55	12.54	13.75	23.55	26.29	2.74
	velocity	7.63	9.17	8.85	8.47	8.16	7.80	7.58	6.99	8.03		8.33	8.66	7.97	7.27	8.49	7.61	

2013 IAAF World Championships (Moscow, RUS)

FINAL

date 13-Aug-13

(2013) - www.trackandfieldnews.com/index.php?option=com_content&view=article&id=1698

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Merritt, LaShawn (USA) (1	time		11.1		21.2		31.8		43.7	43.74	6 / 1							
reaction time 0.256	interval				10.1		10.6		11.9	PB	# of strides	11.10	10.10	10.60	11.90	21.20	22.50	1.30
	velocity		9.01		9.90		9.43		8.40	9.14		9.01	9.90	9.43	8.40	9.43	8.89	
McQuay, Tony (USA) (1990	time		11.1		21.7		32.7		44.4	44.40	4 / 2							
reaction time 0.155	interval				10.6		11.0		11.7	PB	# of strides	11.10	10.60	11.00	11.70	21.70	22.70	1.00
	velocity		9.01		9.43		9.09		8.55	9.01		9.01	9.43	9.09	8.55	9.22	8.81	
Santos, Luguelín (DOM) (1	time		11.6		22.0		32.7		44.5	44.52	7 / 3							
reaction time 0.350	interval				10.4		10.7		11.8		# of strides	11.60	10.40	10.70	11.80	22.00	22.50	0.50
	velocity		8.62		9.62		9.35		8.47	8.98		8.62	9.62	9.35	8.47	9.09	8.89	
Borlée, Jonathan (BEL) (19	time		11.1		21.4		32.4		44.5	44.54	8 / 4							
reaction time 0.224	interval				10.3		11.0		12.1		# of strides	11.10	10.30	11.00	12.10	21.40	23.10	1.70
	velocity		9.01		9.71		9.09		8.26	8.98		9.01	9.71	9.09	8.26	9.35	8.66	
Maslák, Pavel (CZE) (1991)	time		11.2		21.8		32.9		44.9	44.91	1 / 5							
reaction time 0.169	interval				10.6		11.1		12.0		# of strides	11.20	10.60	11.10	12.00	21.80	23.10	1.30
	velocity		8.93		9.43		9.01		8.33	8.91		8.93	9.43	9.01	8.33	9.17	8.66	
Al-Masrahi, Youssef (KSA)	time		11.4		21.8		32.7		45.0	44.97	3 / 6							
reaction time 0.162	interval				10.4		10.9		12.3		# of strides	11.40	10.40	10.90	12.30	21.80	23.20	1.40
	velocity		8.77		9.62		9.17		8.13	8.89		8.77	9.62	9.17	8.13	9.17	8.62	
James, Kirani (GRN) (1992)	time		11.1		21.3		31.9		45.0	44.99	5 / 7							
reaction time 0.186	interval				10.2		10.6		13.1		# of strides	11.10	10.20	10.60	13.10	21.30	23.70	2.40
	velocity		9.01		9.80		9.43		7.63	8.89		9.01	9.80	9.43	7.63	9.39	8.44	

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

Henriques, Anderson (BRA	time		11.2		21.5		32.7		45.0	45.03	2 / 8							
reaction time 0.157	interval				10.3		11.2		12.3		# of strides	11.20	10.30	11.20	12.30	21.50	23.50	2.00
	velocity		8.93		9.71		8.93		8.13	8.88		8.93	9.71	8.93	8.13	9.30	8.51	

2013 Japanese National High School Championships (Oita, JPN)

Yanagiya (2014) - research on athlete performance and technique- 2014 data book

FINAL date 30-Jul-13

Matsuo (2013) - 66th high school championships: JAF scientific committee - biomechanics data collection

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kato, Nobuya (JPN) (1995)	time	6.52	11.97	17.35	22.68	28.29	33.99	39.92	46.11	46.11	4 / 1							*Yanagiya (2014)*
reaction time	interval		5.45	5.38	5.33	5.61	5.70	5.93	6.19		# of strides	11.97	10.71	11.31	12.12	22.68	23.43	0.75
	velocity	7.67	9.17	9.29	9.38	8.91	8.77	8.43	8.08	8.67		8.35	9.34	8.84	8.25	8.82	8.54	
Yui, Kaisei (JPN) (1996)	time		11.58		22.63		34.13		46.79	46.79	7 / 2							Matsuo (2013)
reaction time	interval				11.05		11.50		12.66		# of strides	11.58	11.05	11.50	12.66	22.63	24.16	1.53
	velocity		8.64		9.05		8.70		7.90	8.55		8.64	9.05	8.70	7.90	8.84	8.28	
Nakagawa, Shigeki (JPN) (1	time		11.62		22.37		33.92		46.97	46.97	8 / 3							Matsuo (2013)
reaction time	interval				10.75		11.55		13.05	PB	# of strides	11.62	10.75	11.55	13.05	22.37	24.60	2.23
	velocity		8.61		9.30		8.66		7.66	8.52		8.61	9.30	8.66	7.66	8.94	8.13	
Iwaki, Takuma (JPN) (1996)	time		11.67		22.67		34.43		47.04	47.04	5 / 4							Matsuo (2013)
reaction time	interval				11.00		11.76		12.61		# of strides	11.67	11.00	11.76	12.61	22.67	24.37	1.70
	velocity		8.57		9.09		8.50		7.93	8.50		8.57	9.09	8.50	7.93	8.82	8.21	
Kobayashi, Hidekazu (JPN)	time		11.70		22.83		34.60		47.51	47.51	3 / 5							Matsuo (2013)
reaction time	interval				11.13		11.77		12.91		# of strides	11.70	11.13	11.77	12.91	22.83	24.68	1.85
	velocity		8.55		8.98		8.50		7.75	8.42		8.55	8.98	8.50	7.75	8.76	8.10	
Matsuo, Yuki (JPN) (1995)	time		11.55		22.47		34.45		47.54	47.54	9 / 6							Matsuo (2013)
reaction time	interval				10.92		11.98		13.09	PB	# of strides	11.55	10.92	11.98	13.09	22.47	25.07	2.60
	velocity		8.66		9.16		8.35		7.64	8.41		8.66	9.16	8.35	7.64	8.90	7.98	
Kitagawa, Takamasa (JPN)	time		11.75		23.00		35.12		47.89	47.89	2 / 7							Matsuo (2013)
reaction time	interval				11.25		12.12		12.77		# of strides	11.75	11.25	12.12	12.77	23.00	24.89	1.89
	velocity		8.51		8.89		8.25		7.83	8.35		8.51	8.89	8.25	7.83	8.70	8.04	
Honma, Daisuke (JPN) (199	time		12.02		23.37		35.45		48.79	48.79	6 / 8							Matsuo (2013)
reaction time	interval				11.35		12.08		13.34		# of strides	12.02	11.35	12.08	13.34	23.37	25.42	2.05
	velocity		8.32		8.81		8.28		7.50	8.20		8.32	8.81	8.28	7.50	8.56	7.87	

2013 Golden Spike (Ostrava, CZE)

FINAL date 27-Jun-13

Vazel (2018) - historical analysis and coaching commentary - biomechanical report - London 2017 - Men's 400m

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
van Niekerk, Wayde (RSA)	time		11.2		21.3		32.5		45.09	45.09	/ 2							
reaction time 0.217	interval				10.1		11.2		12.6	PB	# of strides	11.20	10.10	11.20	12.59	21.30	23.79	2.49
	velocity		8.93		9.90		8.93		7.94	8.87		8.93	9.90	8.93	7.94	9.39	8.41	

2013 USATF National Championships (Des Moines, IA)

FINAL date 22-Jun-13

Track Newsletter (2013) - USATF men's championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Merritt, LaShawn (USA) (19	time						32.3		44.2	44.21	/ 1							
reaction time 0.278	interval								11.90		# of strides				11.90			
	velocity						9.29		8.40	9.05					8.40			
McQuay, Tony (USA) (1990	time						32.6		44.7	44.74	/ 2							
reaction time 0.190	interval								12.10		# of strides				12.10			
	velocity						9.20		8.26	8.94					8.26			
Hall, Arman (USA) (1994)	time						32.6		45.0	45.01	/ 3							
reaction time 0.203	interval								12.40		# of strides				12.40			
	velocity						9.20		8.06	8.89					8.06			
Mance, Josh (USA) (1992)	time						32.6		45.2	45.22	/ 4							
reaction time 0.193	interval								12.60		# of strides				12.60			
	velocity						9.20		7.94	8.85					7.94			
Harris, James (USA) (1991)	time						32.8		45.2	45.23	/ 5							
reaction time 0.245	interval								12.40	=PB	# of strides				12.40			
	velocity						9.15		8.06	8.84					8.06			
Verburg, David (USA) (199	time						32.7		45.3	45.34	/ 6							
reaction time 0.204	interval								12.60		# of strides				12.60			
	velocity						9.17		7.94	8.82					7.94			
Mitchell, Manteo (USA) (19	time						32.7		45.8	45.81	/ 7							
reaction time 0.212	interval								13.10		# of strides				13.10			
	velocity						9.17		7.63	8.73					7.63			
Lawrence, Torrin (USA) (19	time						32.9		46.0	46.02	/ 8							
reaction time 0.211	interval								13.10		# of strides				13.10			
	velocity						9.12		7.63	8.69					7.63			

2013 NCAA Championships (Eugene, OR)

FINAL date 07-Jun-13

Track Newsletter (2013) - NCAA men's championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Nellum, Bryshon (USA) (19	time				22.0		33.1		44.7	44.73	/ 1							
reaction time	interval						11.10		11.60	PB	# of strides			11.10	11.60	22.00	22.70	0.70
	velocity				9.09		9.01		8.62	8.94				9.01	8.62	9.09	8.81	
Lendore, Deon (TTO) (1992	time				21.9		33.0		44.9	44.94	/ 2							
reaction time	interval						11.10		11.90	PB	# of strides			11.10	11.90	21.90	23.00	1.10
	velocity				9.13		9.01		8.40	8.90				9.01	8.40	9.13	8.70	
Hall, Arman (USA) (1994)	time				21.6		32.8		45.0	45.02	/ 3							
reaction time	interval						11.20		12.20	PB	# of strides			11.20	12.20	21.60	23.40	1.80
	velocity				9.26		8.93		8.20	8.88				8.93	8.20	9.26	8.55	
Verburg, David (USA) (199	time				22.0		33.2		45.0	45.03	/ 4							
reaction time	interval						11.20		11.80	PB	# of strides			11.20	11.80	22.00	23.00	1.00
	velocity				9.09		8.93		8.47	8.88				8.93	8.47	9.09	8.70	
Harris, James (USA) (1991)	time				22.1		33.4		45.6	45.56	/ 5							
reaction time	interval						11.30		12.20		# of strides			11.30	12.20	22.10	23.50	1.40
	velocity				9.05		8.85		8.20	8.78				8.85	8.20	9.05	8.51	
Graham, Hugh (JAM) (1992	time				22.2		33.6		45.6	45.57	/ 6							
reaction time	interval						11.40		12.00		# of strides			11.40	12.00	22.20	23.40	1.20
	velocity				9.01		8.77		8.33	8.78				8.77	8.33	9.01	8.55	
Brown-Stewart, Cass (USA	time				22.4		34.0		46.0	45.98	/ 7							
reaction time	interval						11.60		12.00		# of strides			11.60	12.00	22.40	23.60	1.20
	velocity				8.93		8.62		8.33	8.70				8.62	8.33	8.93	8.47	
Gauntlett, Akheem (JAM) (	time				22.3		33.8		46.1	46.10	/ 8							
reaction time	interval						11.50		12.30		# of strides			11.50	12.30	22.30	23.80	1.50
	velocity				8.97		8.70		8.13	8.68				8.70	8.13	8.97	8.40	

2013 Japanese National Multi-Event Championship (Nagano, JPN)

Decathlon - Heat date 01-Jun-13

Takeo (2014) - decathletes sprint ability and the relationship of the individual event performance

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Nakamura, Akihiko (JPN) (1	time	6.34	11.66	17.15	22.85	28.80	34.71	40.84	47.32	47.32	6 / 1							
reaction time	interval		5.32	5.49	5.70	5.95	5.91	6.13	6.48		# of strides	11.66	11.19	11.86	12.61	22.85	24.47	1.62
	velocity	7.89	9.40	9.11	8.77	8.40	8.46	8.16	7.72	8.45		8.58	8.94	8.43	7.93	8.75	8.17	

Decathlon - Heat date 01-Jun-13

Takeo (2014) - decathletes sprint ability and the relationship of the individual event performance

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ushiro, Keisuke (JPN) (198	time	6.66	12.23	17.88	23.85	30.04	36.41	43.16	50.43	50.43	6 / 4							
reaction time	interval		5.57	5.65	5.97	6.19	6.37	6.75	7.27		# of strides	12.23	11.62	12.56	14.02	23.85	26.58	2.73
	velocity	7.51	8.98	8.85	8.38	8.08	7.85	7.41	6.88	7.93		8.18	8.61	7.96	7.13	8.39	7.52	

2013 Wakayama Athletics Meeting (Wakayama, JPN)

Decathlon - Heat date 27-Apr-13

Takeo (2014) - decathletes sprint ability and the relationship of the individual event performance

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Nakamura, Akihiko (JPN) (1	time	6.33	11.56	16.95	22.85	29.04	35.19	41.38	48.09	48.09	6 / 1							
reaction time	interval		5.23	5.39	5.90	6.19	6.15	6.19	6.71		# of strides	11.56	11.29	12.34	12.90	22.85	25.24	2.39
	velocity	7.90	9.56	9.28	8.47	8.08	8.13	8.08	7.45	8.32		8.65	8.86	8.10	7.75	8.75	7.92	

Decathlon - Heat date 27-Apr-13

Takeo (2014) - decathletes sprint ability and the relationship of the individual event performance

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ushiro, Keisuke (JPN) (198	time	6.66	12.23	17.92	23.90	30.22	36.76	43.66	51.11	51.11	6 / 4							
reaction time	interval		5.57	5.69	5.98	6.32	6.54	6.90	7.45		# of strides	12.23	11.67	12.86	14.35	23.90	27.21	3.31
	velocity	7.51	8.98	8.79	8.36	7.91	7.65	7.25	6.71	7.83		8.18	8.57	7.78	6.97	8.37	7.35	

2012 Kokutai National Sport Festival (Gifu, JPN)

FINAL date 08-Oct-12

Maho (2013) - race analysis of the men's 400m run in competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Nakano, Hiroyuki (JPN) (19	time	6.31	11.42	16.72	22.15	27.64	33.29	39.30	45.82	45.82	/ 1							
reaction time	interval		5.11	5.30	5.43	5.49	5.65	6.01	6.52		# of strides	11.42	10.73	11.14	12.53	22.15	23.67	1.52
	velocity	7.92	9.78	9.43	9.21	9.11	8.85	8.32	7.67	8.73		8.76	9.32	8.98	7.98	9.03	8.45	
Suguimati, Mahau (JPN) (1	time	6.15	11.25	16.55	21.99	27.68	33.60	39.70	46.21	46.21	/ 2							
reaction time	interval		5.10	5.30	5.44	5.69	5.92	6.10	6.51	PB	# of strides	11.25	10.74	11.61	12.61	21.99	24.22	2.23
	velocity	8.13	9.80	9.43	9.19	8.79	8.45	8.20	7.68	8.66		8.89	9.31	8.61	7.93	9.10	8.26	
Takase, Kei (JPN) (1988)	time	6.06	11.01	16.05	21.33	27.01	33.02	39.35	46.48	46.48	/ 3							
reaction time	interval		4.95	5.04	5.28	5.68	6.01	6.33	7.13		# of strides	11.01	10.32	11.69	13.46	21.33	25.15	3.82
	velocity	8.25	10.10	9.92	9.47	8.80	8.32	7.90	7.01	8.61		9.08	9.69	8.55	7.43	9.38	7.95	
Watanabe, Kazuya (JPN) (1	time	6.19	11.42	16.75	22.21	27.86	33.85	40.05	46.62	46.62	/ 4							
reaction time	interval		5.23	5.33	5.46	5.65	5.99	6.20	6.57		# of strides	11.42	10.79	11.64	12.77	22.21	24.41	2.20
	velocity	8.08	9.56	9.38	9.16	8.85	8.35	8.06	7.61	8.58		8.76	9.27	8.59	7.83	9.00	8.19	
Yagisawa, Junki (JPN)	time	6.33	11.61	16.92	22.39	28.14	34.11	40.32	46.89	46.89	/ 5							
reaction time	interval		5.28	5.31	5.47	5.75	5.97	6.21	6.57	PB	# of strides	11.61	10.78	11.72	12.78	22.39	24.50	2.11
	velocity	7.90	9.47	9.42	9.14	8.70	8.38	8.05	7.61	8.53		8.61	9.28	8.53	7.82	8.93	8.16	

Momiki, Shogo (JPN) (1992	time	6.12	11.28	16.55	22.04	27.81	33.81	40.09	47.02	47.02	/ 6							
reaction time	interval		5.16	5.27	5.49	5.77	6.00	6.28	6.93		# of strides	11.28	10.76	11.77	13.21	22.04	24.98	2.94
	velocity	8.17	9.69	9.49	9.11	8.67	8.33	7.96	7.22	8.51		8.87	9.29	8.50	7.57	9.07	8.01	
Urano, Akihiro (JPN) (1990	time	6.35	11.48	16.85	22.33	27.98	33.94	40.23	47.20	47.20	/ 7							
reaction time	interval		5.13	5.37	5.48	5.65	5.96	6.29	6.97		# of strides	11.48	10.85	11.61	13.26	22.33	24.87	2.54
	velocity	7.87	9.75	9.31	9.12	8.85	8.39	7.95	7.17	8.47		8.71	9.22	8.61	7.54	8.96	8.04	
Kimura, Kazushi (JPN) (19	time	6.57	11.89	17.38	22.93	28.62	34.50	40.72	47.38	47.38	/ 8							
reaction time	interval		5.32	5.49	5.55	5.69	5.88	6.22	6.66		# of strides	11.89	11.04	11.57	12.88	22.93	24.45	1.52
	velocity	7.61	9.40	9.11	9.01	8.79	8.50	8.04	7.51	8.44		8.41	9.06	8.64	7.76	8.72	8.18	

2012 Olympic Games (London, GBR)

Decathlon - Heat

date 08-Aug-12

Takeo (2014) - decathletes sprint ability and the relationship of the individual event performance

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ushiro, Keisuke (JPN) (198	time	6.70	12.34	18.12	24.13	30.39	36.87	43.61	50.78	50.78	7 / 4							
reaction time 0.190	interval		5.64	5.78	6.01	6.26	6.48	6.74	7.17		# of strides	12.34	11.79	12.74	13.91	24.13	26.65	2.52
	velocity	7.46	8.87	8.65	8.32	7.99	7.72	7.42	6.97	7.88	179.5	8.10	8.48	7.85	7.19	8.29	7.50	

FINAL

date 06-Aug-12

Butler (2016) - IAAF statistics handbook- special edition: Games of the XXXI Olympiad- Rio 2016

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
James, Kirani (GRN) (1992)	time		11.1		21.3		32.0		43.9	43.94	5 / 1							
reaction time 0.163	interval				10.20		10.70		11.90	AR	# of strides	11.10	10.20	10.70	11.90	21.30	22.60	1.30
	velocity		9.01		9.80		9.35		8.40	9.10	157.7	9.01	9.80	9.35	8.40	9.39	8.85	
Santos, Luguelín (DOM) (1	time		11.1		21.4		32.2		44.5	44.46	7 / 2							
reaction time 0.185	interval				10.30		10.80		12.30		# of strides	11.10	10.30	10.80	12.30	21.40	23.10	1.70
	velocity		9.01		9.71		9.26		8.13	9.00	186.5	9.01	9.71	9.26	8.13	9.35	8.66	
Gordon, Lalonde (TTO) (19	time		11.2		21.6		32.5		44.5	44.52	4 / 3							
reaction time 0.159	interval				10.40		10.90		12.00	PB	# of strides	11.20	10.40	10.90	12.00	21.60	22.90	1.30
	velocity		8.93		9.62		9.17		8.33	8.98	160.7	8.93	9.62	9.17	8.33	9.26	8.73	
Brown, Chris (BAH) (1978)	time		11.1		21.5		32.4		44.8	44.79	6 / 4							
reaction time 0.166	interval				10.40		10.90		12.40		# of strides	11.10	10.40	10.90	12.40	21.50	23.30	1.80
	velocity		9.01		9.62		9.17		8.06	8.93	187.7	9.01	9.62	9.17	8.06	9.30	8.58	
Borlée, Kevin (BEL) (1988)	time		11.2		21.9		32.8		44.8	44.81	9 / 5							
reaction time 0.151	interval				10.70		10.90		12.00		# of strides	11.20	10.70	10.90	12.00	21.90	22.90	1.00
	velocity		8.93		9.35		9.17		8.33	8.93	173.2	8.93	9.35	9.17	8.33	9.13	8.73	
Borlée, Jonathan (BEL) (19	time		11.1		21.6		32.6		44.8	44.83	2 / 6							
reaction time 0.173	interval				10.50		11.00		12.20		# of strides	11.10	10.50	11.00	12.20	21.60	23.20	1.60
	velocity		9.01		9.52		9.09		8.20	8.92	172.7	9.01	9.52	9.09	8.20	9.26	8.62	
Pinder, Demetrius (BAH) (1	time		10.9		21.4		32.3		45.0	44.98	8 / 7							
reaction time 0.153	interval				10.50		10.90		12.70		# of strides	10.90	10.50	10.90	12.70	21.40	23.60	2.20
	velocity		9.17		9.52		9.17		7.87	8.89	174.7	9.17	9.52	9.17	7.87	9.35	8.47	
Solomon, Steven (AUS) (19	time		11.1		21.9		32.9		45.1	45.14	3 / 8							
reaction time 0.143	interval				10.80		11.00		12.20		# of strides	11.10	10.80	11.00	12.20	21.90	23.20	1.30
	velocity		9.01		9.26		9.09		8.20	8.86	169.7	9.01	9.26	9.09	8.20	9.13	8.62	

Semi-Final 2

date 05-Aug-12

Hadley (2012) - uka 2012 olympic games report: 400m, 4x 400m

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
James, Kirani (GRN) (1992)	time				21.40		32.13		44.59	44.59	7 / 1							
reaction time 0.170	interval						10.73		12.46		# of strides			10.73	12.46	21.40	23.19	1.79
	velocity				9.35		9.32		8.03	8.97	158.7			9.32	8.03	9.35	8.62	

Heat 3

date 04-Aug-12

Hadley (2012) - uka 2012 olympic games report: 400m, 4x 400m

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Borlée, Jonathan (BEL) (19	time				21.20				44.43	44.43	6 / 1							
reaction time 0.179	interval								23.23	NR	# of strides					21.20	23.23	2.03
	velocity				9.43				8.61	9.00	171.2					9.43	8.61	

Heat 2

date 04-Aug-12

Hadley (2012) - uka 2012 olympic games report: 400m, 4x 400m

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
James, Kirani (GRN) (1992)	time				21.96				45.23	45.23	6 / 1							
reaction time 0.173	interval								23.27		# of strides					21.96	23.27	1.31
	velocity				9.11				8.59	8.84	158.7					9.11	8.59	

Heat 1

date 04-Aug-12

Hadley (2012) - uka 2012 olympic games report: 400m, 4x 400m

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Santos, Luguelín (DOM) (1	time				21.10				45.04	45.04	7 / 1							
reaction time 0.187	interval								23.94		# of strides					21.10	23.94	2.84
	velocity				9.48				8.35	8.88	188.7					9.48	8.35	

2012 Japanese National High School Championships (Niigata, JPN)

FINAL

date 29-Jul-12

Yasunori (2012) - 65th high school championships: JAF scientific committee - biomechanics data collection

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Itahana, Kohei (JPN) (1994)	time		11.78		23.18		34.81		47.55	47.55	6 / 1							

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

reaction time	interval		11.40	11.63	12.74		# of strides	11.78	11.40	11.63	12.74	23.18	24.37	1.19
	velocity	8.49	8.77	8.60	7.85	8.41		8.49	8.77	8.60	7.85	8.63	8.21	
Aikyo, Shotaro (JPN) (1994	time	11.86	23.19	34.95	47.84	47.84	8 / 2							
reaction time	interval		11.33	11.76	12.89		# of strides	11.86	11.33	11.76	12.89	23.19	24.65	1.46
	velocity	8.43	8.83	8.50	7.76	8.36		8.43	8.83	8.50	7.76	8.62	8.11	
Kato, Nobuya (JPN) (1995)	time	12.88	24.11	35.76	48.27	48.27	3 / 3							
reaction time	interval		11.23	11.65	12.51		# of strides	12.88	11.23	11.65	12.51	24.11	24.16	0.05
	velocity	7.76	8.90	8.58	7.99	8.29		7.76	8.90	8.58	7.99	8.30	8.28	
Kishida, Kentaro (JPN) (19	time	11.96	23.58	35.60	48.40	48.40	5 / 4							
reaction time	interval		11.62	12.02	12.80		# of strides	11.96	11.62	12.02	12.80	23.58	24.82	1.24
	velocity	8.36	8.61	8.32	7.81	8.26		8.36	8.61	8.32	7.81	8.48	8.06	
Sakurai, Takahiro (JPN) (19	time	12.11	24.05	36.48	48.72	48.72	7 / 5							
reaction time	interval		11.94	12.43	12.24		# of strides	12.11	11.94	12.43	12.24	24.05	24.67	0.62
	velocity	8.26	8.38	8.05	8.17	8.21		8.26	8.38	8.05	8.17	8.32	8.11	
Arai, Masanori (JPN) (1994)	time	12.11	24.05	36.48	48.72	48.72	2 / 6							
reaction time	interval		11.94	12.43	12.24		# of strides	12.11	11.94	12.43	12.24	24.05	24.67	0.62
	velocity	8.26	8.38	8.05	8.17	8.21		8.26	8.38	8.05	8.17	8.32	8.11	
Ogi, Moeto (JPN) (1994)	time	12.33	24.02	35.86	49.03	49.03	4 / 7							
reaction time	interval		11.69	11.84	13.17		# of strides	12.33	11.69	11.84	13.17	24.02	25.01	0.99
	velocity	8.11	8.55	8.45	7.59	8.16		8.11	8.55	8.45	7.59	8.33	8.00	
Maruike, Yuta (JPN) (1994)	time	12.59	24.87	36.93	49.12	49.12	9 / 8							
reaction time	interval		12.28	12.06	12.19		# of strides	12.59	12.28	12.06	12.19	24.87	24.25	-0.62
	velocity	7.94	8.14	8.29	8.20	8.14		7.94	8.14	8.29	8.20	8.04	8.25	

2012 USA Olympic Trials (Eugene, OR)

FINAL date 24-Jun-12

Hymans (2020) - history of the US olympic trials - track and field

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Merritt, LaShawn (USA) (1	time				21.8		32.4		44.12	44.12	6 / 1							
reaction time 0.264	interval						10.60		11.72		# of strides			10.60	11.72	21.80	22.32	0.52
	velocity				9.17		9.43		8.53	9.07				9.43	8.53	9.17	8.96	
McQuay, Tony (USA) (1990	time				21.6		32.4		44.49	44.49	5 / 2							
reaction time 0.206	interval						10.80		12.09		# of strides			10.80	12.09	21.60	22.89	1.29
	velocity				9.26		9.26		8.27	8.99				9.26	8.27	9.26	8.74	
Nellum, Bryshon (USA) (19	time				21.9		32.9		44.80	44.80	7 / 3							
reaction time 0.225	interval						11.00		11.90		# of strides			11.00	11.90	21.90	22.90	1.00
	velocity				9.13		9.09		8.40	8.93				9.09	8.40	9.13	8.73	
Mance, Josh (USA) (1992)	time				21.7		32.6		44.88	44.88	4 / 4							
reaction time 0.190	interval						10.90		12.28		# of strides			10.90	12.28	21.70	23.18	1.48
	velocity				9.22		9.17		8.14	8.91				9.17	8.14	9.22	8.63	
Mitchell, Manteo (USA) (19	time				21.2		32.3		44.96	44.96	3 / 5							
reaction time 0.191	interval						11.10		12.66	PB	# of strides			11.10	12.66	21.20	23.76	2.56
	velocity				9.43		9.01		7.90	8.90				9.01	7.90	9.43	8.42	
Wariner, Jeremy (USA) (19	time				21.8		33.2		45.24	45.24	2 / 6							
reaction time 0.231	interval						11.40		12.04		# of strides			11.40	12.04	21.80	23.44	1.64
	velocity				9.17		8.77		8.31	8.84				8.77	8.31	9.17	8.53	
Verburg, David (USA) (199	time				21.7		33.1		45.36	45.36	1 / 7							
reaction time 0.230	interval						11.40		12.26		# of strides			11.40	12.26	21.70	23.66	1.96
	velocity				9.22		8.77		8.16	8.82				8.77	8.16	9.22	8.45	
Gehret, Brady (USA) (1992)	time				21.3		32.4		45.48	5.48	8 / 8							
reaction time 0.219	interval						11.10		13.08		# of strides			11.10	13.08	21.30	24.18	2.88
	velocity				9.39		9.01		7.65	72.99				9.01	7.65	9.39	8.27	

2012 Japanese National Championships (Osaka, JPN)

FINAL date 09-Jun-12

Maho (2013) - race analysis of the men's 400m run in competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kanemaru, Yuzo (JPN) (19	time	6.04	10.98	16.05	21.57	27.35	33.36	39.58	46.18	46.18	7 / 1							
reaction time	interval		4.94	5.07	5.52	5.78	6.01	6.22	6.60		# of strides	10.98	10.59	11.79	12.82	21.57	24.61	3.04
	velocity	8.28	10.12	9.86	9.06	8.65	8.32	8.04	7.58	8.66	180.5	9.11	9.44	8.48	7.80	9.27	8.13	
Nakano, Hiroyuki (JPN) (19	time	6.37	11.66	17.12	22.76	28.40	34.06	39.93	46.23	46.23	4 / 2							
reaction time	interval		5.29	5.46	5.64	5.64	5.66	5.87	6.30		# of strides	11.66	11.10	11.30	12.17	22.76	23.47	0.71
	velocity	7.85	9.45	9.16	8.87	8.87	8.83	8.52	7.94	8.65	182.7	8.58	9.01	8.85	8.22	8.79	8.52	
Azuma, Yoshihiro (JPN) (1	time	6.29	11.45	16.68	22.19	27.86	33.66	39.73	46.26	46.26	5 / 3							
reaction time	interval		5.16	5.23	5.51	5.67	5.80	6.07	6.53	PB	# of strides	11.45	10.74	11.47	12.60	22.19	24.07	1.88
	velocity	7.95	9.69	9.56	9.07	8.82	8.62	8.24	7.66	8.65	184.0	8.73	9.31	8.72	7.94	9.01	8.31	
Momiki, Shogo (JPN) (1992	time	6.15	11.28	16.48	22.02	27.72	33.58	39.82	46.83	46.83	6 / 4							
reaction time	interval		5.13	5.20	5.54	5.70	5.86	6.24	7.01		# of strides	11.28	10.74	11.56	13.25	22.02	24.81	2.79

	velocity	8.13	9.75	9.62	9.03	8.77	8.53	8.01	7.13	8.54	194.0	8.87	9.31	8.65	7.55	9.08	8.06	
Motoshio, Ryo (JPN) (1990	time	6.13	11.30	16.62	22.26	28.14	34.12	40.29	46.89	46.89	2 / 5							
reaction time	interval		5.17	5.32	5.64	5.88	5.98	6.17	6.60		# of strides	11.30	10.96	11.86	12.77	22.26	24.63	2.37
	velocity	8.16	9.67	9.40	8.87	8.50	8.36	8.10	7.58	8.53	174.5	8.85	9.12	8.43	7.83	8.98	8.12	
Watanabe, Kazuya (JPN) (1	time	6.24	11.51	16.88	22.49	28.25	34.23	40.45	47.05	47.05	9 / 6							
reaction time	interval		5.27	5.37	5.61	5.76	5.98	6.22	6.60		# of strides	11.51	10.98	11.74	12.82	22.49	24.56	2.07
	velocity	8.01	9.49	9.31	8.91	8.68	8.36	8.04	7.58	8.50	186.0	8.69	9.11	8.52	7.80	8.89	8.14	
Yasui, Kazuki (JPN) (1990)	time	6.47	11.74	17.08	22.67	28.30	34.20	40.42	47.13	47.13	3 / 7							
reaction time	interval		5.27	5.34	5.59	5.63	5.90	6.22	6.71		# of strides	11.74	10.93	11.53	12.93	22.67	24.46	1.79
	velocity	7.73	9.49	9.36	8.94	8.88	8.47	8.04	7.45	8.49	173.0	8.52	9.15	8.67	7.73	8.82	8.18	
Hirose, Hideyuki (JPN) (198	time	6.22	11.39	16.68	22.25	27.98	34.04	40.49	47.66	47.66	8 / 8							
reaction time	interval		5.17	5.29	5.57	5.73	6.06	6.45	7.17		# of strides	11.39	10.86	11.79	13.62	22.25	25.41	3.16
	velocity	8.04	9.67	9.45	8.98	8.73	8.25	7.75	6.97	8.39	186.0	8.78	9.21	8.48	7.34	8.99	7.87	

2012 Japanese National Multi-Event Championships (Nagano, JPN)

Decathlon - Heat

date 02-Jun-12

Takeo (2014) - decathletes sprint ability and the relationship of the individual event performance

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Nakamura, Akihiko (JPN) (1	time	6.34	11.53	16.87	22.46	28.26	34.27	40.48	47.17	47.17	4 / 1							
reaction time	interval		5.19	5.34	5.59	5.80	6.01	6.21	6.69	PB	# of strides	11.53	10.93	11.81	12.90	22.46	24.71	2.25
	velocity	7.89	9.63	9.36	8.94	8.62	8.32	8.05	7.47	8.48		8.67	9.15	8.47	7.75	8.90	8.09	

Decathlon - Heat

date 02-Jun-12

Takeo (2014) - decathletes sprint ability and the relationship of the individual event performance

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ushiro, Keisuke (JPN) (198	time	6.66	12.17	17.76	23.64	29.70	36.15	43.01	50.58	50.58	6 / 4							
reaction time	interval		5.51	5.59	5.88	6.06	6.45	6.86	7.57		# of strides	12.17	11.47	12.51	14.43	23.64	26.94	3.30
	velocity	7.51	9.07	8.94	8.50	8.25	7.75	7.29	6.61	7.91		8.22	8.72	7.99	6.93	8.46	7.42	

2012 Tokyo Athletics Championships (Chofu, JPN)

Decathlon - Heat

date 21-Apr-12

Takeo (2014) - decathletes sprint ability and the relationship of the individual event performance

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Nakamura, Akihiko (JPN) (1	time	6.26	11.53	16.88	22.48	28.34	34.48	40.84	47.67	47.67	???							
reaction time	interval		5.27	5.35	5.60	5.86	6.14	6.36	6.83	PB	# of strides	11.53	10.95	12.00	13.19	22.48	25.19	2.71
	velocity	7.99	9.49	9.35	8.93	8.53	8.14	7.86	7.32	8.39		8.67	9.13	8.33	7.58	8.90	7.94	
Ushiro, Keisuke (JPN) (198	time	6.59	12.16	17.88	23.89	30.10	36.68	43.67	51.16	51.16	???							
reaction time	interval		5.57	5.72	6.01	6.21	6.58	6.99	7.49		# of strides	12.16	11.73	12.79	14.48	23.89	27.27	3.38
	velocity	7.59	8.98	8.74	8.32	8.05	7.60	7.15	6.68	7.82		8.22	8.53	7.82	6.91	8.37	7.33	

2011 IAAF World Championships (Daegu, KOR)

FINAL

date 30-Aug-11

Butler (2013) - IAAF world athletic results 2008-2011 full results

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
James, Kirani (GRN) (1992)	time				21.6		32.5		44.60	44.60	5 / 1							
reaction time 0.137	interval						10.9		12.1	PB	# of strides			10.90	12.10	21.60	23.00	1.40
	velocity				9.26		9.17		8.26	8.97	162.0			9.17	8.26	9.26	8.70	
Merritt, LaShawn (USA) (1	time				21.5		32.5		44.63	44.63	4 / 2							
reaction time 0.263	interval						11.0		12.1		# of strides			11.00	12.13	21.50	23.13	1.63
	velocity				9.30		9.09		8.24	8.96	172.7			9.09	8.24	9.30	8.65	
Borlée, Kevin (BEL) (1988)	time				21.7		32.7		44.90	44.90	6 / 3							
reaction time 0.182	interval						11.0		12.2		# of strides			11.00	12.20	21.70	23.20	1.50
	velocity				9.22		9.09		8.20	8.91	172.0			9.09	8.20	9.22	8.62	
Gonzales, Jermaine (JAM) (	time						32.7		44.99	44.99	3 / 4							
reaction time 0.138	interval								12.3		# of strides				12.29			
	velocity						9.17		8.14	8.89	168.0				8.14			
Borlée, Jonathan (BEL) (19	time				21.7		32.9		45.07	45.07	8 / 5							
reaction time 0.160	interval						11.2		12.2		# of strides			11.20	12.17	21.70	23.37	1.67
	velocity				9.22		8.93		8.22	8.88	171.7			8.93	8.22	9.22	8.56	
Bartholomew, Rondell (GR	time						32.7		45.45	45.45	2 / 6							
reaction time 0.314	interval								12.8		# of strides				12.75			
	velocity						9.17		7.84	8.80	170.2				7.84			
Henry, Tabarie (ISV) (1987)	time						33.1		45.55	45.55	7 / 7							
reaction time 0.167	interval								12.5		# of strides				12.45			
	velocity						9.06		8.03	8.78	166.7				8.03			
Ogunode, Femi (QAT) (199	time						33.5		45.55	45.55	1 / 8							
reaction time 0.170	interval								12.1		# of strides				12.05			
	velocity						8.96		8.30	8.78	184.2				8.30			

2011 Japanese National High School Championships (Kitakami, JPN)

FINAL

date 04-Aug-11

Abe (2011) - 64th high school championships: JAF scientific committee - biomechanics data collection

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Yamamoto, Daisuke (JPN)	time		11.68		22.85		34.45		47.48	47.48	5 / 1							
reaction time	interval				11.17		11.60		13.03		# of strides	11.68	11.17	11.60	13.03	22.85	24.63	1.78

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

	velocity	8.56	8.95	8.62	7.67	8.42		8.56	8.95	8.62	7.67	8.75	8.12	
Yamaki, Kakeru (JPN) (1996	time	11.77	23.07	34.99	47.79	47.79	4 / 2							
reaction time	interval		11.30	11.92	12.80		# of strides	11.77	11.30	11.92	12.80	23.07	24.72	1.65
	velocity	8.50	8.85	8.39	7.81	8.37		8.50	8.85	8.39	7.81	8.67	8.09	
Fukunaga, Takuya (JPN) (1	time	11.64	22.68	34.80	47.80	47.80	7 / 3							
reaction time	interval		11.04	12.12	13.00		# of strides	11.64	11.04	12.12	13.00	22.68	25.12	2.44
	velocity	8.59	9.06	8.25	7.69	8.37		8.59	9.06	8.25	7.69	8.82	7.96	
Sato, Takuya (JPN) (1993)	time	11.58	22.63	34.78	48.01	48.01	3 / 4							
reaction time	interval		11.05	12.15	13.23		# of strides	11.58	11.05	12.15	13.23	22.63	25.38	2.75
	velocity	8.64	9.05	8.23	7.56	8.33		8.64	9.05	8.23	7.56	8.84	7.88	
Inoguchi, Yuta (JPN) (1994	time	12.32	23.52	35.31	48.08	48.08	9 / 5							
reaction time	interval		11.20	11.79	12.77		# of strides	12.32	11.20	11.79	12.77	23.52	24.56	1.04
	velocity	8.12	8.93	8.48	7.83	8.32		8.12	8.93	8.48	7.83	8.50	8.14	
Minagi, Yuta (JPN) (1993)	time	11.83	23.22	35.14	48.13	48.13	6 / 6							
reaction time	interval		11.39	11.92	12.99		# of strides	11.83	11.39	11.92	12.99	23.22	24.91	1.69
	velocity	8.45	8.78	8.39	7.70	8.31		8.45	8.78	8.39	7.70	8.61	8.03	
Kuroda, Takuya (JPN)	time	11.78	22.82	35.10	48.26	48.26	2 / 7							
reaction time	interval		11.04	12.28	13.16		# of strides	11.78	11.04	12.28	13.16	22.82	25.44	2.62
	velocity	8.49	9.06	8.14	7.60	8.29		8.49	9.06	8.14	7.60	8.76	7.86	
Aikyo, Shotaro (JPN) (1994	time	11.78	23.03	34.95	48.59	48.59	8 / 8							
reaction time	interval		11.25	11.92	13.64		# of strides	11.78	11.25	11.92	13.64	23.03	25.56	2.53
	velocity	8.49	8.89	8.39	7.33	8.23		8.49	8.89	8.39	7.33	8.68	7.82	

2011 USATF National Championships (Eugene, OR)

FINAL date 25-Jun-11

Track Newsletter (2011) - USATF men's championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
McQuay, Tony (USA) (1990	time		11.0		21.9		32.9		44.7	44.68	/ 1							
reaction time 0.213	interval				10.90		11.00		11.80	PB	# of strides	11.00	10.90	11.00	11.80	21.90	22.80	0.90
	velocity		9.09		9.17		9.09		8.47	8.95		9.09	9.17	9.09	8.47	9.13	8.77	
Wariner, Jeremy (USA) (19	time		11.1		21.6		32.8		45.0	44.98	/ 2							
reaction time 0.223	interval				10.50		11.20		12.20		# of strides	11.10	10.50	11.20	12.20	21.60	23.40	1.80
	velocity		9.01		9.52		8.93		8.20	8.89		9.01	9.52	8.93	8.20	9.26	8.55	
Nixon, Greg (USA) (1981)	time		11.5		22.1		33.2		45.0	44.98	/ 3							
reaction time 0.234	interval				10.60		11.10		11.80		# of strides	11.50	10.60	11.10	11.80	22.10	22.90	0.80
	velocity		8.70		9.43		9.01		8.47	8.89		8.70	9.43	9.01	8.47	9.05	8.73	
Torrence, Jamaal (USA) (19	time		11.3		21.8		32.9		45.1	45.11	/ 4							
reaction time 0.169	interval				10.50		11.10		12.20		# of strides	11.30	10.50	11.10	12.20	21.80	23.30	1.50
	velocity		8.85		9.52		9.01		8.20	8.87		8.85	9.52	9.01	8.20	9.17	8.58	
Berry, Mike (USA) (1991)	time		11.6		22.3		33.3		45.2	45.22	/ 5							
reaction time 0.169	interval				10.70		11.00		11.90		# of strides	11.60	10.70	11.00	11.90	22.30	22.90	0.60
	velocity		8.62		9.35		9.09		8.40	8.85		8.62	9.35	9.09	8.40	8.97	8.73	
Smith, Miles (USA) (1984)	time		11.2		21.8		33.2		45.3	45.34	/ 6							
reaction time 0.123	interval				10.60		11.40		12.10		# of strides	11.20	10.60	11.40	12.10	21.80	23.50	1.70
	velocity		8.93		9.43		8.77		8.26	8.82		8.93	9.43	8.77	8.26	9.17	8.51	
Smith, Calvin (USA) (1987)	time		11.2		21.7		33.0		45.4	45.39	/ 7							
reaction time 0.126	interval				10.50		11.30		12.40		# of strides	11.20	10.50	11.30	12.40	21.70	23.70	2.00
	velocity		8.93		9.52		8.85		8.06	8.81		8.93	9.52	8.85	8.06	9.22	8.44	

2011 Japanese National Championships (Kumagaya, JPN)

FINAL date 12-Jun-11

Maho (2013) - race analysis of the men's 400m run in competition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kanemaru, Yuzo (JPN) (19	time	6.07	11.01	16.02	21.33	26.98	32.91	39.10	45.68	45.68	/ 1							
reaction time	interval		4.94	5.01	5.31	5.65	5.93	6.19	6.58		# of strides	11.01	10.32	11.58	12.77	21.33	24.35	3.02
	velocity	8.24	10.12	9.98	9.42	8.85	8.43	8.08	7.60	8.76		9.08	9.69	8.64	7.83	9.38	8.21	
Hirose, Hideyuki (JPN) (198	time	6.31	11.37	16.58	21.91	27.44	33.11	39.21	45.84	45.84	/ 2							
reaction time	interval		5.06	5.21	5.33	5.53	5.67	6.10	6.63	=PB	# of strides	11.37	10.54	11.20	12.73	21.91	23.93	2.02
	velocity	7.92	9.88	9.60	9.38	9.04	8.82	8.20	7.54	8.73		8.80	9.49	8.93	7.86	9.13	8.36	
Ishitsuka, Yusuke (JPN) (19	time	6.10	11.06	16.28	21.75	27.46	33.29	39.46	46.20	46.20	/ 3							
reaction time	interval		4.96	5.22	5.47	5.71	5.83	6.17	6.74		# of strides	11.06	10.69	11.54	12.91	21.75	24.45	2.70
	velocity	8.20	10.08	9.58	9.14	8.76	8.58	8.10	7.42	8.66		9.04	9.35	8.67	7.75	9.20	8.18	
Nakano, Hiroyuki (JPN) (19	time	6.19	11.42	16.78	22.29	27.99	33.76	39.77	46.31	46.31	/ 4							
reaction time	interval		5.23	5.36	5.51	5.70	5.77	6.01	6.54		# of strides	11.42	10.87	11.47	12.55	22.29	24.02	1.73
	velocity	8.08	9.56	9.33	9.07	8.77	8.67	8.32	7.65	8.64		8.76	9.20	8.72	7.97	8.97	8.33	

2011 Japanese National Multi-Event Championships (Kawasaki, JPN)

Decathlon - Heat date 04-Jun-11

Takeo (2014) - decathletes sprint ability and the relationship of the individual event performance

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential

Nakamura, Akihiko (JPN) (1	time	6.34	11.61	17.08	22.87	28.81	34.86	41.12	47.76	47.76	???							
reaction time	interval		5.27	5.47	5.79	5.94	6.05	6.26	6.64	PB	# of strides	11.61	11.26	11.99	12.90	22.87	24.89	2.02
	velocity	7.89	9.49	9.14	8.64	8.42	8.26	7.99	7.53	8.38		8.61	8.88	8.34	7.75	8.75	8.04	
Ushiro, Keisuke (JPN) (198	time	6.69	12.20	17.87	23.93	30.05	36.41	43.08	50.28	50.28	???							
reaction time	interval		5.51	5.67	6.06	6.12	6.36	6.67	7.20	PB	# of strides	12.20	11.73	12.48	13.87	23.93	26.35	2.42
	velocity	7.47	9.07	8.82	8.25	8.17	7.86	7.50	6.94	7.96		8.20	8.53	8.01	7.21	8.36	7.59	

2011 Wakayama Athletics Meeting (Wakayama, JPN)

Decathlon - Heat date 23-Apr-11

Hisashi (2012) - perfromance analysis of Japanese record holder Keisuke Ushiro

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ushiro, Keisuke (JPN) (198	time	6.73	12.42	18.30	24.45	30.74	37.19	43.75	50.80	50.80	6 / 3							
reaction time	interval		5.69	5.88	6.15	6.29	6.45	6.56	7.05		# of strides	12.42	12.03	12.74	13.61	24.45	26.35	1.90
	velocity	7.43	8.79	8.50	8.13	7.95	7.75	7.62	7.09	7.87		8.05	8.31	7.85	7.35	8.18	7.59	

2010 Asian Games (Guangzhou, CHN)

Decathlon - Heat date 24-Nov-10

Takeo (2014) - decathletes sprint ability and the relationship of the individual event performance

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ushiro, Keisuke (JPN) (198	time	6.80	12.54	18.50	24.70	31.04	37.49	44.12	51.14	51.14	/ 4							
reaction time	interval		5.74	5.96	6.20	6.34	6.45	6.63	7.02		# of strides	12.54	12.16	12.79	13.65	24.70	26.44	1.74
	velocity	7.35	8.71	8.39	8.06	7.89	7.75	7.54	7.12	7.82		7.97	8.22	7.82	7.33	8.10	7.56	

2010 Japanese National High School Championships (Okinawa, JPN)

FINAL date 29-Jul-10

Matsuo (2010) - 63rd high school championships: JAF scientific committee - biomechanics data collection

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Yamazaki, Kengo (JPN) (19	time	6.59	11.92	17.37	22.97	28.69	34.63	40.97	47.79	47.79	/ 1							
reaction time	interval		5.33	5.45	5.60	5.72	5.94	6.34	6.82		# of strides	11.92	11.05	11.66	13.16	22.97	24.82	1.85
	velocity	7.59	9.38	9.17	8.93	8.74	8.42	7.89	7.33	8.37		8.39	9.05	8.58	7.60	8.71	8.06	
Kayata, Takashi (JPN) (199	time	6.29	11.56	16.88	22.43	28.15	34.35	40.96	48.16	48.16	/ 2							
reaction time	interval		5.27	5.32	5.55	5.72	6.20	6.61	7.20		# of strides	11.56	10.87	11.92	13.81	22.43	25.73	3.30
	velocity	7.95	9.49	9.40	9.01	8.74	8.06	7.56	6.94	8.31		8.65	9.20	8.39	7.24	8.92	7.77	
Furukawa, Ryo (JPN) (1992	time	6.47	11.97	17.43	23.14	28.96	35.14	41.51	48.31	48.31	/ 3							
reaction time	interval		5.50	5.46	5.71	5.82	6.18	6.37	6.80		# of strides	11.97	11.17	12.00	13.17	23.14	25.17	2.03
	velocity	7.73	9.09	9.16	8.76	8.59	8.09	7.85	7.35	8.28		8.35	8.95	8.33	7.59	8.64	7.95	

2010 Japanese National Multi-Event Championships (Kawasaki, JPN)

Decathlon - Heat date 12-Jun-10

Hisashi (2012) - perfromance analysis of Japanese record holder Keisuke Ushiro

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ushiro, Keisuke (JPN) (198	time	6.80	12.45	18.22	24.18	30.15	36.48	43.26	50.58	50.58	???							
reaction time	interval		5.65	5.77	5.96	5.97	6.33	6.78	7.32	PB	# of strides	12.45	11.73	12.30	14.10	24.18	26.40	2.22
	velocity	7.35	8.85	8.67	8.39	8.38	7.90	7.37	6.83	7.91		8.03	8.53	8.13	7.09	8.27	7.58	

2010 NCAA Championships (Eugene, OR)

FINAL date 11-Jun-10

Track Newsletter (2010) - NCAA men's championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
James, Kirani (GRN) (1992)	time				21.9		33.1		45.1	45.05	/ 1							
reaction time	interval						11.2		12.0		# of strides			11.20	12.00	21.90	23.20	1.30
	velocity				9.13		8.93		8.33	8.88				8.93	8.33	9.13	8.62	
Sanford, Donald (USA) (19	time				21.9		33.2		45.2	45.21	/ 2							
reaction time	interval						11.3		12.0	PB	# of strides			11.30	12.00	21.90	23.30	1.40
	velocity				9.13		8.85		8.33	8.85				8.85	8.33	9.13	8.58	
Hughes, Joey (USA) (1990)	time				22.3		33.1		45.2	45.23	/ 3							
reaction time	interval						10.8		12.1		# of strides			10.80	12.10	22.30	22.90	0.60
	velocity				8.97		9.26		8.26	8.84				9.26	8.26	8.97	8.73	
Smith, Calvin (USA) (1987)	time				21.9		33.1		45.4	45.37	/ 4							
reaction time	interval						11.2		12.3		# of strides			11.20	12.30	21.90	23.50	1.60
	velocity				9.13		8.93		8.13	8.82				8.93	8.13	9.13	8.51	
Tate, Tavaris (USA) (1990)	time				21.8		33.0		45.6	45.56	/ 5							
reaction time	interval						11.2		12.6		# of strides			11.20	12.60	21.80	23.80	2.00
	velocity				9.17		8.93		7.94	8.78				8.93	7.94	9.17	8.40	
Pinder, Demetrius (BAH) (1	time				21.8		33.1		45.6	45.56	/ 6							
reaction time	interval						11.3		12.5		# of strides			11.30	12.50	21.80	23.80	2.00
	velocity				9.17		8.85		8.00	8.78				8.85	8.00	9.17	8.40	
Borleé, Kevin (BEL) (1988)	time				22.0		33.4		45.8	45.80	/ 7							
reaction time	interval						11.4		12.4		# of strides			11.40	12.40	22.00	23.80	1.80
	velocity				9.09		8.77		8.06	8.73				8.77	8.06	9.09	8.40	
Henry, Tabarie (ISV) (1987)	time				21.4		33.6		45.9	45.92	/ 8							
reaction time	interval						12.2		12.3		# of strides			12.20	12.30	21.40	24.50	3.10
	velocity				9.35		8.20		8.13	8.71				8.20	8.13	9.35	8.16	

2010 Jamaica Invitational (Kingston, JAM)

FINAL date 01-May-10

Vazel (2015) - Van Niekerk and Merritt were on for the record at 300m

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential

Gay, Tyson (USA) (1982)	time		10.6					45.05	45.05	/ 1								
reaction time	interval							34.5		# of strides	10.60							
	velocity		9.43					8.71	8.88		9.43							

2010 Wakayama Athletics Meeting (Wakayama, JPN)

Decathlon - Heat

date 24-Apr-10

Hisashi (2012) - perfromance analysis of Japanese record holder Keisuke Ushiro

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ushiro, Keisuke (JPN) (198	time	7.01	12.69	18.55	24.50	30.63	36.91	43.52	50.61	50.61	8 / 4							
reaction time	interval		5.68	5.86	5.95	6.13	6.28	6.61	7.09		# of strides	12.69	11.81	12.41	13.70	24.50	26.11	1.61
	velocity	7.13	8.80	8.53	8.40	8.16	7.96	7.56	7.05	7.90		7.88	8.47	8.06	7.30	8.16	7.66	

2009 Gunma Relays (Maebashi, JPN)

Decathlon - Heat

date 10-Oct-09

Hisashi (2010) - the run performance analysis in the decathlon sprint events

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Tanaka, Hiromasa (JPN) (19	time	6.52	12.15	18.00	23.94	30.06	36.38	42.90	49.89	49.89	6 / 2							
reaction time	interval		5.63	5.85	5.94	6.12	6.32	6.52	6.99		# of strides	12.15	11.79	12.44	13.51	23.94	25.95	2.01
	velocity	7.67	8.88	8.55	8.42	8.17	7.91	7.67	7.15	8.02		8.23	8.48	8.04	7.40	8.35	7.71	

Decathlon - Heat

date 10-Oct-09

Hisashi (2010) - the run performance analysis in the decathlon sprint events

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ushiro, Keisuke (JPN) (198	time	6.95	12.75	18.68	24.69	30.77	37.09	43.73	50.88	50.88	3 / 5							
reaction time	interval		5.80	5.93	6.01	6.08	6.32	6.64	7.15		# of strides	12.75	11.94	12.40	13.79	24.69	26.19	1.50
	velocity	7.19	8.62	8.43	8.32	8.22	7.91	7.53	6.99	7.86		7.84	8.38	8.06	7.25	8.10	7.64	

Maho (2013) - race analysis of the men's 400m run in competition

2009 IAAF World Championships (Berlin, GER)

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

FINAL

date 21-Aug-09

Graubner (2011) - biomechanical analysis of the sprint and hurdle events at the 2009 IAAF world championships in athletics

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Merritt, LaShawn (USA) (1	time	6.08	11.14	16.25	21.49	26.89	32.30	37.98	44.06	44.06	4 / 1							*Graubner (2011)*
reaction time 0.161	interval		5.06	5.11	5.24	5.40	5.41	5.68	6.08		# of strides	11.14	10.35	10.81	11.76	21.49	22.57	1.08
	velocity	8.22	9.88	9.78	9.54	9.26	9.24	8.80	8.22	9.08		8.98	9.66	9.25	8.50	9.31	8.86	
Wariner, Jeremy (USA) (19	time	6.01	10.98	16.13	21.41	26.86	32.34	38.11	44.60	44.60	6 / 2							*Graubner (2011)*
reaction time 0.162	interval		4.97	5.15	5.28	5.45	5.48	5.77	6.49		# of strides	10.98	10.43	10.93	12.26	21.41	23.19	1.78
	velocity	8.32	10.06	9.71	9.47	9.17	9.12	8.67	7.70	8.97		9.11	9.59	9.15	8.16	9.34	8.62	
Quow, Rennie (TTO) (1987)	time	6.49	11.73	17.08	22.45	27.82	33.29	39.06	45.02	45.02	3 / 3							*Maho (2013)*
reaction time 0.195	interval		5.24	5.35	5.37	5.37	5.47	5.77	5.96		# of strides	11.73	10.72	10.84	11.73	22.45	22.57	0.12
	velocity	7.70	9.54	9.35	9.31	9.31	9.14	8.67	8.39	8.88		8.53	9.33	9.23	8.53	8.91	8.86	
Henry, Tabarie (ISV) (1987)	time		11.18		21.83		33.17		45.42	45.42	7 / 4							*Graubner (2009)*
reaction time 0.162	interval				10.65		11.34		12.25		# of strides	11.18	10.65	11.34	12.25	21.83	23.59	1.76
	velocity		8.94		9.39		8.82		8.16	8.81		8.94	9.39	8.82	8.16	9.16	8.48	
Brown, Chris (BAH) (1978)	time		10.98		21.31		32.53		45.47	45.47	5 / 5							*Graubner (2009)*
reaction time 0.161	interval				10.33		11.22		12.94		# of strides	10.98	10.33	11.22	12.94	21.31	24.16	2.85
	velocity		9.11		9.68		8.91		7.73	8.80		9.11	9.68	8.91	7.73	9.39	8.28	
Gillick, David (IRL) (1983)	time		11.24		21.83		33.18		45.53	45.53	2 / 6							*Graubner (2009)*
reaction time 0.148	interval				10.59		11.35		12.35		# of strides	11.24	10.59	11.35	12.35	21.83	23.70	1.87
	velocity		8.90		9.44		8.81		8.10	8.79		8.90	9.44	8.81	8.10	9.16	8.44	
Bingham, Michael (GBR) (1	time		11.19		21.84		33.02		45.56	45.56	8 / 7							*Graubner (2009)*
reaction time 0.172	interval				10.65		11.18		12.54		# of strides	11.19	10.65	11.18	12.54	21.84	23.72	1.88
	velocity		8.94		9.39		8.94		7.97	8.78		8.94	9.39	8.94	7.97	9.16	8.43	
Djhone, Leslie (FRA) (1981	time		11.34		22.04		33.46		45.90	45.90	1 / 8							*Graubner (2009)*
reaction time 0.151	interval				10.70		11.42		12.44		# of strides	11.34	10.70	11.42	12.44	22.04	23.86	1.82
	velocity		8.82		9.35		8.76		8.04	8.71		8.82	9.35	8.76	8.04	9.07	8.38	

Decathlon - Heat

date 19-Aug-09

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

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Karpov, Dmitriy (KAZ) (198	time		11.89		23.17		35.47		49.45	49.45	7 / 1							
reaction time 0.127	interval				11.28		12.30		13.98		# of strides	11.89	11.28	12.30	13.98	23.17	26.28	3.11
	velocity		8.41		8.87		8.13		7.15	8.09		8.41	8.87	8.13	7.15	8.63	7.61	
Pogorelov, Aleksandr (RUS	time		12.05		23.81		36.41		50.27	50.27	4 / 3							
reaction time 0.171	interval				11.76		12.60		13.86		# of strides	12.05	11.76	12.60	13.86	23.81	26.46	2.65
	velocity		8.30		8.50		7.94		7.22	7.96		8.30	8.50	7.94	7.22	8.40	7.56	

Decathlon - Heat

date 19-Aug-09

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

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hardee, Trey (USA) (1984)	time		11.41		22.50		34.64		48.13	48.13	5 / 1							
reaction time 0.148	interval				11.09		12.14		13.49		# of strides	11.41	11.09	12.14	13.49	22.50	25.63	3.13
	velocity		8.76		9.02		8.24		7.41	8.31		8.76	9.02	8.24	7.41	8.89	7.80	
Garciá, Yordanis (CUB) (19	time		11.07		22.68		35.06		48.34	48.34	3 / 2							
reaction time 0.150	interval				11.61		12.38		13.28	**PB**	# of strides	11.07	11.61	12.38	13.28	22.68	25.66	2.98
	velocity		9.03		8.61		8.08		7.53	8.27		9.03	8.61	8.08	7.53	8.82	7.79	
Coertzen, Willem (RSA) (1	time		11.42		22.62		34.84		48.63	48.63	2 / 3							
reaction time 0.189	interval				11.20		12.22		13.79	**PB**	# of strides	11.42	11.20	12.22	13.79	22.62	26.01	3.39
	velocity		8.76		8.93		8.18		7.25	8.23		8.76	8.93	8.18	7.25	8.84	7.69	

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Wiberg, Nicklas (SWE) (198	time		11.76		22.95		35.09		48.73	48.73	4 / 4							
reaction time 0.198	interval				11.19		12.14		13.64		# of strides	11.76	11.19	12.14	13.64	22.95	25.78	2.83
	velocity		8.50		8.94		8.24		7.33	8.21		8.50	8.94	8.24	7.33	8.71	7.76	
Krauchanka, Andrei (BLR)	time		11.63		22.88		35.17		48.77	48.77	6 / 5							
reaction time 0.207	interval				11.25		12.29		13.60		# of strides	11.63	11.25	12.29	13.60	22.88	25.89	3.01
	velocity		8.60		8.89		8.14		7.35	8.20		8.60	8.89	8.14	7.35	8.74	7.72	
Cleve, Moritz (GER) (1987)	time		12.08		23.43		35.36		49.17	49.17	8 / 6							
reaction time 0.195	interval				11.35		11.93		13.81		# of strides	12.08	11.35	11.93	13.81	23.43	25.74	2.31
	velocity		8.28		8.81		8.38		7.24	8.14		8.28	8.81	8.38	7.24	8.54	7.77	

Decathlon - Heat

date 19-Aug-09

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

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Müller, Norman (GER) (198	time		11.65		22.58		34.55		48.20	48.20	5 / 1							
reaction time 0.184	interval				10.93		11.97		13.65		# of strides	11.65	10.93	11.97	13.65	22.58	25.62	3.04
	velocity		8.58		9.15		8.35		7.33	8.30		8.58	9.15	8.35	7.33	8.86	7.81	
Behrenbruch, Pascal (GER)	time		11.35		22.54		34.86		48.72	48.72	8 / 2							
reaction time 0.142	interval				11.19		12.32		13.86		# of strides	11.35	11.19	12.32	13.86	22.54	26.18	3.64
	velocity		8.81		8.94		8.12		7.22	8.21		8.81	8.94	8.12	7.22	8.87	7.64	
Raja, Andres (EST) (1982)	time		11.67		22.98		35.79		49.00	49.00	2 / 3							
reaction time 0.170	interval				11.31		12.81		13.21		# of strides	11.67	11.31	12.81	13.21	22.98	26.02	3.04
	velocity		8.57		8.84		7.81		7.57	8.16		8.57	8.84	7.81	7.57	8.70	7.69	

Decathlon - Heat

date 19-Aug-09

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

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Díaz, Yunior (CUB) (1987)	time		11.27		21.94		33.50		46.15	46.15	8 / 1							
reaction time 0.180	interval				10.67		11.56		12.65	PB	# of strides	11.27	10.67	11.56	12.65	21.94	24.21	2.27
	velocity		8.87		9.37		8.65		7.91	8.67		8.87	9.37	8.65	7.91	9.12	8.26	
Almgren, Daniel (SWE) (19	time		11.80		22.80		34.78		47.68	47.68	3 / 2							
reaction time 0.167	interval				11.00		11.98		12.90	PB	# of strides	11.80	11.00	11.98	12.90	22.80	24.88	2.08
	velocity		8.47		9.09		8.35		7.75	8.39		8.47	9.09	8.35	7.75	8.77	8.04	
Eaton, Ashton (USA) (1988	time		11.39		22.70		34.94		47.75	47.75	6 / 3							
reaction time 0.171	interval				11.31		12.24		12.81		# of strides	11.39	11.31	12.24	12.81	22.70	25.05	2.35
	velocity		8.78		8.84		8.17		7.81	8.38		8.78	8.84	8.17	7.81	8.81	7.98	
Kasyanov, Oleksiy (UKR) (1	time		11.78		23.00		35.36		47.85	47.85	5 / 4							
reaction time 0.163	interval				11.22		12.36		12.49		# of strides	11.78	11.22	12.36	12.49	23.00	24.85	1.85
	velocity		8.49		8.91		8.09		8.01	8.36		8.49	8.91	8.09	8.01	8.70	8.05	
Suárez, Leonel (CUB) (198	time		11.41		22.66		34.74		48.00	48.00	4 / 5							
reaction time 0.137	interval				11.25		12.08		13.26		# of strides	11.41	11.25	12.08	13.26	22.66	25.34	2.68
	velocity		8.76		8.89		8.28		7.54	8.33		8.76	8.89	8.28	7.54	8.83	7.89	
Bouraada, Larbi (ALG) (19	time		11.35		22.00		34.20		48.58	48.58	2 / 6							
reaction time 0.141	interval				10.65		12.20		14.38		# of strides	11.35	10.65	12.20	14.38	22.00	26.58	4.58
	velocity		8.81		9.39		8.20		6.95	8.23		8.81	9.39	8.20	6.95	9.09	7.52	

Decathlon - Heat

date 19-Aug-09

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

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Sysoyev, Alekey (RUS) (198	time		11.79		23.23		35.48		49.32	49.32	5 / 2							
reaction time 0.141	interval				11.44		12.25		13.84		# of strides	11.79	11.44	12.25	13.84	23.23	26.09	2.86
	velocity		8.48		8.74		8.16		7.23	8.11		8.48	8.74	8.16	7.23	8.61	7.67	
Vos, Ingmar (NED) (1986)	time		11.68		22.90		35.21		49.99	49.99	6 / 5							
reaction time 0.155	interval				11.22		12.31		14.78		# of strides	11.68	11.22	12.31	14.78	22.90	27.09	4.19
	velocity		8.56		8.91		8.12		6.77	8.00		8.56	8.91	8.12	6.77	8.73	7.38	
Newdick, Brent (NZL) (198	time		11.76		23.29		35.62		50.10	50.10	8 / 6							
reaction time 0.158	interval				11.53		12.33		14.48		# of strides	11.76	11.53	12.33	14.48	23.29	26.81	3.52
	velocity		8.50		8.67		8.11		6.91	7.98		8.50	8.67	8.11	6.91	8.59	7.46	
Šebrle, Roman (CZE) (1974	time		11.99		23.55		36.11		50.42	50.42	2 / 7							
reaction time 0.164	interval				11.56		12.56		14.31		# of strides	11.99	11.56	12.56	14.31	23.55	26.87	3.32
	velocity		8.34		8.65		7.96		6.99	7.93		8.34	8.65	7.96	6.99	8.49	7.44	

Semi-Final 3

date 19-Aug-09

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

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Brown, Chris (BAH) (1978)	time		11.08		21.72		32.84		44.95	44.95	3 / 1							
reaction time 0.129	interval				10.64		11.12		12.11		# of strides	11.08	10.64	11.12	12.11	21.72	23.23	1.51
	velocity		9.03		9.40		8.99		8.26	8.90		9.03	9.40	8.99	8.26	9.21	8.61	
Henry, Tabarie (ISV) (1987)	time		11.22		21.91		32.89		44.97	44.97	4 / 2							
reaction time 0.146	interval				10.69		10.98		12.08		# of strides	11.22	10.69	10.98	12.08	21.91	23.06	1.15
	velocity		8.91		9.35		9.11		8.28	8.89		8.91	9.35	9.11	8.28	9.13	8.67	
Chambers, Ricardo (JAM) (	time		11.28		22.00		32.88		45.13	45.13	7 / 3							
reaction time 0.167	interval				10.72		10.88		12.25		# of strides	11.28	10.72	10.88	12.25	22.00	23.13	1.13

	velocity		8.87		9.33		9.19	8.16	8.86		8.87	9.33	9.19	8.16	9.09	8.65	
Borlée, Kevin (BEL) (1988)	time		11.40		22.28		33.34	45.28	45.28	8 / 4							
reaction time 0.143	interval				10.88		11.06	11.94		# of strides	11.40	10.88	11.06	11.94	22.28	23.00	0.72
	velocity		8.77		9.19		9.04	8.38	8.83		8.77	9.19	9.04	8.38	8.98	8.70	
Steffensen, John (AUS) (1	time		11.29		21.74		32.85	45.50	45.50	5 / 5							
reaction time 0.153	interval				10.45		11.11	12.65		# of strides	11.29	10.45	11.11	12.65	21.74	23.76	2.02
	velocity		8.86		9.57		9.00	7.91	8.79		8.86	9.57	9.00	7.91	9.20	8.42	

Semi-Final 2

date 19-Aug-09

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

Graubner (2011) - biomechanical analysis of the sprint and hurdle events at the 2009 IAAF world championships in athletics

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Merritt, LaShawn (USA) (1	time		10.94		21.51		32.50		44.37	44.37	3 / 1							*Graubner (2009)*
reaction time 0.163	interval				10.57		10.99		11.87		# of strides	10.94	10.57	10.99	11.87	21.51	22.86	1.35
	velocity		9.14		9.46		9.10		8.42	9.02		9.14	9.46	9.10	8.42	9.30	8.75	
Quow, Rennie (TTO) (1987)	time	6.34	11.54	16.81	22.09	27.57	32.97	38.59	44.53	44.53	4 / 2							*Graubner (2011)*
reaction time 0.248	interval		5.20	5.27	5.28	5.48	5.40	5.62	5.94	PB	# of strides	11.54	10.55	10.88	11.56	22.09	22.44	0.35
	velocity	7.89	9.62	9.49	9.47	9.12	9.26	8.90	8.42	8.98		8.67	9.48	9.19	8.65	9.05	8.91	
Collazo, William (CUB) (19	time		10.97		21.56		32.67		44.93	44.93	5 / 3							*Graubner (2009)*
reaction time 0.147	interval				10.59		11.11		12.26	PB	# of strides	10.97	10.59	11.11	12.26	21.56	23.37	1.81
	velocity		9.12		9.44		9.00		8.16	8.90		9.12	9.44	9.00	8.16	9.28	8.56	
Wroe, Sean (AUS) (1985)	time		11.03		21.52		32.81		45.32	45.32	6 / 4							*Graubner (2009)*
reaction time 0.160	interval				10.49		11.29		12.51		# of strides	11.03	10.49	11.29	12.51	21.52	23.80	2.28
	velocity		9.07		9.53		8.86		7.99	8.83		9.07	9.53	8.86	7.99	9.29	8.40	
Hurtault, Erison (DMA) (19	time						32.97		45.59	45.59	2 / 5							*Graubner (2009)*
reaction time 0.151	interval								12.62		# of strides				12.62			
	velocity						9.10		7.92	8.77					7.92			
Yousif, Rabah (SUD) (1986	time		11.33		21.80		33.07		45.63	45.63	7 / 6							*Graubner (2009)*
reaction time 0.175	interval				10.47		11.27		12.56		# of strides	11.33	10.47	11.27	12.56	21.80	23.83	2.03
	velocity		8.83		9.55		8.87		7.96	8.77		8.83	9.55	8.87	7.96	9.17	8.39	

Semi-Final 1

date 19-Aug-09

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

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Wariner, Jeremy (USA) (19	time		11.11		21.63		32.48		44.69	44.69	4 / 1							
reaction time 0.189	interval				10.52		10.85		12.21		# of strides	11.11	10.52	10.85	12.21	21.63	23.06	1.43
	velocity		9.00		9.51		9.22		8.19	8.95		9.00	9.51	9.22	8.19	9.25	8.67	
Bingham, Michael (GBR) (1	time		11.15		21.84		32.76		44.74	44.74	8 / 2							
reaction time 0.173	interval				10.69		10.92		11.98	PB	# of strides	11.15	10.69	10.92	11.98	21.84	22.90	1.06
	velocity		8.97		9.35		9.16		8.35	8.94		8.97	9.35	9.16	8.35	9.16	8.73	
Djhone, Leslie (FRA) (1981	time		11.32		21.87		32.85		44.80	44.80	3 / 3							
reaction time 0.165	interval				10.55		10.98		11.95		# of strides	11.32	10.55	10.98	11.95	21.87	22.93	1.06
	velocity		8.83		9.48		9.11		8.37	8.93		8.83	9.48	9.11	8.37	9.14	8.72	
Gillick, David (IRL) (1983)	time		11.27		21.80		32.77		44.88	44.88	6 / 4							
reaction time 0.147	interval				10.53		10.97		12.11		# of strides	11.27	10.53	10.97	12.11	21.80	23.08	1.28
	velocity		8.87		9.50		9.12		8.26	8.91		8.87	9.50	9.12	8.26	9.17	8.67	
Miller, Ramon (BAH) (1987	time		11.26		21.99		32.80		44.99	44.99	5 / 5							
reaction time 0.157	interval				10.73		10.81		12.19	PB	# of strides	11.26	10.73	10.81	12.19	21.99	23.00	1.01
	velocity		8.88		9.32		9.25		8.20	8.89		8.88	9.32	9.25	8.20	9.10	8.70	

Heat 7

date 18-Aug-09

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

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Henry, Tabarie (ISV) (1987)	time		11.07		21.67		32.84		45.14	45.14	5 / 1							
reaction time 0.137	interval				10.60		11.17		12.30		# of strides	11.07	10.60	11.17	12.30	21.67	23.47	1.80
	velocity		9.03		9.43		8.95		8.13	8.86		9.03	9.43	8.95	8.13	9.23	8.52	
Wroe, Sean (AUS) (1985)	time		11.13		21.57		32.90		45.31	45.31	8 / 2							
reaction time 0.166	interval				10.44		11.33		12.41		# of strides	11.13	10.44	11.33	12.41	21.57	23.74	2.17
	velocity		8.98		9.58		8.83		8.06	8.83		8.98	9.58	8.83	8.06	9.27	8.42	
Rooney, Martyn (GBR) (19	time		11.48		21.94		33.08		45.45	45.45	1 / 3							
reaction time 0.189	interval				10.46		11.14		12.37		# of strides	11.48	10.46	11.14	12.37	21.94	23.51	1.57
	velocity		8.71		9.56		8.98		8.08	8.80		8.71	9.56	8.98	8.08	9.12	8.51	
Hurtault, Erison (DMA) (19	time		11.09		21.82		33.11		45.55	45.55	6 / 4							
reaction time 0.148	interval				10.73		11.29		12.44		# of strides	11.09	10.73	11.29	12.44	21.82	23.73	1.91
	velocity		9.02		9.32		8.86		8.04	8.78		9.02	9.32	8.86	8.04	9.17	8.43	
Khouaja, Mohamed Ashou	time		11.27		21.63		33.02		45.56	45.56	3 / 5							
reaction time 0.207	interval				10.36		11.39		12.54	NR	# of strides	11.27	10.36	11.39	12.54	21.63	23.93	2.30
	velocity		8.87		9.65		8.78		7.97	8.78		8.87	9.65	8.78	7.97	9.25	8.36	

Heat 6

date 18-Aug-09

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

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Wariner, Jeremy (USA) (19	time		11.04		21.30		32.81		45.54	45.54	4 / 1							

reaction time 0.178	interval		10.26	11.51	12.73		# of strides	11.04	10.26	11.51	12.73	21.30	24.24	2.94
	velocity	9.06	9.75	8.69	7.86	8.78		9.06	9.75	8.69	7.86	9.39	8.25	
Chambers, Ricardo (JAM)	time	11.22	21.62	32.91	45.57	45.57	5 / 3							
reaction time 0.172	interval		10.40	11.29	12.66		# of strides	11.22	10.40	11.29	12.66	21.62	23.95	2.33
	velocity	8.91	9.62	8.86	7.90	8.78		8.91	9.62	8.86	7.90	9.25	8.35	
Venel, Teddy (FRA) (1985)	time	11.16	21.64	33.03	46.16	46.16	2 / 3							
reaction time 0.161	interval		10.48	11.39	13.13		# of strides	11.16	10.48	11.39	13.13	21.64	24.52	2.88
	velocity	8.96	9.54	8.78	7.62	8.67		8.96	9.54	8.78	7.62	9.24	8.16	

Heat 5

date 18-Aug-09

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

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Miller, Ramon (BAH) (1987	time		11.16		21.70		32.74		45.00	45.00	4 / 1							
reaction time 0.143	interval				10.54		11.04		12.26	PB	# of strides	11.16	10.54	11.04	12.26	21.70	23.30	1.60
	velocity		8.96		9.49		9.06		8.16	8.89		8.96	9.49	9.06	8.16	9.22	8.58	
Djhone, Leslie (FRA) (1981	time		11.42		21.86		32.94		45.20	45.20	7 / 2							
reaction time 0.165	interval				10.44		11.08		12.26		# of strides	11.42	10.44	11.08	12.26	21.86	23.34	1.48
	velocity		8.76		9.58		9.03		8.16	8.85		8.76	9.58	9.03	8.16	9.15	8.57	
Wissman, Johan (SWE) (19	time		11.19		21.50		32.82		45.83	45.83	2 / 3							
reaction time 0.176	interval				10.31		11.32		13.01		# of strides	11.19	10.31	11.32	13.01	21.50	24.33	2.83
	velocity		8.94		9.70		8.83		7.69	8.73		8.94	9.70	8.83	7.69	9.30	8.22	
Dyldin, Maksim (RUS) (198	time		11.75		22.33		33.42		45.91	45.91	6 / 4							
reaction time 0.172	interval				10.58		11.09		12.49		# of strides	11.75	10.58	11.09	12.49	22.33	23.58	1.25
	velocity		8.51		9.45		9.02		8.01	8.71		8.51	9.45	9.02	8.01	8.96	8.48	

Heat 4

date 18-Aug-09

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

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Merritt, LaShawn (USA) (1	time		11.03		21.66		32.71		45.23	45.23	4 / 1							
reaction time 0.151	interval				10.63		11.05		12.52		# of strides	11.03	10.63	11.05	12.52	21.66	23.57	1.91
	velocity		9.07		9.41		9.05		7.99	8.84		9.07	9.41	9.05	7.99	9.23	8.49	
Steffensen, John (AUS) (1	time		11.18		21.51		32.78		45.37	45.37	3 / 2							
reaction time 0.150	interval				10.33		11.27		12.59		# of strides	11.18	10.33	11.27	12.59	21.51	23.86	2.35
	velocity		8.94		9.68		8.87		7.94	8.82		8.94	9.68	8.87	7.94	9.30	8.38	
Galvan, Matteo (ITA) (1988)	time		11.53		22.31		33.50		45.86	45.86	6 / 3							
reaction time 0.150	interval				10.78		11.19		12.36	PB	# of strides	11.53	10.78	11.19	12.36	22.31	23.55	1.24
	velocity		8.67		9.28		8.94		8.09	8.72		8.67	9.28	8.94	8.09	8.96	8.49	

Heat 3

date 18-Aug-09

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

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Brown, Chris (BAH) (1978)	time		11.10		21.78		33.47		45.53	45.53	2 / 1							
reaction time 0.158	interval				10.68		11.69		12.06		# of strides	11.10	10.68	11.69	12.06	21.78	23.75	1.97
	velocity		9.01		9.36		8.55		8.29	8.79		9.01	9.36	8.55	8.29	9.18	8.42	
Bingham, Michael (GBR) (1	time		11.11		21.90		33.34		45.54	45.54	5 / 2							
reaction time 0.149	interval				10.79		11.44		12.20		# of strides	11.11	10.79	11.44	12.20	21.90	23.64	1.74
	velocity		9.00		9.27		8.74		8.20	8.78		9.00	9.27	8.74	8.20	9.13	8.46	
Milburn, Joel (AUS) (1986)	time		11.31		21.74		33.06		45.56	45.56	8 / 3							
reaction time 0.162	interval				10.43		11.32		12.50		# of strides	11.31	10.43	11.32	12.50	21.74	23.82	2.08
	velocity		8.84		9.59		8.83		8.00	8.78		8.84	9.59	8.83	8.00	9.20	8.40	

Heat 2

date 18-Aug-09

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

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Quow, Rennie (TTO) (1987)	time		11.72		22.30		33.10		45.21	45.21	4 / 1							
reaction time 0.202	interval				10.58		10.80		12.11		# of strides	11.72	10.58	10.80	12.11	22.30	22.91	0.61
	velocity		8.53		9.45		9.26		8.26	8.85		8.53	9.45	9.26	8.26	8.97	8.73	
Collazo, William (CUB) (19	time		11.11		21.66		33.02		45.52	45.52	1 / 2							
reaction time 0.171	interval				10.55		11.36		12.50		# of strides	11.11	10.55	11.36	12.50	21.66	23.86	2.20
	velocity		9.00		9.48		8.80		8.00	8.79		9.00	9.48	8.80	8.00	9.23	8.38	
Borlée, Kevin (BEL) (1988)	time		11.17		21.70		33.12		45.61	45.61	8 / 3							
reaction time 0.144	interval				10.53		11.42		12.49		# of strides	11.17	10.53	11.42	12.49	21.70	23.91	2.21
	velocity		8.95		9.50		8.76		8.01	8.77		8.95	9.50	8.76	8.01	9.22	8.36	
Marciniszyn, Marcin (POL)	time		11.44		21.98		33.46		45.77	45.77	3 / 4							
reaction time 0.167	interval				10.54		11.48		12.31		# of strides	11.44	10.54	11.48	12.31	21.98	23.79	1.81
	velocity		8.74		9.49		8.71		8.12	8.74		8.74	9.49	8.71	8.12	9.10	8.41	

Heat 1

date 18-Aug-09

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

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Tobin, Robert (GBR) (1983	time		11.17		21.55		32.82		45.50	45.50	5 / 1							
reaction time 0.179	interval				10.38		11.27		12.68		# of strides	11.17	10.38	11.27	12.68	21.55	23.95	2.40
	velocity		8.95		9.63		8.87		7.89	8.79		8.95	9.63	8.87	7.89	9.28	8.35	
Gillick, David (IRL) (1983)	time		11.25		21.67		33.00		45.54	45.54	7 / 2							
reaction time 0.169	interval				10.42		11.33		12.54		# of strides	11.25	10.42	11.33	12.54	21.67	23.87	2.20

	velocity	8.89	9.60	8.83	7.97	8.78		8.89	9.60	8.83	7.97	9.23	8.38	
Yousif, Rabah (SUD) (1986	time	11.25	21.66	32.89	45.55	45.55	4 / 3							
reaction time 0.143	interval		10.41	11.23	12.66	PB	# of strides	11.25	10.41	11.23	12.66	21.66	23.89	2.23
	velocity	8.89	9.61	8.90	7.90	8.78		8.89	9.61	8.90	7.90	9.23	8.37	
Larry, Lionel (USA) (1986)	time	11.07	21.49	32.92	45.64	45.64	3 / 4							
reaction time 0.152	interval		10.42	11.43	12.72		# of strides	11.07	10.42	11.43	12.72	21.49	24.15	2.66
	velocity	9.03	9.60	8.75	7.86	8.76		9.03	9.60	8.75	7.86	9.31	8.28	
Nyongani, Young Talkmor	time	11.29	21.89	32.37	45.92	45.92	8 / 5							
reaction time 0.178	interval		10.60	10.48	13.55		# of strides	11.29	10.60	10.48	13.55	21.89	24.03	2.14
	velocity	8.86	9.43	9.54	7.38	8.71		8.86	9.43	9.54	7.38	9.14	8.32	
van Branteghem, Cédric (B	time	11.26	21.46	32.92	45.94	45.94	2 / 6							
reaction time 0.155	interval		10.20	11.46	13.02		# of strides	11.26	10.20	11.46	13.02	21.46	24.48	3.02
	velocity	8.88	9.80	8.73	7.68	8.71		8.88	9.80	8.73	7.68	9.32	8.17	

2009 Japanese National High School Championships (Nara, JPN)

FINAL date 29-Jul-09

Matsuo (2009) - 62nd high school championships: JAF scientific committee - biomechanics data collection

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Yamazaki, Kengo (JPN) (19	time		11.63		23.02		34.57		46.83	46.83	5 / 1							
reaction time	interval				11.39		11.55		12.26		# of strides	11.63	11.39	11.55	12.26	23.02	23.81	0.79
	velocity		8.60		8.78		8.66		8.16	8.54		8.60	8.78	8.66	8.16	8.69	8.40	
Urano, Akihiro (JPN) (1990	time		11.61		22.80		34.52		47.23	47.23	4 / 2							
reaction time	interval				11.19		11.72		12.71		# of strides	11.61	11.19	11.72	12.71	22.80	24.43	1.63
	velocity		8.61		8.94		8.53		7.87	8.47		8.61	8.94	8.53	7.87	8.77	8.19	
Kobayashi, Masahito (JPN)	time		11.48		22.38		34.28		47.26	47.26	3 / 3							
reaction time	interval				10.90		11.90		12.98		# of strides	11.48	10.90	11.90	12.98	22.38	24.88	2.50
	velocity		8.71		9.17		8.40		7.70	8.46		8.71	9.17	8.40	7.70	8.94	8.04	
Kayata, Takashi (JPN) (199	time		11.98		23.12		34.96		47.75	47.75	1 / 4							
reaction time	interval				11.14		11.84		12.79		# of strides	11.98	11.14	11.84	12.79	23.12	24.63	1.51
	velocity		8.35		8.98		8.45		7.82	8.38		8.35	8.98	8.45	7.82	8.65	8.12	
Iwamoto, Taishi (JPN) (199	time		11.85		23.35		35.48		47.87	47.87	6 / 5							
reaction time	interval				11.50		12.13		12.39		# of strides	11.85	11.50	12.13	12.39	23.35	24.52	1.17
	velocity		8.44		8.70		8.24		8.07	8.36		8.44	8.70	8.24	8.07	8.57	8.16	
Matsubara, Tetsuya (JPN) (	time		11.85		23.05		35.08		48.31	48.31	2 / 6							
reaction time	interval				11.20		12.03		13.23		# of strides	11.85	11.20	12.03	13.23	23.05	25.26	2.21
	velocity		8.44		8.93		8.31		7.56	8.28		8.44	8.93	8.31	7.56	8.68	7.92	
Yoshimura, Kengo (JPN) (	time		11.72		23.67		35.99		48.82	48.82	8 / 7							
reaction time	interval				11.95		12.32		12.83		# of strides	11.72	11.95	12.32	12.83	23.67	25.15	1.48
	velocity		8.53		8.37		8.12		7.79	8.19		8.53	8.37	8.12	7.79	8.45	7.95	
Kabeya, Tomoyuki (JPN) (1	time		12.03		23.22		35.45		49.11	49.11	7 / 8							
reaction time	interval				11.19		12.23		13.66		# of strides	12.03	11.19	12.23	13.66	23.22	25.89	2.67
	velocity		8.31		8.94		8.18		7.32	8.14		8.31	8.94	8.18	7.32	8.61	7.72	

2009 USATF National Championships (Eugene, OR)

FINAL date 24-Jun-09

Track Newsletter (2009) - USATF men's championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Merritt, LaShawn (USA) (1	time		11.1		21.7		32.8		44.5	44.50	/ 1							
reaction time	interval				10.60		11.10		11.70		# of strides	11.10	10.60	11.10	11.70	21.70	22.80	1.10
	velocity		9.01		9.43		9.01		8.55	8.99		9.01	9.43	9.01	8.55	9.22	8.77	

2009 Japanese National Championships (Hiroshima, JPN)

Decathlon - Heat date 25-Jun-09

Hisashi (2010) - the run performance analysis in the decathlon sprint events

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ikeda, Daisuke (JPN) (1986)	time	6.78	12.66	18.57	24.58	30.70	36.92	43.24	49.82	49.82	1 / 3							
reaction time	interval		5.88	5.91	6.01	6.12	6.22	6.32	6.58		# of strides	12.66	11.92	12.34	12.90	24.58	25.24	0.66
	velocity	7.37	8.50	8.46	8.32	8.17	8.04	7.91	7.60	8.03		7.90	8.39	8.10	7.75	8.14	7.92	
Tanaka, Hiromasa (JPN) (1	time	6.52	12.28	18.29	24.38	30.61	37.03	43.62	50.65	50.65	2 / 5							
reaction time	interval		5.76	6.01	6.09	6.23	6.42	6.59	7.03		# of strides	12.28	12.10	12.65	13.62	24.38	26.27	1.89
	velocity	7.67	8.68	8.32	8.21	8.03	7.79	7.59	7.11	7.90		8.14	8.26	7.91	7.34	8.20	7.61	
Ushiro, Keisuke (JPN) (198	time	6.93	12.85	18.82	24.85	31.07	37.35	43.83	50.77	50.77	4 / 6							
reaction time	interval		5.92	5.97	6.03	6.22	6.28	6.48	6.94		# of strides	12.85	12.00	12.50	13.42	24.85	25.92	1.07
	velocity	7.22	8.45	8.38	8.29	8.04	7.96	7.72	7.20	7.88		7.78	8.33	8.00	7.45	8.05	7.72	

2009 ISTAF (Berlin, GER)

FINAL date 14-Jun-09

Graubner (2009) - http://www.fgs.uni-halle.de

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Brown, Chris (BAH) (1978)	time		11.09		21.55		32.93		45.61	45.61	4 / 1							
reaction time 0.277	interval				10.46		11.38		12.68		# of strides	11.09	10.46	11.38	12.68	21.55	24.06	2.51
	velocity		9.02		9.56		8.79		7.89	8.77		9.02	9.56	8.79	7.89	9.28	8.31	

Kikaya, Gary (COD) (1980)	time	11.02	21.45	32.94	45.68	45.68	3 / 2								
reaction time 0.161	interval		10.43	11.49	12.74		# of strides	11.02	10.43	11.49	12.74	21.45	24.23	2.78	
	velocity	9.07	9.59	8.70	7.85	8.76		9.07	9.59	8.70	7.85	9.32	8.25		
Mathieu, Michael (BAH) (1	time	11.06	21.72	33.05	45.92	45.92	7 / 3								
reaction time 0.316	interval		10.66	11.33	12.87		# of strides	11.06	10.66	11.33	12.87	21.72	24.20	2.48	
	velocity	9.04	9.38	8.83	7.77	8.71		9.04	9.38	8.83	7.77	9.21	8.26		
Wissman, Johan (SWE) (19	time	11.35	21.74	33.09	45.97	45.97	5 / 4								
reaction time 0.273	interval		10.39	11.35	12.88		# of strides	11.35	10.39	11.35	12.88	21.74	24.23	2.49	
	velocity	8.81	9.62	8.81	7.76	8.70		8.81	9.62	8.81	7.76	9.20	8.25		
Alekseyev, Denis (RUS) (19	time	11.52	21.98	33.51	46.33	46.33	1 / 5								
reaction time 0.282	interval		10.46	11.53	12.82		# of strides	11.52	10.46	11.53	12.82	21.98	24.35	2.37	
	velocity	8.68	9.56	8.67	7.80	8.63		8.68	9.56	8.67	7.80	9.10	8.21		
Gaba, Kamghe (GER) (1984	time	11.22	21.73	33.27	46.45	46.45	6 / 6								
reaction time 0.302	interval		10.51	11.54	13.18		# of strides	11.22	10.51	11.54	13.18	21.73	24.72	2.99	
	velocity	8.91	9.51	8.67	7.59	8.61		8.91	9.51	8.67	7.59	9.20	8.09		
Bain, Andretti (BAH) (1985	time	11.45	22.10	33.70	46.82	46.82	2 / 7								
reaction time 0.232	interval		10.65	11.60	13.12		# of strides	11.45	10.65	11.60	13.12	22.10	24.72	2.62	
	velocity	8.73	9.39	8.62	7.62	8.54		8.73	9.39	8.62	7.62	9.05	8.09		

B FINAL

date 14-Jun-09

Graubner (2009) - http://www.fgs.uni-halle.de

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Grothkopp, Martin (GER) (	time		11.34		22.12		33.74		46.74	46.74	/ 1							
reaction time 0.313	interval				10.78		11.62		13.00		# of strides	11.34	10.78	11.62	13.00	22.12	24.62	2.50
	velocity		8.82		9.28		8.61		7.69	8.56		8.82	9.28	8.61	7.69	9.04	8.12	
Rigau, Miguel (GER) (1985)	time		11.38		22.11		33.83		46.87	46.87	/ 2							
reaction time 0.255	interval				10.73		11.72		13.04	PB	# of strides	11.38	10.73	11.72	13.04	22.11	24.76	2.65
	velocity		8.79		9.32		8.53		7.67	8.53		8.79	9.32	8.53	7.67	9.05	8.08	
Faller, Ruwen (GER) (1980)	time		11.73		22.72		34.20		46.88	46.88	/ 3							
reaction time 0.346	interval				10.99		11.48		12.68		# of strides	11.73	10.99	11.48	12.68	22.72	24.16	1.44
	velocity		8.53		9.10		8.71		7.89	8.53		8.53	9.10	8.71	7.89	8.80	8.28	
Plass, Jonas (GER) (1986)	time		11.63		22.74		34.66		47.36	47.36	/ 4							
reaction time 0.210	interval				11.11		11.92		12.70		# of strides	11.63	11.11	11.92	12.70	22.74	24.62	1.88
	velocity		8.60		9.00		8.39		7.87	8.45		8.60	9.00	8.39	7.87	8.80	8.12	
Ruch, Tilo (GER) (1983)	time		11.40		22.43		34.21		47.43	47.43	/ 5							
reaction time 0.297	interval				11.03		11.78		13.22		# of strides	11.40	11.03	11.78	13.22	22.43	25.00	2.57
	velocity		8.77		9.07		8.49		7.56	8.43		8.77	9.07	8.49	7.56	8.92	8.00	
Meisolle, Alexander (GER)	time		11.48		22.75		34.83		47.60	47.60	/ 6							
reaction time 0.227	interval				11.27		12.08		12.77		# of strides	11.48	11.27	12.08	12.77	22.75	24.85	2.10
	velocity		8.71		8.87		8.28		7.83	8.40		8.71	8.87	8.28	7.83	8.79	8.05	
Swillims, Bastian (GER) (19	time		11.51		22.56		34.73		48.32	48.32	/ 7							
reaction time 0.354	interval				11.05		12.17		13.59		# of strides	11.51	11.05	12.17	13.59	22.56	25.76	3.20
	velocity		8.69		9.05		8.22		7.36	8.28		8.69	9.05	8.22	7.36	8.87	7.76	

2009 Prefontaine Classic (Eugene, OR) (300m)

FINAL

date 07-Jun-09

Track Newsletter (2009) - prefontaine classic

		50m	100m	150m	200m	250m	300m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Merritt, LaShawn (USA) (1	time				20.5		31.3	31.30	/ 1							
reaction time	interval						10.80	PB	# of strides			10.80				
	velocity				9.76		9.26	9.58				9.26				

2009 Shizuoka International Athletics Meeting (Fukuroi, JPN)

FINAL

date 03-May-09

Matsuo (2010) - 63rd high school championships: JAF scientific committee - biomechanics data collection

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kanemaru, Yuzo (JPN) (19	time	6.21	11.20	16.25	21.55	27.07	32.91	38.89	45.27	45.27	/ 1							
reaction time	interval		4.99	5.05	5.30	5.52	5.84	5.98	6.38		# of strides	11.20	10.35	11.36	12.36	21.55	23.72	2.17
	velocity	8.05	10.02	9.90	9.43	9.06	8.56	8.36	7.84	8.84		8.93	9.66	8.80	8.09	9.28	8.43	

B FINAL

date 03-May-09

Matsuo (2010) - 63rd high school championships: JAF scientific committee - biomechanics data collection

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hirose, Hideyuki (JPN) (19	time	6.31	11.71	17.02	22.50	28.10	33.86	39.77	45.98	45.98	/ 1							
reaction time	interval		5.40	5.31	5.48	5.60	5.76	5.91	6.21		# of strides	11.71	10.79	11.36	12.12	22.50	23.48	0.98
	velocity	7.92	9.26	9.42	9.12	8.93	8.68	8.46	8.05	8.70		8.54	9.27	8.80	8.25	8.89	8.52	

2009 Wakayama Athletics Meeting (Wakayama, JPN)

Decathlon - Heat

date 18-Apr-09

Hisashi (2010) - the run performance analysis in the decathlon sprint events

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ikeda, Daisuke (JPN) (1986)	time	6.69	12.09	17.63	23.50	29.59	35.87	42.35	49.91	49.91	8 / 1							
reaction time	interval		5.40	5.54	5.87	6.09	6.28	6.48	7.56		# of strides	12.09	11.41	12.37	14.04	23.50	26.41	2.91
	velocity	7.47	9.26	9.03	8.52	8.21	7.96	7.72	6.61	8.01		8.27	8.76	8.08	7.12	8.51	7.57	
Ushiro, Keisuke (JPN) (198	time	6.92	12.57	18.17	24.06	30.13	36.38	42.93	50.60	50.60	9 / 3							

reaction time	interval		5.65	5.60	5.89	6.07	6.25	6.55	7.67	PB	# of strides	12.57	11.49	12.32	14.22	24.06	26.54	2.48
	velocity	7.23	8.85	8.93	8.49	8.24	8.00	7.63	6.52	7.91		7.96	8.70	8.12	7.03	8.31	7.54	

Decathlon - Heat

date 18-Apr-09

Hisashi (2010) - the run performance analysis in the decathlon sprint events

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Tanaka, Hiromasa (JPN) (1	time	6.35	11.73	17.27	23.20	29.30	35.55	42.09	50.08	50.08	6 / 3							
reaction time	interval		5.38	5.54	5.93	6.10	6.25	6.54	7.99		# of strides	11.73	11.47	12.35	14.53	23.20	26.88	3.68
	velocity	7.87	9.29	9.03	8.43	8.20	8.00	7.65	6.26	7.99		8.53	8.72	8.10	6.88	8.62	7.44	

2009 University of West Indies Invitational (Kingston, JAM)

Heat 4

date 21-Feb-09

Vazel (2009) - http://futuranterieur.files.wordpress.com

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Bolt, Usain (JAM) (1986)	time		10.9		21.6		33.0		45.54	45.54	/ 1							
reaction time	interval				10.7		11.4		12.54		# of strides	10.90	10.70	11.40	12.54	21.60	23.94	2.34
	velocity		9.17		9.35		8.77		7.97	8.78		9.17	9.35	8.77	7.97	9.26	8.35	

2008 IAAF World Athletic Final (Stuttgart, GER)

FINAL

date 13-Sep-08

Graubner (2009) - http://www.fgs.uni-halle.de

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Merritt, LaShawn (USA) (1	time		11.21		21.55		32.56		44.50	44.50	5 / 1							
reaction time 0.144	interval				10.34		11.01		11.94		# of strides	11.21	10.34	11.01	11.94	21.55	22.95	1.40
	velocity		8.92		9.67		9.08		8.38	8.99		8.92	9.67	9.08	8.38	9.28	8.71	
Wariner, Jeremy (USA) (19	time		11.12		21.53		32.41		44.51	44.51	4 / 2							
reaction time 0.175	interval				10.41		10.88		12.10		# of strides	11.12	10.41	10.88	12.10	21.53	22.98	1.45
	velocity		8.99		9.61		9.19		8.26	8.99		8.99	9.61	9.19	8.26	9.29	8.70	
Brown, Chris (BAH) (1978)	time		11.08		21.59		32.85		45.36	45.36	3 / 3							
reaction time 0.133	interval				10.51		11.26		12.51		# of strides	11.08	10.51	11.26	12.51	21.59	23.77	2.18
	velocity		9.03		9.51		8.88		7.99	8.82		9.03	9.51	8.88	7.99	9.26	8.41	
Taylor, Angelo (USA) (1978	time		11.15		21.73		33.22		45.37	45.37	6 / 4							
reaction time 0.161	interval				10.58		11.49		12.15		# of strides	11.15	10.58	11.49	12.15	21.73	23.64	1.91
	velocity		8.97		9.45		8.70		8.23	8.82		8.97	9.45	8.70	8.23	9.20	8.46	
Rooney, Martyn (GBR) (19	time		11.57		22.42		33.78		45.82	45.82	8 / 5							
reaction time 0.179	interval				10.85		11.36		12.04		# of strides	11.57	10.85	11.36	12.04	22.42	23.40	0.98
	velocity		8.64		9.22		8.80		8.31	8.73		8.64	9.22	8.80	8.31	8.92	8.55	
Kikaya, Gary (COD) (1980)	time		11.15		21.65		33.09		45.92	45.92	2 / 6							
reaction time 0.167	interval				10.50		11.44		12.83		# of strides	11.15	10.50	11.44	12.83	21.65	24.27	2.62
	velocity		8.97		9.52		8.74		7.79	8.71		8.97	9.52	8.74	7.79	9.24	8.24	
Gaba, Kamghe (GER) (1984	time		11.10		21.49		32.86		46.22	46.22	1 / 7							
reaction time 0.209	interval				10.39		11.37		13.36		# of strides	11.10	10.39	11.37	13.36	21.49	24.73	3.24
	velocity		9.01		9.62		8.80		7.49	8.65		9.01	9.62	8.80	7.49	9.31	8.09	
Wissman, Johan (SWE) (19	time		11.41		22.08		33.70		46.48	46.48	7 / 8							
reaction time 0.174	interval				10.67		11.62		12.78		# of strides	11.41	10.67	11.62	12.78	22.08	24.40	2.32
	velocity		8.76		9.37		8.61		7.82	8.61		8.76	9.37	8.61	7.82	9.06	8.20	

2008 Olympic Games (Beijing, CHN)

Butler (2016) - IAAF statistics handbook- special edition: Games of the XXXI Olympiad- Rio 2016

FINAL

date 21-Aug-08

Vazel (2011) - speed reserve in the 400m

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Merritt, LaShawn (USA) (1	time		10.99		21.02		31.78		43.75	43.75	4 / 1							*Vazel (2011)*
reaction time 0.318	interval				10.03		10.76		11.97	PB	# of strides	10.99	10.03	10.76	11.97	21.02	22.73	1.71
	velocity		9.10		9.97		9.29		8.35	9.14	170.0	9.10	9.97	9.29	8.35	9.51	8.80	
Warner, Jeremy (USA) (198	time				20.9		31.6		44.7	44.74	7 / 2							*Butler (2016)*
reaction time 0.209	interval						10.70		13.10		# of strides			10.70	13.10	20.90	23.80	2.90
	velocity				9.57		9.35		7.63	8.94	172.0			9.35	7.63	9.57	8.40	
Neville, David (USA) (1984)	time				21.1		31.7		44.8	44.80	9 / 3							*Butler (2016)*
reaction time 0.293	interval						10.60		13.10		# of strides			10.60	13.10	21.10	23.70	2.60
	velocity				9.48		9.43		7.63	8.93	166.2			9.43	7.63	9.48	8.44	
Brown, Chris (BAH) (1978)	time				21.3		31.9		44.8	44.84	5 / 4							*Butler (2016)*
reaction time 0.231	interval						10.60		12.90		# of strides			10.60	12.90	21.30	23.50	2.20
	velocity				9.39		9.43		7.75	8.92	186.0			9.43	7.75	9.39	8.51	
Djhone, Leslie (FRA) (1981	time				21.5		32.2		45.1	45.11	6 / 5							*Butler (2016)*
reaction time 0.164	interval						10.70		12.90		# of strides			10.70	12.90	21.50	23.60	2.10
	velocity				9.30		9.35		7.75	8.87	166.5			9.35	7.75	9.30	8.47	
Rooney, Martyn (GBR) (19	time				21.5		32.1		45.1	45.12	8 / 6							*Butler (2016)*
reaction time 0.208	interval						10.60		13.00		# of strides			10.60	13.00	21.50	23.60	2.10
	velocity				9.30		9.43		7.69	8.87	167.2			9.43	7.69	9.30	8.47	
Quow, Rennie (TTO) (1987)	time				21.7		32.6		45.2	45.22	2 / 7							*Butler (2016)*
reaction time 0.201	interval						10.90		12.60		# of strides			10.90	12.60	21.70	23.50	1.80
	velocity				9.22		9.17		7.94	8.85	190.5			9.17	7.94	9.22	8.51	
Wissman, Johan (SWE) (19	time				21.4		32.3		45.4	45.39	3 / 8							*Butler (2016)*

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

reaction time 0.218	interval				10.90		13.10		# of strides			10.90	13.10	21.40	24.00	2.60
	velocity			9.35		9.17		7.63	8.81	177.0			9.17	7.63	9.35	8.33

2008 Japanese National High School Championships (Kumagaya, JPN)

FINAL

date 29-Jul-08

Abe (2008) - 61st high school championships: JAF scientific committee - biomechanics data collection

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Sato, Keitaro (JPN) (1991)	time	6.57	11.95	17.40	23.03	28.81	34.53	40.43	46.86	46.86	/ 1							
reaction time	interval		5.38	5.45	5.63	5.78	5.72	5.90	6.43		# of strides	11.95	11.08	11.50	12.33	23.03	23.83	0.80
	velocity	7.61	9.29	9.17	8.88	8.65	8.74	8.47	7.78	8.54		8.37	9.03	8.70	8.11	8.68	8.39	
Urano, Akihiro (JPN) (1990	time	6.47	11.82	17.22	22.69	28.46	34.27	40.39	47.12	47.12	/ 2							
reaction time	interval		5.35	5.40	5.47	5.77	5.81	6.12	6.73		# of strides	11.82	10.87	11.58	12.85	22.69	24.43	1.74
	velocity	7.73	9.35	9.26	9.14	8.67	8.61	8.17	7.43	8.49		8.46	9.20	8.64	7.78	8.81	8.19	
Yanagisawa, Junki (JPN) (1	time	6.76	12.30	18.00	23.67	29.51	35.53	41.67	48.07	48.07	/ 3							
reaction time	interval		5.54	5.70	5.67	5.84	6.02	6.14	6.40		# of strides	12.30	11.37	11.86	12.54	23.67	24.40	0.73
	velocity	7.40	9.03	8.77	8.82	8.56	8.31	8.14	7.81	8.32		8.13	8.80	8.43	7.97	8.45	8.20	

2008 USA Olympic Trials (Eugene, OR)

FINAL

date 03-Jul-08

USATF Women's Sprint Development with HPC (2008)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Merritt, LaShawn (USA) (19	time		10.98	15.58	21.45	26.75	32.32	37.95	44.00	44.00	6 / 1							
reaction time	interval			4.60	5.87	5.30	5.57	5.63	6.05		# of strides	10.98	10.47	10.87	11.68	21.45	22.55	1.10
	velocity		9.11	10.87	8.52	9.43	8.98	8.88	8.26	9.09		9.11	9.55	9.20	8.56	9.32	8.87	
Wariner, Jeremy (USA) (19	time		11.06	15.78	21.67	27.01	32.51	38.02	44.20	44.20	5 / 2							
reaction time	interval			4.72	5.89	5.34	5.50	5.51	6.18		# of strides	11.06	10.61	10.84	11.69	21.67	22.53	0.86
	velocity		9.04	10.59	8.49	9.36	9.09	9.07	8.09	9.05		9.04	9.43	9.23	8.55	9.23	8.88	
Neville, David (USA) (1984)	time		10.99	15.65	21.25	26.56	32.28	38.18	44.61	44.61	8 / 3							
reaction time	interval			4.66	5.60	5.31	5.72	5.90	6.43	PB	# of strides	10.99	10.26	11.03	12.33	21.25	23.36	2.11
	velocity		9.10	10.73	8.93	9.42	8.74	8.47	7.78	8.97		9.10	9.75	9.07	8.11	9.41	8.56	
Witherspoon, Reggie (USA	time		11.02	15.65	21.51	27.10	32.53	38.58	45.01	45.01	7 / 4							
reaction time	interval			4.63	5.86	5.59	5.43	6.05	6.43		# of strides	11.02	10.49	11.02	12.48	21.51	23.50	1.99
	velocity		9.07	10.80	8.53	8.94	9.21	8.26	7.78	8.89		9.07	9.53	9.07	8.01	9.30	8.51	
Smith, Calvin (USA) (1987)	time		11.39	16.03	21.93	27.56	33.42	39.47	45.57	45.57	3 / 5							
reaction time	interval			4.64	5.90	5.63	5.86	6.05	6.10		# of strides	11.39	10.54	11.49	12.15	21.93	23.64	1.71
	velocity		8.78	10.78	8.47	8.88	8.53	8.26	8.20	8.78		8.78	9.49	8.70	8.23	9.12	8.46	
Williamson, Darold (USA) (	time		11.18	16.02	21.94	27.41	33.05	39.21	45.58	45.58	4 / 6							
reaction time	interval			4.84	5.92	5.47	5.64	6.16	6.37		# of strides	11.18	10.76	11.11	12.53	21.94	23.64	1.70
	velocity		8.94	10.33	8.45	9.14	8.87	8.12	7.85	8.78		8.94	9.29	9.00	7.98	9.12	8.46	
Nixon, Greg (USA) (1981)	time		11.16	15.70	21.52	27.01	32.79	38.95	45.64	45.64	2 / 7							
reaction time	interval			4.54	5.82	5.49	5.78	6.16	6.69		# of strides	11.16	10.36	11.27	12.85	21.52	24.12	2.60
	velocity		8.96	11.01	8.59	9.11	8.65	8.12	7.47	8.76		8.96	9.65	8.87	7.78	9.29	8.29	
Larry, Lionel (USA) (1986)	time		11.13	15.66	21.42	26.94	32.73	39.03	45.82	45.82	1 / 8							
reaction time	interval			4.53	5.76	5.52	5.79	6.30	6.79		# of strides	11.13	10.29	11.31	13.09	21.42	24.40	2.98
	velocity		8.98	11.04	8.68	9.06	8.64	7.94	7.36	8.73		8.98	9.72	8.84	7.64	9.34	8.20	

Semi-Final 2

date 30-Jun-08

USATF Women's Sprint Development with HPC (2008)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Wariner, Jeremy (USA) (19	time		10.94	16.16	21.65	27.12	32.78	38.40	44.66	44.66	4 / 1							
reaction time	interval			5.22	5.49	5.47	5.66	5.62	6.26		# of strides	10.94	10.71	11.13	11.88	21.65	23.01	1.36
	velocity		9.14	9.58	9.11	9.14	8.83	8.90	7.99	8.96		9.14	9.34	8.98	8.42	9.24	8.69	
Merritt, LaShawn (USA) (19	time		10.97	16.06	21.56	26.98	32.84	38.55	44.76	44.76	5 / 2							
reaction time	interval			5.09	5.50	5.42	5.86	5.71	6.21		# of strides	10.97	10.59	11.28	11.92	21.56	23.20	1.64
	velocity		9.12	9.82	9.09	9.23	8.53	8.76	8.05	8.94		9.12	9.44	8.87	8.39	9.28	8.62	
Neville, David (USA) (1984)	time		11.21	16.46	21.85	27.16	32.95	38.64	45.03	45.03	3 / 3							
reaction time	interval			5.25	5.39	5.31	5.79	5.69	6.39		# of strides	11.21	10.64	11.10	12.08	21.85	23.18	1.33
	velocity		8.92	9.52	9.28	9.42	8.64	8.79	7.82	8.88		8.92	9.40	9.01	8.28	9.15	8.63	
Nixon, Greg (USA) (1985)	time		11.32		21.76	27.10	32.83	38.64	45.20	45.20	8 / 4							
reaction time	interval				10.44	5.34	5.73	5.81	6.56	PB	# of strides	11.32	10.44	11.07	12.37	21.76	23.44	1.68
	velocity		8.83		9.58	9.36	8.73	8.61	7.62	8.85		8.83	9.58	9.03	8.08	9.19	8.53	
Betters, LaJerald (USA) (19	time		11.16	16.19	21.56	27.11	32.98	38.92	45.55	45.55	6 / 5							
reaction time	interval			5.03	5.37	5.55	5.87	5.94	6.63		# of strides	11.16	10.40	11.42	12.57	21.56	23.99	2.43
	velocity		8.96	9.94	9.31	9.01	8.52	8.42	7.54	8.78		8.96	9.62	8.76	7.96	9.28	8.34	
Smith, Miles (USA) (1984)	time		11.18		21.90	27.54	33.53	39.57	46.32	46.32	1 / 6							
reaction time	interval				10.72	5.64	5.99	6.04	6.75		# of strides	11.18	10.72	11.63	12.79	21.90	24.42	2.52
	velocity		8.94		9.33	8.87	8.35	8.28	7.41	8.64		8.94	9.33	8.60	7.82	9.13	8.19	
Hurtault, Erison (USA) (19	time		11.14		21.70	27.22	33.21	39.32	46.34	46.34	7 / 7							
reaction time	interval				10.56	5.52	5.99	6.11	7.02		# of strides	11.14	10.56	11.51	13.13	21.70	24.64	2.94
	velocity		8.98		9.47	9.06	8.35	8.18	7.12	8.63		8.98	9.47	8.69	7.62	9.22	8.12	

Hogans, Obra (USA) (1982)	time		11.21		22.14	27.64	33.45	39.60	46.37	46.37	2 / 8						
reaction time	interval				10.93	5.50	5.81	6.15	6.77		# of strides	11.21	10.93	11.31	12.92	22.14	24.23	2.09
	velocity		8.92		9.15	9.09	8.61	8.13	7.39	8.63		8.92	9.15	8.84	7.74	9.03	8.25	

Semi-Final 1

date 30-Jun-08

USATF Women's Sprint Development with HPC (2008)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Witherspoon, Reggie (USA	time		11.16	16.35	21.61	27.16	32.95	38.77	44.99	44.99	6 / 1							
reaction time	interval			5.19	5.26	5.55	5.79	5.82	6.22	PB	# of strides	11.16	10.45	11.34	12.04	21.61	23.38	1.77
	velocity		8.96	9.63	9.51	9.01	8.64	8.59	8.04	8.89		8.96	9.57	8.82	8.31	9.25	8.55	
Williamson, Darold (USA) (	time		11.27		21.95	27.32	33.13	38.95	45.16	45.16	8 / 2							
reaction time	interval				10.68	5.37	5.81	5.82	6.21		# of strides	11.27	10.68	11.18	12.03	21.95	23.21	1.26
	velocity		8.87		9.36	9.31	8.61	8.59	8.05	8.86		8.87	9.36	8.94	8.31	9.11	8.62	
Smith, Calvin (USA) (1987)	time		11.44	16.62	22.08	27.56	33.40	39.22	45.43	45.43	7 / 3							
reaction time	interval			5.18	5.46	5.48	5.84	5.82	6.21		# of strides	11.44	10.64	11.32	12.03	22.08	23.35	1.27
	velocity		8.74	9.65	9.16	9.12	8.56	8.59	8.05	8.80		8.74	9.40	8.83	8.31	9.06	8.57	
Larry, Lionel (USA) (1986)	time		11.04	16.25	21.82	27.31	33.23	39.09	45.55	45.55	4 / 4							
reaction time	interval			5.21	5.57	5.49	5.92	5.86	6.46		# of strides	11.04	10.78	11.41	12.32	21.82	23.73	1.91
	velocity		9.06	9.60	8.98	9.11	8.45	8.53	7.74	8.78		9.06	9.28	8.76	8.12	9.17	8.43	
Torrance, Jamaal (USA) (19	time		11.21		21.87	27.41	33.13	39.25	45.76	45.76	2 / 5							
reaction time	interval				10.66	5.54	5.72	6.12	6.51		# of strides	11.21	10.66	11.26	12.63	21.87	23.89	2.02
	velocity		8.92		9.38	9.03	8.74	8.17	7.68	8.74		8.92	9.38	8.88	7.92	9.14	8.37	
Iglehart-Summers, Quentin	time		11.27	16.62	21.36	27.72	33.60	39.50	45.84	45.84	5 / 6							
reaction time	interval			5.35	4.74	6.36	5.88	5.90	6.34		# of strides	11.27	10.09	12.24	12.24	21.36	24.48	3.12
	velocity		8.87	9.35	10.55	7.86	8.50	8.47	7.89	8.73		8.87	9.91	8.17	8.17	9.36	8.17	
Boase, Jordan (USA) (1985	time		11.42		22.12	27.66	33.72	39.82	46.60	46.60	3 / 7							
reaction time	interval				10.70	5.54	6.06	6.10	6.78		# of strides	11.42	10.70	11.60	12.88	22.12	24.48	2.36
	velocity		8.76		9.35	9.03	8.25	8.20	7.37	8.58		8.76	9.35	8.62	7.76	9.04	8.17	
Blakely, Fernada (USA) (19	time		11.29		22.00	27.64	33.63	39.88	46.72	46.72	1 / 8							
reaction time	interval				10.71	5.64	5.99	6.25	6.84		# of strides	11.29	10.71	11.63	13.09	22.00	24.72	2.72
	velocity		8.86		9.34	8.87	8.35	8.00	7.31	8.56		8.86	9.34	8.60	7.64	9.09	8.09	

2007 IAAF World Athletic Final (Stuttgart, GER)

FINAL

date 22-Sep-07

Graubner (2007) - http://www.fgs.uni-halle.de

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Merritt, LaShawn (USA) (1	time		10.92		21.24		38.35		44.58	44.58	5 / 1							
reaction time 0.169	interval				10.32		17.11		6.23		# of strides	10.92	10.32	17.11	6.23	21.24	23.34	2.10
	velocity		9.16		9.69		5.84		16.05	8.97		9.16	9.69	5.84	16.05	9.42	8.57	
Christopher, Tyler (CAN) (	time		11.06		21.44		38.73		44.87	44.87	3 / 2							
reaction time 0.160	interval				10.38		17.29		6.14		# of strides	11.06	10.38	17.29	6.14	21.44	23.43	1.99
	velocity		9.04		9.63		5.78		16.29	8.91		9.04	9.63	5.78	16.29	9.33	8.54	
Taylor, Angelo (USA) (1978	time		11.29		21.90		38.96		44.92	44.92	6 / 3							
reaction time 0.156	interval				10.61		17.06		5.96		# of strides	11.29	10.61	17.06	5.96	21.90	23.02	1.12
	velocity		8.86		9.43		5.86		16.78	8.90		8.86	9.43	5.86	16.78	9.13	8.69	
Kikaya, Gary (COD) (1980)	time		11.24		21.65		38.77		45.58	45.58	4 / 4							
reaction time 0.155	interval				10.41		17.12		6.81		# of strides	11.24	10.41	17.12	6.81	21.65	23.93	2.28
	velocity		8.90		9.61		5.84		14.68	8.78		8.90	9.61	5.84	14.68	9.24	8.36	
Steffensen, John (AUS) (1	time		11.23		21.62		39.71		46.16	46.16	8 / 5							
reaction time 0.151	interval				10.39		18.09		6.45		# of strides	11.23	10.39	18.09	6.45	21.62	24.54	2.92
	velocity		8.90		9.62		5.53		15.50	8.67		8.90	9.62	5.53	15.50	9.25	8.15	
Rooney, Martyn (GBR) (19	time		11.42		22.18		39.92		46.25	46.25	1 / 6							
reaction time 0.155	interval				10.76		17.74		6.33		# of strides	11.42	10.76	17.74	6.33	22.18	24.07	1.89
	velocity		8.76		9.29		5.64		15.80	8.65		8.76	9.29	5.64	15.80	9.02	8.31	
Francique, Alleyne (GRN) (	time		11.38		21.92		39.62		46.27	46.27	7 / 7							
reaction time 0.156	interval				10.54		17.70		6.65		# of strides	11.38	10.54	17.70	6.65	21.92	24.35	2.43
	velocity		8.79		9.49		5.65		15.04	8.64		8.79	9.49	5.65	15.04	9.12	8.21	
Ayre, Sanjay (JAM) (1980)	time		11.20		21.90		39.78		46.32	46.32	2 / 8							
reaction time 0.155	interval				10.70		17.88		6.54		# of strides	11.20	10.70	17.88	6.54	21.90	24.42	2.52
	velocity		8.93		9.35		5.59		15.29	8.64		8.93	9.35	5.59	15.29	9.13	8.19	

2007 ISTAF (Berlin, GER) (TV Analysis)

FINAL

date 16-Sep-07

Graubner (2009) - http://www.fgs.uni-halle.de

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Wariner, Jeremy (USA) (19	time		11.18		21.54		32.38		44.05	44.05	4 / 1							
reaction time 0.283	interval				10.36		10.84		11.67		# of strides	11.18	10.36	10.84	11.67	21.54	22.51	0.97
	velocity		8.94		9.65		9.23		8.57	9.08	170.0	8.94	9.65	9.23	8.57	9.29	8.88	

2007 IAAF World Championships (Osaka, JPN)

FINAL

date 31-Aug-07

Mochida (2008) - biomechancial analysis of the 400m final race at the 2007 world championships in athletics

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential

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

Wariner, Jeremy (USA) (19	time	6.01	10.80	15.77	20.97	26.27	31.60	37.24	43.45	43.45	6 / 1							
reaction time 0.182	interval		4.79	4.97	5.20	5.30	5.33	5.64	6.21	PB	# of strides	10.80	10.17	10.63	11.85	20.97	22.48	1.51
	velocity	8.32	10.44	10.06	9.62	9.43	9.38	8.87	8.05	9.21	168.7	9.26	9.83	9.41	8.44	9.54	8.90	
Merritt, LaShawn (USA) (1	time	6.01	10.76	15.63	20.90	26.31	31.72	37.45	43.96	43.96	5 / 2							
reaction time 0.180	interval		4.75	4.87	5.27	5.41	5.41	5.73	6.51	PB	# of strides	10.76	10.14	10.82	12.24	20.90	23.06	2.16
	velocity	8.32	10.53	10.27	9.49	9.24	9.24	8.73	7.68	9.10	168.0	9.29	9.86	9.24	8.17	9.57	8.67	
Taylor, Angelo (USA) (1978	time	6.06	10.93	15.78	20.94	26.38	31.90	37.90	44.32	44.32	4 / 3							
reaction time 0.173	interval		4.87	4.85	5.16	5.44	5.52	6.00	6.42		# of strides	10.93	10.01	10.96	12.42	20.94	23.38	2.44
	velocity	8.25	10.27	10.31	9.69	9.19	9.06	8.33	7.79	9.03	168.0	9.15	9.99	9.12	8.05	9.55	8.55	
Brown, Chris (BAH) (1978)	time	5.93	10.66	15.53	20.74	26.14	31.81	37.88	44.45	44.45	8 / 4							
reaction time 0.168	interval		4.73	4.87	5.21	5.40	5.67	6.07	6.57	NR	# of strides	10.66	10.08	11.07	12.64	20.74	23.71	2.97
	velocity	8.43	10.57	10.27	9.60	9.26	8.82	8.24	7.61	9.00	186.2	9.38	9.92	9.03	7.91	9.64	8.44	
Djhone, Leslie (FRA) (1981	time	6.18	10.96	15.90	21.09	26.49	32.16	38.17	44.59	44.59	7 / 5							
reaction time 0.151	interval		4.78	4.94	5.19	5.40	5.67	6.01	6.42		# of strides	10.96	10.13	11.07	12.43	21.09	23.50	2.41
	velocity	8.09	10.46	10.12	9.63	9.26	8.82	8.32	7.79	8.97	164.5	9.12	9.87	9.03	8.05	9.48	8.51	
Christopher, Tyler (CAN) (	time	6.02	10.86	15.83	21.05	26.54	32.38	38.40	44.71	44.71	3 / 6							
reaction time 0.169	interval		4.84	4.97	5.22	5.49	5.84	6.02	6.31		# of strides	10.86	10.19	11.33	12.33	21.05	23.66	2.61
	velocity	8.31	10.33	10.06	9.58	9.11	8.56	8.31	7.92	8.95	183.7	9.21	9.81	8.83	8.11	9.50	8.45	
Wissman, Johan (SWE) (19	time	6.13	10.86	15.72	20.97	26.36	32.07	38.20	44.72	44.72	9 / 7							
reaction time 0.181	interval		4.73	4.86	5.25	5.39	5.71	6.13	6.52		# of strides	10.86	10.11	11.10	12.65	20.97	23.75	2.78
	velocity	8.16	10.57	10.29	9.52	9.28	8.76	8.16	7.67	8.94	177.2	9.21	9.89	9.01	7.91	9.54	8.42	
Moncur, Avard (BAH) (197	time	6.24	11.06	15.93	21.10	26.59	32.43	38.61	45.40	45.40	2 / 8							
reaction time 0.164	interval		4.82	4.87	5.17	5.49	5.84	6.18	6.79		# of strides	11.06	10.04	11.33	12.97	21.10	24.30	3.20
	velocity	8.01	10.37	10.27	9.67	9.11	8.56	8.09	7.36	8.81	165.0	9.04	9.96	8.83	7.71	9.48	8.23	

2007 Japanese National High School Championships (Saga, JPN)

FINAL date 02-Aug-07

Hitorara (2007) - 60st high school championships: JAF scientific committee - biomechanics data collection

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Sato, Keitaro (JPN) (1991)	time	6.32	12.04	18.07	24.32	30.54	36.51	42.41	48.68	48.68	/ 1							
reaction time	interval		5.72	6.03	6.25	6.22	5.97	5.90	6.27		# of strides	12.04	12.28	12.19	12.17	24.32	24.36	0.04
	velocity	7.91	8.74	8.29	8.00	8.04	8.38	8.47	7.97	8.22		8.31	8.14	8.20	8.22	8.22	8.21	
Junya, Nagahisa (JPN)	time	6.60	12.29	18.25	24.28	30.37	36.41	42.63	49.29	49.29	/ 2							
reaction time	interval		5.69	5.96	6.03	6.09	6.04	6.22	6.66		# of strides	12.29	11.99	12.13	12.88	24.28	25.01	0.73
	velocity	7.58	8.79	8.39	8.29	8.21	8.28	8.04	7.51	8.12		8.14	8.34	8.24	7.76	8.24	8.00	
Hamano, Junpei (JPN) (198	time	6.25	11.77	17.78	24.08	30.28	36.34	42.64	49.76	49.76	/ 3							
reaction time	interval		5.52	6.01	6.30	6.20	6.06	6.30	7.12		# of strides	11.77	12.31	12.26	13.42	24.08	25.68	1.60
	velocity	8.00	9.06	8.32	7.94	8.06	8.25	7.94	7.02	8.04		8.50	8.12	8.16	7.45	8.31	7.79	

2007 USATF National Championships (Indianapolis, IN)

FINAL date 23-Jun-07

Track Newsletter (2007) - USATF men's championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Taylor, Angelo (USA) (1978	time				20.8		31.9		44.1	44.05	/ 1							
reaction time	interval						11.10		12.20	PB	# of strides			11.10	12.20	20.80	23.30	2.50
	velocity				9.62		9.01		8.20	9.08				9.01	8.20	9.62	8.58	
Merritt, LaShawn (USA) (1	time				20.7		31.8		44.1	44.06	/ 2							
reaction time	interval						11.10		12.30	PB	# of strides			11.10	12.30	20.70	23.40	2.70
	velocity				9.66		9.01		8.13	9.08				9.01	8.13	9.66	8.55	
Larry, Lionel (USA) (1986)	time				21.3		32.3		44.8	44.84	/ 3							
reaction time	interval						11.00		12.50		# of strides			11.00	12.50	21.30	23.50	2.20
	velocity				9.39		9.09		8.00	8.92				9.09	8.00	9.39	8.51	
Williamson, Darold (USA) (	time				21.3		32.1		45.0	44.97	/ 4							
reaction time	interval						10.80		12.90		# of strides			10.80	12.90	21.30	23.70	2.40
	velocity				9.39		9.26		7.75	8.89				9.26	7.75	9.39	8.44	
Jackson, Bershawn (USA) (	time						32.4		45.6	45.55	/ 5							
reaction time	interval								13.2		# of strides				13.20			
	velocity						9.26		7.58	8.78					7.58			
Torrance, Jamaal (USA) (19	time						32.7		45.8	45.79	/ 6							
reaction time	interval								13.1		# of strides				13.10			
	velocity						9.17		7.63	8.74					7.63			
Neville, David (USA) (1984)	time						33.1		46.1	46.06	/ 7							
reaction time	interval								13.0		# of strides				13.00			
	velocity						9.06		7.69	8.68					7.69			
Brew, Derrick (USA) (1977)	time						32.8		46.2	46.16	/ 8							
reaction time	interval								13.4		# of strides				13.40			
	velocity						9.15		7.46	8.67					7.46			

2007 European Cup (Munich, GER)

FINAL date 23-Jun-07

Graubner (2007) - http://www.fgs.uni-halle.de

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Djhone, Leslie (FRA) (1981	time		11.70		22.13		33.27		45.54	45.54	/ 1							
reaction time 0.242	interval				10.43		11.14		12.27		# of strides	11.70	10.43	11.14	12.27	22.13	23.41	1.28
	velocity		8.55		9.59		8.98		8.15	8.78		8.55	9.59	8.98	8.15	9.04	8.54	
Benjamin, Tim (GBR) (1982	time		11.62		22.42		33.63		45.87	45.87	/ 2							
reaction time 0.178	interval				10.80		11.21		12.24		# of strides	11.62	10.80	11.21	12.24	22.42	23.45	1.03
	velocity		8.61		9.26		8.92		8.17	8.72		8.61	9.26	8.92	8.17	8.92	8.53	
Swillims, Bastian (GER) (19	time		11.38		21.83		33.38		45.95	45.95	/ 3							
reaction time 0.151	interval				10.45		11.55		12.57		# of strides	11.38	10.45	11.55	12.57	21.83	24.12	2.29
	velocity		8.79		9.57		8.66		7.96	8.71		8.79	9.57	8.66	7.96	9.16	8.29	
Dyldin, Maksim (RUS) (198	time		11.52		22.04		33.42		46.04	46.04	/ 4							
reaction time 0.151	interval				10.52		11.38		12.62		# of strides	11.52	10.52	11.38	12.62	22.04	24.00	1.96
	velocity		8.68		9.51		8.79		7.92	8.69		8.68	9.51	8.79	7.92	9.07	8.33	
Dabrowski, Daniel (POL) (1	time		11.64		22.41		33.90		46.25	46.25	/ 5							
reaction time 0.193	interval				10.77		11.49		12.35		# of strides	11.64	10.77	11.49	12.35	22.41	23.84	1.43
	velocity		8.59		9.29		8.70		8.10	8.65		8.59	9.29	8.70	8.10	8.92	8.39	
Borlée, Kevin (BEL) (1988)	time		11.70		22.49		33.94		46.46	46.46	/ 6							
reaction time 0.166	interval				10.79		11.45		12.52		# of strides	11.70	10.79	11.45	12.52	22.49	23.97	1.48
	velocity		8.55		9.27		8.73		7.99	8.61		8.55	9.27	8.73	7.99	8.89	8.34	
Grávalos, Dimítrios (GRE) (	time		11.63		22.36		33.76		46.83	46.83	/ 7							
reaction time 0.139	interval				10.73		11.40		13.07		# of strides	11.63	10.73	11.40	13.07	22.36	24.47	2.11
	velocity		8.60		9.32		8.77		7.65	8.54		8.60	9.32	8.77	7.65	8.94	8.17	
Rachkovsky, Oleksiy (UKR)	time		11.66		22.45		34.17		47.05	47.05	/ 8							
reaction time 0.240	interval				10.79		11.72		12.88		# of strides	11.66	10.79	11.72	12.88	22.45	24.60	2.15
	velocity		8.58		9.27		8.53		7.76	8.50		8.58	9.27	8.53	7.76	8.91	8.13	

2007 NCAA Championships (Sacramento, CA)

FINAL date 09-Jun-07

Track Newsletter (2007) - NCAA men's championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Chambers, Ricardo (JAM)	time		11.1		21.3		32.4		44.7	44.66	/ 1							
reaction time	interval				10.20		11.10		12.30		# of strides	11.10	10.20	11.10	12.30	21.30	23.40	2.10
	velocity		9.01		9.80		9.01		8.13	8.96		9.01	9.80	9.01	8.13	9.39	8.55	
Larry, Lionel (USA) (1986)	time		11.0		21.0		32.4		44.7	44.68	/ 2							
reaction time	interval				10.00		11.40		12.30	PB	# of strides	11.00	10.00	11.40	12.30	21.00	23.70	2.70
	velocity		9.09		10.00		8.77		8.13	8.95		9.09	10.00	8.77	8.13	9.52	8.44	
Hurtault, Erison (USA) (19	time						33.2		45.4	45.40	/ 3							
reaction time	interval								12.2	PB	# of strides				12.20			
	velocity						9.04		8.20	8.81					8.20			
Masheto, Garologelwane (B	time						33.2		45.5	45.51	/ 4							
reaction time	interval								12.3		# of strides				12.30			
	velocity						9.04		8.13	8.79					8.13			
Bingham, Michael (USA) (1	time						33.2		45.6	45.57	/ 5							
reaction time	interval								12.4	PB	# of strides				12.40			
	velocity						9.04		8.06	8.78					8.06			
Betters, LeJerald (USA) (19	time						33.5		45.7	45.66	/ 6							
reaction time	interval								12.2		# of strides				12.20			
	velocity						8.96		8.20	8.76					8.20			
Smith, Calvin (USA) (1987)	time						33.6		45.7	45.74	/ 7							
reaction time	interval								12.1		# of strides				12.10			
	velocity						8.93		8.26	8.75					8.26			
Williams, Siraj (LBR) (1984)	time						33.4		45.8	45.77	/ 8							
reaction time	interval								12.4	NR	# of strides				12.40			
	velocity						8.98		8.06	8.74					8.06			

2007 World Championship Trials (Suzhou, CHN)

FINAL date 09-Jun-07

He (2014) - the game characteristics and training monitoring of national excellent 400m male athletes

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Liu Xiaosheng (CHN) (1988	time	6.43	11.53	16.77	22.13	27.71	33.51	39.37	45.75	45.79	/ 1							
reaction time	interval		5.10	5.24	5.36	5.58	5.80	5.86	6.38	PB	# of strides	11.53	10.60	11.38	12.24	22.13	23.62	1.49
	velocity	7.78	9.80	9.54	9.33	8.96	8.62	8.53	7.84	8.74		8.67	9.43	8.79	8.17	9.04	8.47	

2006 Seiko Super Grand Prix (Yokohama, JPN)

FINAL date 24-Sep-06

Hisashi (2007) - Super Grand Prix 2006 - sprinting speed changes in the 400m

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Horigome, Yoshihiro (JPN)	time	6.1	11.3	16.6	22.1	27.6	33.3	39.3	45.77	45.77	7 / 1							
reaction time	interval		5.20	5.30	5.50	5.50	5.70	6.00	6.47	PB	# of strides	11.30	10.80	11.20	12.47	22.10	23.67	1.57
	velocity	8.20	9.62	9.43	9.09	9.09	8.77	8.33	7.73	8.74		8.85	9.26	8.93	8.02	9.05	8.45	

Dabrowski, Daniel (POL) (1	time	6.2	11.3	16.6	22.2	28.0	33.9	39.8	45.99	45.99	4 / 2							
reaction time	interval		5.10	5.30	5.60	5.80	5.90	5.90	6.19		# of strides	11.30	10.90	11.70	12.09	22.20	23.79	1.59
	velocity	8.06	9.80	9.43	8.93	8.62	8.47	8.47	8.08	8.70		8.85	9.17	8.55	8.27	9.01	8.41	
Kanemaru, Yuzo (JPN) (19	time	6.2	11.1	16.2	21.6	27.4	33.4	39.7	46.05	46.05	5 / 3							
reaction time	interval		4.90	5.10	5.40	5.80	6.00	6.30	6.35		# of strides	11.10	10.50	11.80	12.65	21.60	24.45	2.85
	velocity	8.06	10.20	9.80	9.26	8.62	8.33	7.94	7.87	8.69		9.01	9.52	8.47	7.91	9.26	8.18	
Wieruszewski, Rafeł (POL)	time	6.2	11.6	16.8	22.4	28.1	34.0	39.9	46.18	46.18	3 / 4							
reaction time	interval		5.40	5.20	5.60	5.70	5.90	5.90	6.28		# of strides	11.60	10.80	11.60	12.18	22.40	23.78	1.38
	velocity	8.06	9.26	9.62	8.93	8.77	8.47	8.47	7.96	8.66		8.62	9.26	8.62	8.21	8.93	8.41	
Mukai, Yukihiro (JPN) (198	time	6.3	11.4	16.7	22.3	28.1	33.9	39.9	46.37	46.37	2 / 5							
reaction time	interval		5.10	5.30	5.60	5.80	5.80	6.00	6.47		# of strides	11.40	10.90	11.60	12.47	22.30	24.07	1.77
	velocity	7.94	9.80	9.43	8.93	8.62	8.62	8.33	7.73	8.63		8.77	9.17	8.62	8.02	8.97	8.31	
Tamesue, Dai (JPN) (1978)	time	6.1	11.4	16.7	22.3	27.9	33.8	40.0	46.41	46.41	8 / 6							
reaction time	interval		5.30	5.30	5.60	5.60	5.90	6.20	6.41		# of strides	11.40	10.90	11.50	12.61	22.30	24.11	1.81
	velocity	8.20	9.43	9.43	8.93	8.93	8.47	8.06	7.80	8.62		8.77	9.17	8.70	7.93	8.97	8.30	
Sasaki, Yudai (JPN) (1986)	time	6.3	11.5	16.6	22.1	27.8	33.7	39.8	46.59	46.59	1 / 7							
reaction time	interval		5.20	5.10	5.50	5.70	5.90	6.10	6.79		# of strides	11.50	10.60	11.60	12.89	22.10	24.49	2.39
	velocity	7.94	9.62	9.80	9.09	8.77	8.47	8.20	7.36	8.59		8.70	9.43	8.62	7.76	9.05	8.17	
Batman, Daniel (AUS) (198	time	6.1	11.0	16.2	21.8	27.3	33.2	39.8	46.88	46.88	6 / 8							
reaction time	interval		4.90	5.20	5.60	5.50	5.90	6.60	7.08		# of strides	11.00	10.80	11.40	13.68	21.80	25.08	3.28
	velocity	8.20	10.20	9.62	8.93	9.09	8.47	7.58	7.06	8.53		9.09	9.26	8.77	7.31	9.17	7.97	

2006 IAAF World Athletic Final (Stuttgart, GER) (TV Analysis)

FINAL date 09-Sep-06

Graubner (2009) - http://www.fgs.uni-halle.de

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Wariner, Jeremy (USA) (19	time		10.86		21.06		32.13		44.02	44.02	5 / 1							
reaction time 0.185	interval				10.20		11.07		11.89	CR	# of strides	10.86	10.20	11.07	11.89	21.06	22.96	1.90
	velocity		9.21		9.80		9.03		8.41	9.09		9.21	9.80	9.03	8.41	9.50	8.71	
Kikaya, Gary (COD) (1980)	time		11.07		21.22		32.24		44.10	44.10	4 / 2							
reaction time 0.163	interval				10.15		11.02		11.86	AR	# of strides	11.07	10.15	11.02	11.86	21.22	22.88	1.66
	velocity		9.03		9.85		9.07		8.43	9.07		9.03	9.85	9.07	8.43	9.43	8.74	
Merritt, LaShawn (USA) (1	time		11.00		21.25		32.26		44.14	44.14	6 / 3							
reaction time 0.188	interval				10.25		11.01		11.88	PB	# of strides	11.00	10.25	11.01	11.88	21.25	22.89	1.64
	velocity		9.09		9.76		9.08		8.42	9.06		9.09	9.76	9.08	8.42	9.41	8.74	
Rock, Andrew (USA) (1982	0.191	no information available								44.69	3 / 4							
Blackwood, Michael (JAM)	0.181	no information available								45.09	8 / 5							
Francique, Alleyne (GRN) (	0.291	no information available								45.28	2 / 6							
Raquil, Marc (FRA) (1977)	0.232	no information available								45.75	1 / 7							
Gaba, Kamghe (GER) (1984	0.197	no information available								45.96	7 / 8							

2006 European Championships (Göteborg, SWE)

FINAL date 09-Aug-06

Behm (2006) - Championnats d'Europe Göteborg 2006… Le 400m avec ou sans obstacles

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Raquil, Marc (FRA) (1977)	time				22.5		33.0		45.02	45.02	/ 1							
reaction time	interval						10.50		12.02		# of strides			10.50	12.02	22.50	22.52	0.02
	velocity				8.89		19.05		8.32	8.88				9.52	8.32	8.89	8.88	
Frolov, Vladislav (RUS) (19	time				22.3		32.9		45.09	45.09	/ 2							
reaction time	interval						10.60		12.19	PB	# of strides			10.60	12.19	22.30	22.79	0.49
	velocity				8.97		18.87		8.20	8.87				9.43	8.20	8.97	8.78	
Djhone, Leslie (FRA) (1981	time				22.6		33.1		45.40	45.40	/ 3							
reaction time	interval						10.50		12.30		# of strides			10.50	12.30	22.60	22.80	0.20
	velocity				8.85		19.05		8.13	8.81				9.52	8.13	8.85	8.77	
Dabrowski, Daniel (POL) (1	time				22.4		33.0		45.56	45.56	/ 4							
reaction time	interval						10.60		12.56		# of strides			10.60	12.56	22.40	23.16	0.76
	velocity				8.93		18.87		7.96	8.78				9.43	7.96	8.93	8.64	
Barberi, Andrea (ITA) (1979	time				22.9		33.4		45.70	45.70	/ 5							
reaction time	interval						10.50		12.30		# of strides			10.50	12.30	22.90	22.80	-0.10
	velocity				8.73		19.05		8.13	8.75				9.52	8.13	8.73	8.77	
Benjamin, Tim (GBR) (1982	time				22.6		33.2		45.89	45.89	/ 6							
reaction time	interval						10.60		12.69		# of strides			10.60	12.69	22.60	23.29	0.69
	velocity				8.85		18.87		7.88	8.72				9.43	7.88	8.85	8.59	
Wieruszewski, Rafał (POL)	time				22.4		33.0		45.97	45.97	/ 7							
reaction time	interval						10.60		12.97		# of strides			10.60	12.97	22.40	23.57	1.17
	velocity				8.93		18.87		7.71	8.70				9.43	7.71	8.93	8.49	
Régas, Dimítrios (GRE) (19	time				22.6		33.2		46.23	46.23	/ 8							
reaction time	interval						10.60		13.03		# of strides			10.60	13.03	22.60	23.63	1.03
	velocity				8.85		18.87		7.67	8.65				9.43	7.67	8.85	8.46	

2006 USATF National Championships (Indianapolis, IN)

FINAL date 24-Jun-06

Track Newsletter (2006) - USATF men's championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Rock, Andrew (USA) (1982	time		11.34		21.62		32.48		44.45	44.45	/ 1							
reaction time	interval				10.28		10.86		11.97		# of strides	11.34	10.28	10.86	11.97	21.62	22.83	1.21
	velocity		8.82		9.73		9.21		8.35	9.00		8.82	9.73	9.21	8.35	9.25	8.76	
Merritt, LaShawn (USA) (1!	time		10.91		21.24		32.38		44.50	44.50	/ 2							
reaction time	interval				10.33		11.14		12.12	PB	# of strides	10.91	10.33	11.14	12.12	21.24	23.26	2.02
	velocity		9.17		9.68		8.98		8.25	8.99		9.17	9.68	8.98	8.25	9.42	8.60	
Neville, David (USA) (1984)	time		11.46		21.78		32.67		44.75	44.75	/ 3							
reaction time	interval				10.32		10.89		12.08	PB	# of strides	11.46	10.32	10.89	12.08	21.78	22.97	1.19
	velocity		8.73		9.69		9.18		8.28	8.94		8.73	9.69	9.18	8.28	9.18	8.71	
Williamson, Darold (USA) (	time		11.61		21.96		32.88		44.94	44.94	/ 4							
reaction time	interval				10.35		10.92		12.06		# of strides	11.61	10.35	10.92	12.06	21.96	22.98	1.02
	velocity		8.61		9.66		9.16		8.29	8.90		8.61	9.66	9.16	8.29	9.11	8.70	
Harris, Otis (USA) (1982)	time		11.54		22.23		33.25		45.00	45.00	/ 5							
reaction time	interval				10.69		11.02		11.75		# of strides	11.54	10.69	11.02	11.75	22.23	22.77	0.54
	velocity		8.67		9.35		9.07		8.51	8.89		8.67	9.35	9.07	8.51	9.00	8.78	
Ashley, Jamel (USA) (1979)	time		11.10		21.44		32.65		45.01	45.01	/ 6							
reaction time	interval				10.34		11.21		12.36		# of strides	11.10	10.34	11.21	12.36	21.44	23.57	2.13
	velocity		9.01		9.67		8.92		8.09	8.89		9.01	9.67	8.92	8.09	9.33	8.49	
Brew, Derrick (USA) (1977)	time		11.41				33.07		45.23	45.23	/ 7							
reaction time	interval						21.66		12.16		# of strides	11.41			12.16			
	velocity		8.76				9.23		8.22	8.84		8.76			8.22			
Campbell, Milton (USA) (1!	time		11.26		21.54		32.65		45.51	45.51	/ 8							
reaction time	interval				10.28		11.11		12.86		# of strides	11.26	10.28	11.11	12.86	21.54	23.97	2.43
	velocity		8.88		9.73		9.00		7.78	8.79		8.88	9.73	9.00	7.78	9.29	8.34	

2006 NCAA Championships (Sacramento, CA)

FINAL date 10-Jun-06

Track Newsletter (2006) - NCAA men's championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Carter, Xavier (USA) (1985)	time		11.3		21.6		32.7		44.5	44.53	/ 1							
reaction time	interval				10.30		11.10		11.80	PB	# of strides	11.30	10.30	11.10	11.80	21.60	22.90	1.30
	velocity		8.85		9.71		9.01		8.47	8.98		8.85	9.71	9.01	8.47	9.26	8.73	
Chambers, Ricardo (JAM) (	time		11.0		21.3		32.6		44.7	44.71	/ 2							
reaction time	interval				10.30		11.30		12.10	PB	# of strides	11.00	10.30	11.30	12.10	21.30	23.40	2.10
	velocity		9.09		9.71		8.85		8.26	8.95		9.09	9.71	8.85	8.26	9.39	8.55	
Neville, David (USA) (1984)	time		11.2		21.4		32.5		44.9	44.94	/ 3							
reaction time	interval				10.20		11.10		12.40	PB	# of strides	11.20	10.20	11.10	12.40	21.40	23.50	2.10
	velocity		8.93		9.80		9.01		8.06	8.90		8.93	9.80	9.01	8.06	9.35	8.51	
Banda, Lewis (ZIM) (1982)	time		11.2		21.6		32.9		45.1	45.10	/ 4							
reaction time	interval				10.40		11.30		12.20		# of strides	11.20	10.40	11.30	12.20	21.60	23.50	1.90
	velocity		8.93		9.62		8.85		8.20	8.87		8.93	9.62	8.85	8.20	9.26	8.51	
Scherer, Matt (USA) (1983)	time		11.2		21.6		33.1		45.4	45.41	/ 5							
reaction time	interval				10.40		11.50		12.30		# of strides	11.20	10.40	11.50	12.30	21.60	23.80	2.20
	velocity		8.93		9.62		8.70		8.13	8.81		8.93	9.62	8.70	8.13	9.26	8.40	
Larry, Lionel (USA) (1986)	time		11.2		21.8		33.2		45.4	45.43	/ 6							
reaction time	interval				10.60		11.40		12.20	PB	# of strides	11.20	10.60	11.40	12.20	21.80	23.60	1.80
	velocity		8.93		9.43		8.77		8.20	8.80		8.93	9.43	8.77	8.20	9.17	8.47	
Everhart, Craig (USA) (198	time		11.2		22.1		33.3		45.7	45.70	/ 7							
reaction time	interval				10.90		11.20		12.40		# of strides	11.20	10.90	11.20	12.40	22.10	23.60	1.50
	velocity		8.93		9.17		8.93		8.06	8.75		8.93	9.17	8.93	8.06	9.05	8.47	
Buzard, Aaron (USA) (1984	time		11.4		22.1		33.5		45.9	45.91	/ 8							
reaction time	interval				10.70		11.40		12.40		# of strides	11.40	10.70	11.40	12.40	22.10	23.80	1.70
	velocity		8.77		9.35		8.77		8.06	8.71		8.77	9.35	8.77	8.06	9.05	8.40	

2006 Modesto Relays (Modesto, CA)

FINAL date 06-May-06

Track Newsletter (2006) - modesto relays

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Wariner, Jeremy (USA) (19!	time				21.8				44.80	44.84	/ 1							ferrari (2009)
reaction time	interval								23.0		# of strides					21.80	23.00	1.20
	velocity				9.17				8.70	8.92						9.17	8.70	

2005 Seiko Super Grand Prix (Yokohama, JPN)

FINAL date 19-Sep-05

Masaaki (2006) - time analysis in the 400m at the Seiko Super Grand Prix

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kanemaru, Yuzo (JPN) (19!	time		11.33		22.02		33.23	39.12	45.47	45.47	4 / 1							

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

reaction time	interval		10.69	11.21	5.89	6.35	PB	# of strides	11.33	10.69	11.21	12.24	22.02	23.45	1.43
	velocity	8.83	9.35	8.92	8.49	7.87	8.80		8.83	9.35	8.92	8.17	9.08	8.53	
Dabrowski, Daniel (POL) (1	time	11.45	22.12	33.22	39.21	45.62	45.62	7 / 2							
reaction time	interval		10.67	11.10	5.99	6.41	PB	# of strides	11.45	10.67	11.10	12.40	22.12	23.50	1.38
	velocity	8.73	9.37	9.01	8.35	7.80	8.77		8.73	9.37	9.01	8.06	9.04	8.51	
Bryd, Leonard (USA) (1975	time	11.34	22.10	33.25	39.28	45.86	45.86	5 / 3							
reaction time	interval		10.76	11.15	6.03	6.58		# of strides	11.34	10.76	11.15	12.61	22.10	23.76	1.66
	velocity	8.82	9.29	8.97	8.29	7.60	8.72		8.82	9.29	8.97	7.93	9.05	8.42	
Horigome, Yoshihiro (JPN)	time	11.47	22.46	33.52	39.36	45.89	45.89	2 / 4							
reaction time	interval		10.99	11.06	5.84	6.53	PB	# of strides	11.47	10.99	11.06	12.37	22.46	23.43	0.97
	velocity	8.72	9.10	9.04	8.56	7.66	8.72		8.72	9.10	9.04	8.08	8.90	8.54	
Clarke, Davian (JAM) (1976	time	11.22	21.63	32.75	38.95	45.95	45.95	6 / 5							
reaction time	interval		10.41	11.12	6.20	7.00		# of strides	11.22	10.41	11.12	13.20	21.63	24.32	2.69
	velocity	8.91	9.61	8.99	8.06	7.14	8.71		8.91	9.61	8.99	7.58	9.25	8.22	
Sato, Mitsuhiro (JPN) (198	time	11.13	21.37	33.20	39.32	46.30	46.30	3 / 6							
reaction time	interval		10.24	11.83	6.12	6.98		# of strides	11.13	10.24	11.83	13.10	21.37	24.93	3.56
	velocity	8.98	9.77	8.45	8.17	7.16	8.64		8.98	9.77	8.45	7.63	9.36	8.02	
Inoue, Yosuke (JPN) (1983)	time	11.33	22.24	33.44	39.78	46.72	46.72	8 / 7							
reaction time	interval		10.91	11.20	6.34	6.94		# of strides	11.33	10.91	11.20	13.28	22.24	24.48	2.24
	velocity	8.83	9.17	8.93	7.89	7.20	8.56		8.83	9.17	8.93	7.53	8.99	8.17	
Osakada, Jun (JPN) (1974)	time	11.26	22.17	33.92	40.28	47.40	47.40	1 / 8							
reaction time	interval		10.91	11.75	6.36	7.12		# of strides	11.26	10.91	11.75	13.48	22.17	25.23	3.06
	velocity	8.88	9.17	8.51	7.86	7.02	8.44		8.88	9.17	8.51	7.42	9.02	7.93	

2005 IAAF World Championships (Helsinki, FIN)

Track Newsletter (2005) - World championships- men

FINAL date 12-Aug-05

ferrari (2009) - Split 100 metri uomini e donne (www.noivelocisti.net/forum?func=view&catid=9&id=1813)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Wariner, Jeremy (USA) (19	time		10.7		21.0		31.8		43.93	43.93	3 / 1							ferrari (2009)
reaction time 0.150	interval				10.3		10.8		12.1	PB	# of strides	10.70	10.30	10.80	12.13	21.00	22.93	1.93
	velocity		9.35		9.71		9.26		8.24	9.11	171.0	9.35	9.71	9.26	8.24	9.52	8.72	
Rock, Andrew (USA) (1982	time						32.4		44.4	44.35	7 / 2							*Track Newsletter (2005)*
reaction time 0.244	interval								12.0	PB	# of strides				12.00			
	velocity						9.26		8.33	9.02	171.2				8.33			
Christoher, Tyler (CAN) (1	time						32.2		44.4	44.44	4 / 3							*Track Newsletter (2005)*
reaction time 0.154	interval								12.2	NR	# of strides				12.20			
	velocity						9.32		8.20	9.00	174.7				8.20			
Brown, Chris (BAH) (1978)	time						32.5		44.5	44.48	8 / 4							*Track Newsletter (2005)*
reaction time 0.259	interval								12.0	NR	# of strides				12.00			
	velocity						9.23		8.33	8.99	184.2				8.33			
Benjamin, Timothy (GBR) (	time						32.5		44.9	44.93	1 / 5							*Track Newsletter (2005)*
reaction time 0.192	interval								12.4		# of strides				12.40			
	velocity						9.23		8.06	8.90	172.5				8.06			
Simpson, Brandon (JAM) (	time						32.5		45.0	45.01	6 / 6							*Track Newsletter (2005)*
reaction time 0.147	interval								12.5		# of strides				12.50			
	velocity						9.23		8.00	8.89	183.2				8.00			
Williamson, Darold (USA) (	time						32.4		45.1	45.12	5 / 7							*Track Newsletter (2005)*
reaction time 0.179	interval								12.7		# of strides				12.70			
	velocity						9.26		7.87	8.87	168.2				7.87			
Steffensen, John (AUS) (1	time						32.5		45.5	45.46	2 / 8							*Track Newsletter (2005)*
reaction time 0.151	interval								13.0		# of strides				13.00			
	velocity						9.23		7.69	8.80	175.0				7.69			

2005 USATF National Championship (Carson, CA)

FINAL date 25-Jun-05

USATF Women's Sprint Development (2005)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Wariner, Jeremy (USA) (19	time		11.45	16.53	21.72	27.13	32.42	38.12	44.20	44.20	5 / 1							
reaction time	interval			5.08	5.19	5.41	5.29	5.70	6.08		# of strides	11.45	10.27	10.70	11.78	21.72	22.48	0.76
	velocity		8.73	9.84	9.63	9.24	9.45	8.77	8.22	9.05		8.73	9.74	9.35	8.49	9.21	8.90	
Williamson, Darold (USA) (	time		11.61	16.72	21.90	27.14	32.58	38.41	44.62	44.62	4 / 2							
reaction time	interval			5.11	5.18	5.24	5.44	5.83	6.21		# of strides	11.61	10.29	10.68	12.04	21.90	22.72	0.82
	velocity		8.61	9.78	9.65	9.54	9.19	8.58	8.05	8.96		8.61	9.72	9.36	8.31	9.13	8.80	
Rock, Andrew (USA) (1982	time			16.47	21.74	27.06	32.62	38.53	44.70	44.70	7 / 3							
reaction time	interval				5.27	5.32	5.56	5.91	6.17		# of strides			10.88	12.08	21.74	22.96	1.22
	velocity			9.11	9.49	9.40	8.99	8.46	8.10	8.95				9.19	8.28	9.20	8.71	
Merritt, LaShawn (USA) (1	time		11.34	16.30	21.47	26.86	32.48	38.33	44.73	44.73	6 / 4							
reaction time	interval			4.96	5.17	5.39	5.62	5.85	6.40		# of strides	11.34	10.13	11.01	12.25	21.47	23.26	1.79

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

	velocity	8.82	10.08	9.67	9.28	8.90	8.55	7.81	8.94		8.82	9.87	9.08	8.16	9.32	8.60	
Brew, Derrick (USA) (1977)	time	11.28	16.41	21.56	26.89	32.50	38.51	45.01	45.01	3 / 5							
reaction time	interval		5.13	5.15	5.33	5.61	6.01	6.50		# of strides	11.28	10.28	10.94	12.51	21.56	23.45	1.89
	velocity	8.87	9.75	9.71	9.38	8.91	8.32	7.69	8.89		8.87	9.73	9.14	7.99	9.28	8.53	
Smith, Miles (USA) (1984)	time	11.51	16.52	21.78	27.15	32.90	38.93	45.25	45.25	2 / 6							
reaction time	interval		5.01	5.26	5.37	5.75	6.03	6.32		# of strides	11.51	10.27	11.12	12.35	21.78	23.47	1.69
	velocity	8.69	9.98	9.51	9.31	8.70	8.29	7.91	8.84		8.69	9.74	8.99	8.10	9.18	8.52	
Washington, Tyree (USA) (	time	11.40	16.65	22.11	27.58	33.29	39.34	45.61	45.61	1 / 7							
reaction time	interval		5.25	5.46	5.47	5.71	6.05	6.27		# of strides	11.40	10.71	11.18	12.32	22.11	23.50	1.39
	velocity	8.77	9.52	9.16	9.14	8.76	8.26	7.97	8.77		8.77	9.34	8.94	8.12	9.05	8.51	
Byrd, Leonard (USA) (1975	time			21.72	27.25	33.03	39.27	45.67	45.67	8 / 8							
reaction time	interval				5.53	5.78	6.24	6.40		# of strides			11.31	12.64	21.72	23.95	2.23
	velocity			9.21	9.04	8.65	8.01	7.81	8.76				8.84	7.91	9.21	8.35	
Homewood, Dirk (USA) (19	time			22.12	27.57	33.31	39.66	46.15	46.15	9 / 9							
reaction time	interval				5.45	5.74	6.35	6.49		# of strides			11.19	12.84	22.12	24.03	1.91
	velocity			9.04	9.17	8.71	7.87	7.70	8.67				8.94	7.79	9.04	8.32	

2005 USATF National Junior Championship (Carson, CA)

FINAL date 25-Jun-05

USATF Women's Sprint Development (2005)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Oliver, Justin (USA) (1987)	time			17.05	22.77	28.33	33.87	39.88	46.26	46.26	7 / 1							
reaction time	interval				5.72	5.56	5.54	6.01	6.38		# of strides			11.10	12.39	22.77	23.49	0.72
	velocity			8.80	8.74	8.99	9.03	8.32	7.84	8.65				9.01	8.07	8.78	8.51	
Anderson, Nathaniel (USA	time		11.53	16.96	22.56	28.22	33.77	39.89	46.47	46.47	5 / 2							
reaction time	interval			5.43	5.60	5.66	5.55	6.12	6.58	PB	# of strides	11.53	11.03	11.21	12.70	22.56	23.91	1.35
	velocity		8.67	9.21	8.93	8.83	9.01	8.17	7.60	8.61		8.67	9.07	8.92	7.87	8.87	8.36	
Larry, Lionel (USA) (1986)	time		11.35	16.52	21.91	27.55	33.19	39.48	46.52	46.52	4 / 3							
reaction time	interval			5.17	5.39	5.64	5.64	6.29	7.04		# of strides	11.35	10.56	11.28	13.33	21.91	24.61	2.70
	velocity		8.81	9.67	9.28	8.87	8.87	7.95	7.10	8.60		8.81	9.47	8.87	7.50	9.13	8.13	
Reid, Terrence (USA) (1986	time		11.83	17.32			34.55	40.63	47.00	47.00	1 / 4							
reaction time	interval			5.49			17.23	6.08	6.37		# of strides	11.83			12.45			
	velocity		8.45	9.11			8.71	8.22	7.85	8.51		8.45			8.03			
Lowe, Sean (USA) (1986)	time		11.95	17.43	23.14	28.97	34.54	40.73	47.29	47.29	6 / 5							
reaction time	interval			5.48	5.71	5.83	5.57	6.19	6.56		# of strides	11.95	11.19	11.40	12.75	23.14	24.15	1.01
	velocity		8.37	9.12	8.76	8.58	8.98	8.08	7.62	8.46		8.37	8.94	8.77	7.84	8.64	8.28	
Latson, Kolee (USA) (1986)	time		11.71	17.02	22.51	28.30	34.14	40.41	47.48	47.48	2 / 6							
reaction time	interval			5.31	5.49	5.79	5.84	6.27	7.07		# of strides	11.71	10.80	11.63	13.34	22.51	24.97	2.46
	velocity		8.54	9.42	9.11	8.64	8.56	7.97	7.07	8.42		8.54	9.26	8.60	7.50	8.88	8.01	
Scheuerman, Jacob (USA)	time			16.95	22.51	28.32	34.22	40.68	47.68	47.68	8 / 7							
reaction time	interval				5.56	5.81	5.90	6.46	7.00		# of strides			11.71	13.46	22.51	25.17	2.66
	velocity			8.85	8.99	8.61	8.47	7.74	7.14	8.39				8.54	7.43	8.88	7.95	
Johnston, Rashaud (USA)	time			17.28	22.76	28.65	34.39	40.73	47.88	47.88	9 / 8							
reaction time	interval				5.48	5.89	5.74	6.34	7.15		# of strides			11.63	13.49	22.76	25.12	2.36
	velocity			8.68	9.12	8.49	8.71	7.89	6.99	8.35				8.60	7.41	8.79	7.96	
McCaskill, William (USA) (1	time		11.82	17.08	22.58	28.43	34.34	40.81	48.14	48.14	3 / 9							
reaction time	interval			5.26	5.50	5.85	5.91	6.47	7.33		# of strides	11.82	10.76	11.76	13.80	22.58	25.56	2.98
	velocity		8.46	9.51	9.09	8.55	8.46	7.73	6.82	8.31		8.46	9.29	8.50	7.25	8.86	7.82	

2005 DKB-DLV (Ulm, GER)

FINAL date 12-Jun-05

Graubner (2009) - http://www.fgs.uni-halle.de

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Benjamin, Tim (GBR) (1982	time		11.29		21.70		32.88		45.17	45.17	/ 1							
reaction time 0.198	interval				10.41		11.18		12.29		# of strides	11.29	10.41	11.18	12.29	21.70	23.47	1.77
	velocity		8.86		9.61		8.94		8.14	8.86		8.86	9.61	8.94	8.14	9.22	8.52	

2005 NCAA Championships (Sacramento, CA)

FINAL date 11-Jun-05

Track Newsletter (2005) - NCAA men's championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Williamson, Darold (USA) (	time		11.3		21.3		32.2		44.5	44.51	/ 1							
reaction time	interval				10.00		10.90		12.30		# of strides	11.30	10.00	10.90	12.30	21.30	23.20	1.90
	velocity		8.85		10.00		9.17		8.13	8.99		8.85	10.00	9.17	8.13	9.39	8.62	
Ashley, Jamel (USA) (1979	time		11.2		21.2		32.3		44.8	44.75	/ 2							
reaction time	interval				10.00		11.10		12.50	PB	# of strides	11.20	10.00	11.10	12.50	21.20	23.60	2.40
	velocity		8.93		10.00		9.01		8.00	8.94		8.93	10.00	9.01	8.00	9.43	8.47	
Williams, Andrae (BAH) (1	time		11.0		21.7		32.7		44.9	44.90	/ 3							
reaction time	interval				10.70		11.00		12.20	PB	# of strides	11.00	10.70	11.00	12.20	21.70	23.20	1.50
	velocity		9.09		9.35		9.09		8.20	8.91		9.09	9.35	9.09	8.20	9.22	8.62	

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

Chambers, Ricardo (JAM)	time	11.1	21.5	32.6	45.0	45.03	/ 4								
reaction time	interval		10.40	11.10	12.40		# of strides	11.10	10.40	11.10	12.40	21.50	23.50	2.00	
	velocity	9.01	9.62	9.01	8.06	8.88		9.01	9.62	9.01	8.06	9.30	8.51		
Smith, Miles (USA) (1984)	time	11.3	21.4	32.7	45.2	45.16	/ 5								
reaction time	interval		10.10	11.30	12.50	=PB	# of strides	11.30	10.10	11.30	12.50	21.40	23.80	2.40	
	velocity	8.85	9.90	8.85	8.00	8.86		8.85	9.90	8.85	8.00	9.35	8.40		
Willie, Kelly (USA) (1982)	time	11.0	20.7	32.4	45.2	45.17	/ 6								
reaction time	interval		9.70	11.70	12.80		# of strides	11.00	9.70	11.70	12.80	20.70	24.50	3.80	
	velocity	9.09	10.31	8.55	7.81	8.86		9.09	10.31	8.55	7.81	9.66	8.16		
Gatson, Terry (USA) (1982)	time	11.2	21.7	33.2	45.7	45.68	/ 7								
reaction time	interval		10.50	11.50	12.50		# of strides	11.20	10.50	11.50	12.50	21.70	24.00	2.30	
	velocity	8.93	9.52	8.70	8.00	8.76		8.93	9.52	8.70	8.00	9.22	8.33		
Inico, Kedar (USA) (1983)	time	11.6	21.7	33.3	45.9	45.85	/ 8								
reaction time	interval		10.10	11.60	12.60		# of strides	11.60	10.10	11.60	12.60	21.70	24.20	2.50	
	velocity	8.62	9.90	8.62	7.94	8.72		8.62	9.90	8.62	7.94	9.22	8.26		

2005 Modesto Relays (Modesto, CA)

FINAL date 07-May-05

Track Newsletter (2005) - modesto relays

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Wariner, Jeremy (USA) (19	time				21.9				45.2	45.16	/ 1							
reaction time	interval								23.3		# of strides					21.90	23.30	1.40
	velocity				9.13				8.58	8.86						9.13	8.58	

2004 Olympic Games (Athens, GRE)

FINAL date 23-Aug-04

Butler (2016) - IAAF statistics handbook- special edition: Games of the XXXI Olympiad- Rio 2016

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Wariner, Jeremy (USA) (19	time				21.5		32.2		44.0	44.00	4 / 1							
reaction time 0.268	interval						10.7		11.8	PB	# of strides			10.70	11.80	21.50	22.50	1.00
	velocity				9.30		9.35		8.47	9.09				9.35	8.47	9.30	8.89	
Harris, Otis (USA) (1982)	time				21.4		32.1		44.2	44.16	5 / 2							
reaction time 0.259	interval						10.7		12.1	PB	# of strides			10.70	12.10	21.40	22.80	1.40
	velocity				9.35		9.35		8.26	9.06				9.35	8.26	9.35	8.77	
Brew, Derrick (USA) (1977)	time				21.5		32.4		44.4	44.42	3 / 3							
reaction time 0.262	interval						10.9		12.0		# of strides			10.90	12.00	21.50	22.90	1.40
	velocity				9.30		9.17		8.33	9.00				9.17	8.33	9.30	8.73	
Francique, Alleyne (GRN) (	time				21.4		32.5		44.7	44.66	8 / 4							
reaction time 0.352	interval						11.1		12.2		# of strides			11.10	12.20	21.40	23.30	1.90
	velocity				9.35		9.01		8.20	8.96				9.01	8.20	9.35	8.58	
Simpson, Brandon (JAM) (	time				21.6		32.4		44.7	44.76	6 / 5							
reaction time 0.277	interval						10.8		12.3		# of strides			10.80	12.30	21.60	23.10	1.50
	velocity				9.26		9.26		8.13	8.94				9.26	8.13	9.26	8.66	
Clarke, Davian (JAM) (1976	time				21.7		32.7		44.8	44.83	7 / 6							
reaction time 0.263	interval						11.0		12.1	PB	# of strides			11.00	12.10	21.70	23.10	1.40
	velocity				9.22		9.09		8.26	8.92				9.09	8.26	9.22	8.66	
Djhone, Leslie (FRA) (1981	time				21.6		32.7		44.9	44.94	2 / 7							
reaction time 0.178	interval						11.1		12.2		# of strides			11.10	12.20	21.60	23.30	1.70
	velocity				9.26		9.01		8.20	8.90				9.01	8.20	9.26	8.58	
Blackwood, Michael (JAM)	time				21.6		32.7		45.6	45.55	1 / 8							
reaction time 0.218	interval						11.1		12.9		# of strides			11.10	12.90	21.60	24.00	2.40
	velocity				9.26		9.01		7.75	8.78				9.01	7.75	9.26	8.33	

2004 Leichtathletik Team Challenge (Munich, GER)

FINAL date 08-Aug-04

Graubner (2009) - http://www.fgs.uni-halle.de

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Wariner, Jeremy (USA) (19	time		11.05		21.64		32.76		44.91	44.91	/ 1							
reaction time	interval				10.59		11.12		12.15		# of strides	11.05	10.59	11.12	12.15	21.64	23.27	1.63
	velocity		9.05		9.44		8.99		8.23	8.91		9.05	9.44	8.99	8.23	9.24	8.59	

2004 USA Olympic Trials (Sacramento, CA)

FINAL date 15-Jul-04

USATF Women's Sprint Development (2004)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Wariner, Jeremy (USA) (19	time		11.08		21.46	26.84	32.33	38.09	44.37	44.37	5 / 1							
reaction time	interval				10.38	5.38	5.49	5.76	6.28	PB	# of strides	11.08	10.38	10.87	12.04	21.46	22.91	1.45
	velocity		9.03		9.63	9.29	9.11	8.68	7.96	9.02	171.2	9.03	9.63	9.20	8.31	9.32	8.73	
Harris, Otis (USA) (1982)	time		11.38		21.57	27.11	32.67	38.67	44.67	44.67	8 / 2							
reaction time	interval				10.19	5.54	5.56	6.00	6.00		# of strides	11.38	10.19	11.10	12.00	21.57	23.10	1.53
	velocity		8.79		9.81	9.03	8.99	8.33	8.33	8.95	167.7	8.79	9.81	9.01	8.33	9.27	8.66	
Brew, Derrick (USA) (1977)	time		10.99		21.44	26.80	32.45	38.32	44.69	44.69	3 / 3							
reaction time	interval				10.45	5.36	5.65	5.87	6.37		# of strides	10.99	10.45	11.01	12.24	21.44	23.25	1.81

	velocity	9.10	9.57	9.33	8.85	8.52	7.85	8.95	177.0	9.10	9.57	9.08	8.17	9.33	8.60	
Williamson, Darold (USA) (	time	11.28	21.75	26.02	32.53	38.36	44.70	44.70	2 / 4							
reaction time	interval		10.47	4.27	6.51	5.83	6.34		# of strides	11.28	10.47	10.78	12.17	21.75	22.95	1.20
	velocity	8.87	9.55	11.71	7.68	8.58	7.89	8.95	165.5	8.87	9.55	9.28	8.22	9.20	8.71	
Harrison, Calvin (USA) (19	time	11.40	21.72	27.17	32.72	38.48	44.85	44.85	7 / ~~5~~							
reaction time	interval		10.32	5.45	5.55	5.76	6.37	DV	# of strides	11.40	10.32	11.00	12.13	21.72	23.13	1.41
	velocity	8.77	9.69	9.17	9.01	8.68	7.85	8.92	180.0	8.77	9.69	9.09	8.24	9.21	8.65	
Rock, Andrew (USA) (1982	time	11.38	21.74	27.14	32.73	38.59	44.95	44.95	6 / ~~6~~ 5							
reaction time	interval		10.36	5.40	5.59	5.86	6.36		# of strides	11.38	10.36	10.99	12.22	21.74	23.21	1.47
	velocity	8.79	9.65	9.26	8.94	8.53	7.86	8.90	171.5	8.79	9.65	9.10	8.18	9.20	8.62	
Willie, Kelly (USA) (1982)	time	10.89	21.62	27.01	32.48	38.32	44.97	44.97	4 / ~~7~~ 6							
reaction time	interval		10.73	5.39	5.47	5.84	6.65		# of strides	10.89	10.73	10.86	12.49	21.62	23.35	1.73
	velocity	9.18	9.32	9.28	9.14	8.56	7.52	8.89	180.0	9.18	9.32	9.21	8.01	9.25	8.57	
Harris, Jerry (USA) (1981)	time	11.36	21.87	27.40	33.10	38.82	45.06	45.06	1 / ~~8~~ 7							
reaction time	interval		10.51	5.53	5.70	5.72	6.24		# of strides	11.36	10.51	11.23	11.96	21.87	23.19	1.32
	velocity	8.80	9.51	9.04	8.77	8.74	8.01	8.88	171.5	8.80	9.51	8.90	8.36	9.14	8.62	

2004 DLV-Gala (Erfurt, GER)

FINAL date 13-Jun-04

Graubner (2009) - http://www.fgs.uni-halle.de

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Canal, David (ESP) (1978)	time		11.03		21.25		32.55		45.06	45.06	/ 1							
reaction time 0.191	interval				10.22		11.30		12.51		# of strides	11.03	10.22	11.30	12.51	21.25	23.81	2.56
	velocity		9.07		9.78		8.85		7.99	8.88		9.07	9.78	8.85	7.99	9.41	8.40	

2004 NCAA Championships (Sacramento, CA)

FINAL date 12-Jun-04

Track Newsletter (2004) - NCAA championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Wariner, Jeremy (USA) (19	time				21.9		33.4		44.7	44.71	/ 1							
reaction time	interval						11.5		11.3		# of strides			11.50	11.30	21.90	22.80	0.90
	velocity				9.13		8.70		8.85	8.95				8.70	8.85	9.13	8.77	

2003 IAAF World Championships (Paris, FRA)

FINAL date 26-Aug-03

Bonvin (2003) - Compte-rendu 400m et relais 4x 400m

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Young, Jerome (USA) (197	time				21.4		32.3		44.50	44.50	6 / ~~1~~							
reaction time 0.160	interval						10.9		12.2	DV	# of strides			10.90	12.20	21.40	23.10	1.70
	velocity				9.35		9.17		8.20	8.99				9.17	8.20	9.35	8.66	
Washington, Tyree (USA) (	time				21.3		32.10		44.77	44.77	4 / ~~2~~ 1							
reaction time 0.182	interval						10.8		12.7		# of strides			10.80	12.67	21.30	23.47	2.17
	velocity				9.39		9.26		7.89	8.93				9.26	7.89	9.39	8.52	
Raquil, Marc (FRA) (1977)	time				21.8		33.0		44.79	44.79	5 / ~~3~~ 2							
reaction time 0.174	interval						11.2		11.8	NR	# of strides			11.20	11.79	21.80	22.99	1.19
	velocity				9.17		8.93		8.48	8.93				8.93	8.48	9.17	8.70	
Blackwood, Michael (JAM)	time				21.4		32.4		44.80	44.80	2 / ~~4~~ 3							
reaction time 0.158	interval						11.0		12.4		# of strides			11.00	12.40	21.40	23.40	2.00
	velocity				9.35		9.09		8.06	8.93				9.09	8.06	9.35	8.55	
Djhone, Leslie (FRA) (1981	time				21.4		32.40		44.83	44.83	8 / ~~5~~ 4							
reaction time 0.170	interval						11.0		12.4		# of strides			11.00	12.43	21.40	23.43	2.03
	velocity				9.35		9.09		8.05	8.92				9.09	8.05	9.35	8.54	
Harrison, Calvin (USA) (19	time				21.5		32.3		44.96	44.96	3 / ~~6~~							
reaction time 0.176	interval						10.8		12.7	DV	# of strides			10.80	12.66	21.50	23.46	1.96
	velocity				9.30		9.26		7.90	8.90				9.26	7.90	9.30	8.53	
Milazar, Eric (MRI) (1975)	time				21.3		32.30		45.17	45.17	1 / ~~7~~ 5							
reaction time 0.168	interval						11.0		12.9		# of strides			11.00	12.87	21.30	23.87	2.57
	velocity				9.39		9.09		7.77	8.86				9.09	7.77	9.39	8.38	
Francique, Alleyne (GRN) (	time				21.4		32.6		45.48	45.48	7 / ~~8~~ 6							
reaction time 0.270	interval						11.2		12.9		# of strides			11.20	12.88	21.40	24.08	2.68
	velocity				9.35		8.93		7.76	8.80				8.93	7.76	9.35	8.31	

2003 USATF National Junior Championship (Palo Alto, CA)

FINAL date 22-Jun-03

USATF Women's Sprint Development (2003)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Collins, Ashton (USA) (198	time				22.36		33.72	39.42	45.64	45.64	4 / 1							
reaction time	interval						11.36	5.70	6.22	PB	# of strides			11.36	11.92	22.36	23.28	0.92
	velocity				8.94		8.80	8.77	8.04	8.76				8.80	8.39	8.94	8.59	
Wariner, Jeremy (USA) (19	time				22.06		33.80	39.74	46.41	46.41	5 / 2							
reaction time	interval						11.74	5.94	6.67		# of strides			11.74	12.61	22.06	24.35	2.29
	velocity				9.07		8.52	8.42	7.50	8.62				8.52	7.93	9.07	8.21	

Coleman, Elzie (USA) (1985	time		22.79		34.58	40.47	47.06	47.06	7 / 3						
reaction time	interval				11.79	5.89	6.59		# of strides		11.79	12.48	22.79	24.27	1.48
	velocity		8.78		8.48	8.49	7.59	8.50			8.48	8.01	8.78	8.24	
Westman, Ryan (USA) (198	time		22.97		34.89	40.87	47.32	47.32	3 / 4						
reaction time	interval				11.92	5.98	6.45	PB	# of strides		11.92	12.43	22.97	24.35	1.38
	velocity		8.71		8.39	8.36	7.75	8.45			8.39	8.05	8.71	8.21	
Cunningham, Desean (USA	time		22.99		34.90	40.98	47.34	47.34	2 / 5						
reaction time	interval				11.91	6.08	6.36		# of strides		11.91	12.44	22.99	24.35	1.36
	velocity		8.70		8.40	8.22	7.86	8.45			8.40	8.04	8.70	8.21	
Caesar, Lester (USA)	time		22.67		34.72		47.39	47.39	9 / 6						
reaction time	interval				12.05		12.67		# of strides		12.05	12.67	22.67	24.72	2.05
	velocity		8.82		8.30		7.89	8.44			8.30	7.89	8.82	8.09	
Sanderson, Adian (USA) (1	time		22.57		34.48	40.66	47.47	47.47	6 / 7						
reaction time	interval				11.91	6.18	6.81		# of strides		11.91	12.99	22.57	24.90	2.33
	velocity		8.86		8.40	8.09	7.34	8.43			8.40	7.70	8.86	8.03	
Anderson, Travis (USA) (19	time		22.49		34.62		47.48	47.48	8 / 8						
reaction time	interval				12.13		12.86		# of strides		12.13	12.86	22.49	24.99	2.50
	velocity		8.89		8.24		7.78	8.42			8.24	7.78	8.89	8.00	
Pitre, Marcus (USA) (1984)	time		23.66		35.37	41.51	48.19	48.19	1 / 9						
reaction time	interval				11.71	6.14	6.68		# of strides		11.71	12.82	23.66	24.53	0.87
	velocity		8.45		8.54	8.14	7.49	8.30			8.54	7.80	8.45	8.15	

2003 USATF National Championship (Palo Alto, CA)

FINAL

date 21-Jun-03

USATF Women's Sprint Development (2003)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Washington, Tyree (USA) (	time				21.66		32.63	38.27	44.33	44.33	5 / 1							
reaction time	interval						10.97	5.64	6.06		# of strides			10.97	11.70	21.66	22.67	1.01
	velocity				9.23		9.12	8.87	8.25	9.02				9.12	8.55	9.23	8.82	
Harrison, Calvin (USA) (19	time				21.65		32.55	38.36	44.62	44.62	2 / ~~3~~							
reaction time	interval						10.90	5.81	6.26	DV	# of strides			10.90	12.07	21.65	22.97	1.32
	velocity				9.24		9.17	8.61	7.99	8.96				9.17	8.29	9.24	8.71	
Young, Jerome (USA) (197	time				21.67		32.59	38.42	44.79	44.79	6 / ~~3~~							
reaction time	interval						10.92	5.83	6.37	DV	# of strides			10.92	12.20	21.67	23.12	1.45
	velocity				9.23		9.16	8.58	7.85	8.93				9.16	8.20	9.23	8.65	
Brew, Derrick (USA) (1977)	time				21.59		32.81	38.79	45.05	45.05	4 / ~~4~~ 2							
reaction time	interval						11.22	5.98	6.26		# of strides			11.22	12.24	21.59	23.46	1.87
	velocity				9.26		8.91	8.36	7.99	8.88				8.91	8.17	9.26	8.53	
Potter, Mitchell (USA) (198	time				21.86		33.07	38.85	45.29	45.29	8 / ~~5~~ 3							
reaction time	interval						11.21	5.78	6.44		# of strides			11.21	12.22	21.86	23.43	1.57
	velocity				9.15		8.92	8.65	7.76	8.83				8.92	8.18	9.15	8.54	
Steele, Adam (USA) (1980)	time				22.32		33.45	39.21	45.51	45.51	9 / ~~6~~ 4							
reaction time	interval						11.13	5.76	6.30		# of strides			11.13	12.06	22.32	23.19	0.87
	velocity				8.96		8.98	8.68	7.94	8.79				8.98	8.29	8.96	8.62	
Maybank, Anthuan (USA) (	time				21.67		32.91	39.00	45.62	45.62	3 / ~~7~~ 5							
reaction time	interval						11.24	6.09	6.62		# of strides			11.24	12.71	21.67	23.95	2.28
	velocity				9.23		8.90	8.21	7.55	8.77				8.90	7.87	9.23	8.35	
Williamson, Darold (USA) (	time				22.09		33.35	39.27	45.87	45.87	7 / ~~8~~ 6							
reaction time	interval						11.26	5.92	6.60		# of strides			11.26	12.52	22.09	23.78	1.69
	velocity				9.05		8.88	8.45	7.58	8.72				8.88	7.99	9.05	8.41	

Semi-Final 2

date 20-Jun-03

USATF Women's Sprint Development (2003)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Brew, Derrick (USA) (1977)	time				21.67		33.38	39.26	45.57	45.57	4 / 1							
reaction time	interval						11.71	5.88	6.31		# of strides			11.71	12.19	21.67	23.90	2.23
	velocity				9.23		8.54	8.50	7.92	8.78				8.54	8.20	9.23	8.37	
Williamson, Darold (USA) (	time				21.84		33.28	38.19	45.70	45.70	9 / 2							
reaction time	interval						11.44	4.91	7.51		# of strides			11.44	12.42	21.84	23.86	2.02
	velocity				9.16		8.74	10.18	6.66	8.75				8.74	8.05	9.16	8.38	
Steele, Adam (USA) (1980)	time				21.81		33.37	39.27	45.75	45.75	8 / 3							
reaction time	interval						11.56	5.90	6.48		# of strides			11.56	12.38	21.81	23.94	2.13
	velocity				9.17		8.65	8.47	7.72	8.74				8.65	8.08	9.17	8.35	
Maybank, Anthuan (USA) (	time				21.44		33.18	39.29	46.01	46.01	6 / 4							
reaction time	interval						11.74	6.11	6.72		# of strides			11.74	12.83	21.44	24.57	3.13
	velocity				9.33		8.52	8.18	7.44	8.69				8.52	7.79	9.33	8.14	
Hooker, Ja'Warren (USA) (	time				21.77		33.42	39.46	46.12	46.12	5 / 5							
reaction time	interval						11.65	6.04	6.66		# of strides			11.65	12.70	21.77	24.35	2.58

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

	velocity		9.19		8.58	8.28	7.51	8.67			8.58	7.87	9.19	8.21	
Rock, Andrew (USA) (1982	time		21.67		33.55	39.54	46.13	46.13	7 / 6						
reaction time	interval				11.88	5.99	6.59		# of strides		11.88	12.58	21.67	24.46	2.79
	velocity		9.23		8.42	8.35	7.59	8.67			8.42	7.95	9.23	8.18	
Ammons, Andre (USA) (19	time		21.71		33.62	39.66	46.25	46.25	2 / 7						
reaction time	interval				11.91	6.04	6.59		# of strides		11.91	12.63	21.71	24.54	2.83
	velocity		9.21		8.40	8.28	7.59	8.65			8.40	7.92	9.21	8.15	
Campbell, Milton (USA) (1	time		21.77		33.79	39.77	46.53	46.53	3 / 8						
reaction time	interval				12.02	5.98	6.76		# of strides		12.02	12.74	21.77	24.76	2.99
	velocity		9.19		8.32	8.36	7.40	8.60			8.32	7.85	9.19	8.08	

Semi-Final 1

date 20-Jun-03 — *USATF Women's Sprint Development (2003)*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Washington, Tyree (USA) (	time				21.37		32.78	38.51	45.09	45.09	7 / 1							
reaction time	interval						11.41	5.73	6.58		# of strides			11.41	12.31	21.37	23.72	2.35
	velocity				9.36		8.76	8.73	7.60	8.87				8.76	8.12	9.36	8.43	
Young, Jerome (USA) (197	time				21.61		32.82	38.59	45.24	45.24	6 / ~~2~~							
reaction time	interval						11.21	5.77	6.65	DV	# of strides			11.21	12.42	21.61	23.63	2.02
	velocity				9.25		8.92	8.67	7.52	8.84				8.92	8.05	9.25	8.46	
Harrison, Calvin (USA) (19	time				22.11		33.47	39.06	45.28	45.28	4 / ~~3~~							
reaction time	interval						11.36	5.59	6.22	DV	# of strides			11.36	11.81	22.11	23.17	1.06
	velocity				9.05		8.80	8.94	8.04	8.83				8.80	8.47	9.05	8.63	
Potter, Mitchell (USA) (198	time				21.57		32.93	38.87	45.50	45.50	5 / ~~4~~ 2							
reaction time	interval						11.36	5.94	6.63		# of strides			11.36	12.57	21.57	23.93	2.36
	velocity				9.27		8.80	8.42	7.54	8.79				8.80	7.96	9.27	8.36	
Harris, Jerry (USA) (1981)	time				21.63		33.07	39.01	45.52	45.52	8 / ~~5~~ 3							
reaction time	interval						11.44	5.94	6.51	PB	# of strides			11.44	12.45	21.63	23.89	2.26
	velocity				9.25		8.74	8.42	7.68	8.79				8.74	8.03	9.25	8.37	
Byrd, Leonard (USA) (1975	time				21.54		33.10	39.21	46.04	46.04	9 / ~~6~~ 4							
reaction time	interval						11.56	6.11	6.83		# of strides			11.56	12.94	21.54	24.50	2.96
	velocity				9.29		8.65	8.18	7.32	8.69				8.65	7.73	9.29	8.16	
Harrison, Alvin (USA) (197	time				21.61		32.97	39.11	46.07	46.07	2 / ~~7~~							
reaction time	interval						11.36	6.14	6.96	DV	# of strides			11.36	13.10	21.61	24.46	2.85
	velocity				9.25		8.80	8.14	7.18	8.68				8.80	7.63	9.25	8.18	
Swarn, Brian (USA) (1979)	time				22.17		33.88	39.94	46.51	46.51	3 / ~~8~~ 5							
reaction time	interval						11.71	6.06	6.57		# of strides			11.71	12.63	22.17	24.34	2.17
	velocity				9.02		8.54	8.25	7.61	8.60				8.54	7.92	9.02	8.22	

2003 NCAA Championships (Sacramento, CA)

FINAL

date 14-Jun-03 — *Track Newsletter (2003) - NCAA championships*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Steele, Adam (USA) (1980)		no information available							PB	44.57	/ 1							
Harris, Oits (USA) (1982)		no information available							PB	44.57	/ 2							
Potter, Mitch (USA) (1980)	time				21.4		32.4		44.6	44.59	/ 3							
reaction time	interval						11.00		12.20	PB	# of strides			11.00	12.20	21.40	23.20	1.80
	velocity				9.35		9.09		8.20	8.97				9.09	8.20	9.35	8.62	

2002 European Championships (Munich, GER)

FINAL

date 08-Aug-02 — *Graubner (2009) - http://www.fgs.uni-halle.de*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Schultz, Ingo (GER) (1975)	time		11.18		21.34		32.58		45.14	45.14	/ 1							
reaction time 0.180	interval				10.16		11.24		12.56		# of strides	11.18	10.16	11.24	12.56	21.34	23.80	2.46
	velocity		8.94		9.84		8.90		7.96	8.86		8.94	9.84	8.90	7.96	9.37	8.40	
Canal, David (ESP) (1978)	time		11.88		21.86		33.04		45.24	45.24	/ 2							
reaction time 0.148	interval				9.98		11.18		12.20		# of strides	11.88	9.98	11.18	12.20	21.86	23.38	1.52
	velocity		8.42		10.02		8.94		8.20	8.84		8.42	10.02	8.94	8.20	9.15	8.55	
Caines, Daniel (GBR) (1979	time		11.20		21.58		32.81		45.28	45.28	/ 3							
reaction time 0.141	interval				10.38		11.23		12.47		# of strides	11.20	10.38	11.23	12.47	21.58	23.70	2.12
	velocity		8.93		9.63		8.90		8.02	8.83		8.93	9.63	8.90	8.02	9.27	8.44	
Plawgo, Marek (POL) (1981	time		11.30		21.80		32.98		45.40	45.40	/ 4							
reaction time 0.145	interval				10.50		11.18		12.42		# of strides	11.30	10.50	11.18	12.42	21.80	23.60	1.80
	velocity		8.85		9.52		8.94		8.05	8.81		8.85	9.52	8.94	8.05	9.17	8.47	
Szeglet, Zsolt (HUN) (1977)	time		11.35		21.96		33.00		45.74	45.74	/ 5							
reaction time 0.167	interval				10.61		11.04		12.74		# of strides	11.35	10.61	11.04	12.74	21.96	23.78	1.82
	velocity		8.81		9.43		9.06		7.85	8.75		8.81	9.43	9.06	7.85	9.11	8.41	
van Branteghem, Cédric (B	time		11.30		21.75		33.18		45.95	45.95	/ 6							
reaction time 0.201	interval				10.45		11.43		12.77		# of strides	11.30	10.45	11.43	12.77	21.75	24.20	2.45

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
	velocity		8.85		9.57		8.75		7.83	8.71		8.85	9.57	8.75	7.83	9.20	8.26	
Bláha, Karel (CZE) (1975)	time		11.72		22.35		33.73		46.21	46.21	/ 7							
reaction time 0.152	interval				10.63		11.38		12.48		# of strides	11.72	10.63	11.38	12.48	22.35	23.86	1.51
	velocity		8.53		9.41		8.79		8.01	8.66		8.53	9.41	8.79	8.01	8.95	8.38	

Semi-Final 2

date 07-Aug-02

Graubner (2009) - http://www.fgs.uni-halle.de

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Canal, David (ESP) (1978)	time		11.44		21.85		33.22		45.86	45.86	/ 1							
reaction time 0.152	interval				10.41		11.37		12.64		# of strides	11.44	10.41	11.37	12.64	21.85	24.01	2.16
	velocity		8.74		9.61		8.80		7.91	8.72		8.74	9.61	8.80	7.91	9.15	8.33	
van Branteghem, Cédric (B	time		11.22		21.70		33.22		45.94	45.94	/ 2							
reaction time 0.199	interval				10.48		11.52		12.72	PB	# of strides	11.22	10.48	11.52	12.72	21.70	24.24	2.54
	velocity		8.91		9.54		8.68		7.86	8.71		8.91	9.54	8.68	7.86	9.22	8.25	
Benjamin, Tim (GBR) (1982	time		11.36		21.96		33.40		46.07	46.07	/ 3							
reaction time 0.139	interval				10.60		11.44		12.67		# of strides	11.36	10.60	11.44	12.67	21.96	24.11	2.15
	velocity		8.80		9.43		8.74		7.89	8.68		8.80	9.43	8.74	7.89	9.11	8.30	
Bláha, Karel (CZE) (1975)	time		11.34		21.85		33.22		46.15	46.15	/ 4							
reaction time 0.161	interval				10.51		11.37		12.93		# of strides	11.34	10.51	11.37	12.93	21.85	24.30	2.45
	velocity		8.82		9.51		8.80		7.73	8.67		8.82	9.51	8.80	7.73	9.15	8.23	
Rysiukiewicz, Piotr (POL) (	time		11.40		22.09		33.74		46.15	46.15	/ 5							
reaction time 0.187	interval				10.69		11.65		12.41		# of strides	11.40	10.69	11.65	12.41	22.09	24.06	1.97
	velocity		8.77		9.35		8.58		8.06	8.67		8.77	9.35	8.58	8.06	9.05	8.31	
Swillims, Bastian (GER) (19	time		11.57		22.24		33.54		46.19	46.19	/ 6							
reaction time 0.191	interval				10.67		11.30		12.65	PB	# of strides	11.57	10.67	11.30	12.65	22.24	23.95	1.71
	velocity		8.64		9.37		8.85		7.91	8.66		8.64	9.37	8.85	7.91	8.99	8.35	
Semyonov, Andrey (RUS) (	time		11.71		22.38		33.85		46.51	46.51	/ 7							
reaction time 0.139	interval				10.67		11.47		12.66		# of strides	11.71	10.67	11.47	12.66	22.38	24.13	1.75
	velocity		8.54		9.37		8.72		7.90	8.60		8.54	9.37	8.72	7.90	8.94	8.29	
Raquil, Marc (FRA) (1977)	no information available									dnf								

Semi-Final 1

date 07-Aug-02

Graubner (2009) - http://www.fgs.uni-halle.de

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Caines, Daniel (GBR) (1979	time		11.10		21.63		32.94		45.35	45.35	/ 1							
reaction time 0.144	interval				10.53		11.31		12.41		# of strides	11.10	10.53	11.31	12.41	21.63	23.72	2.09
	velocity		9.01		9.50		8.84		8.06	8.82		9.01	9.50	8.84	8.06	9.25	8.43	
Schultz, Ingo (GER) (1975)	time		11.30		21.60		32.85		45.59	45.49	/ 2							
reaction time 0.159	interval				10.30		11.25		12.74		# of strides	11.30	10.30	11.25	12.74	21.60	23.99	2.39
	velocity		8.85		9.71		8.89		7.85	8.79		8.85	9.71	8.89	7.85	9.26	8.34	
Plawgo, Marek (POL) (1981	time		11.43		22.14		33.49		45.83	45.83	/ 3							
reaction time 0.172	interval				10.71		11.35		12.34		# of strides	11.43	10.71	11.35	12.34	22.14	23.69	1.55
	velocity		8.75		9.34		8.81		8.10	8.73		8.75	9.34	8.81	8.10	9.03	8.44	
Szeglet, Zsolt (HUN) (1977)	time		11.52		22.46		33.41		45.84	45.84	/ 4							
reaction time 0.155	interval				10.94		10.95		12.43		# of strides	11.52	10.94	10.95	12.43	22.46	23.38	0.92
	velocity		8.68		9.14		9.13		8.05	8.73		8.68	9.14	9.13	8.05	8.90	8.55	
McKee, Paul (IRL) (1977)	time		11.38		22.02		33.25		45.92	45.92	/ 5							
reaction time 0.154	interval				10.64		11.23		12.67		# of strides	11.38	10.64	11.23	12.67	22.02	23.90	1.88
	velocity		8.79		9.40		8.90		7.89	8.71		8.79	9.40	8.90	7.89	9.08	8.37	
Dimotsios, Stilianós (GRE)	time		11.77		22.60		33.91		45.98	45.98	/ 6							
reaction time 0.153	interval				10.83		11.31		12.07	PB	# of strides	11.77	10.83	11.31	12.07	22.60	23.38	0.78
	velocity		8.50		9.23		8.84		8.29	8.70		8.50	9.23	8.84	8.29	8.85	8.55	
Borzakovskiy, Yuriy (RUS)	time		11.96		22.78		34.08		46.04	46.04	/ 7							
reaction time 0.226	interval				10.82		11.30		11.96		# of strides	11.96	10.82	11.30	11.96	22.78	23.26	0.48
	velocity		8.36		9.24		8.85		8.36	8.69		8.36	9.24	8.85	8.36	8.78	8.60	
Zachoval, Radek (CZE) (197	time		11.52		22.13		33.55		46.24	46.24	/ 8							
reaction time 0.161	interval				10.61		11.42		12.69	PB	# of strides	11.52	10.61	11.42	12.69	22.13	24.11	1.98
	velocity		8.68		9.43		8.76		7.88	8.65		8.68	9.43	8.76	7.88	9.04	8.30	

Heat 4

date 06-Aug-02

Graubner (2009) - http://www.fgs.uni-halle.de

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Bláha, Karel (CZE) (1975)	time		11.75		22.46		33.74		46.03	46.03	/ 1							
reaction time 0.154	interval				10.71		11.28		12.29		# of strides	11.75	10.71	11.28	12.29	22.46	23.57	1.11
	velocity		8.51		9.34		8.87		8.14	8.69		8.51	9.34	8.87	8.14	8.90	8.49	
Caines, Daniel (GBR) (1979	time		11.26		21.88		33.42		46.06	46.06	/ 2							
reaction time 0.150	interval				10.62		11.54		12.64		# of strides	11.26	10.62	11.54	12.64	21.88	24.18	2.30
	velocity		8.88		9.42		8.67		7.91	8.68		8.88	9.42	8.67	7.91	9.14	8.27	
Szeglet, Zsolt (HUN) (1977)	time		11.61		22.29		33.50		46.23	46.23	/ 3							

			50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
reaction time 0.205	interval			10.68		11.21		12.73				# of strides	11.61	10.68	11.21	12.73	22.29	23.94	1.65
	velocity		8.61	9.36		8.92		7.86		8.65			8.61	9.36	8.92	7.86	8.97	8.35	
Rysiukiewicz, Piotr (POL) (	time		11.64	22.43		33.07		46.44		46.44		/ 4							
reaction time 0.216	interval			10.79		10.64		13.37				# of strides	11.64	10.79	10.64	13.37	22.43	24.01	1.58
	velocity		8.59	9.27		9.40		7.48		8.61			8.59	9.27	9.40	7.48	8.92	8.33	

Heat 3

date 06-Aug-02

Graubner (2009) - http://www.fgs.uni-halle.de

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Plawgo, Marek (POL) (1981	time		11.61		22.40		33.76		46.97	45.97	/ 1							
reaction time 0.154	interval				10.79		11.36		13.21		# of strides	11.61	10.79	11.36	13.21	22.40	24.57	2.17
	velocity		8.61		9.27		8.80		7.57	8.70		8.61	9.27	8.80	7.57	8.93	8.14	
van Branteghem, Cédric (B	time		11.44		22.14		33.64		46.23	46.23	/ 2							
reaction time 0.180	interval				10.70		11.50		12.59		# of strides	11.44	10.70	11.50	12.59	22.14	24.09	1.95
	velocity		8.74		9.35		8.70		7.94	8.65		8.74	9.35	8.70	7.94	9.03	8.30	
Semyonov, Andrey (RUS) (	time		11.65		22.26		33.70		46.54	46.54	/ 3							
reaction time 0.138	interval				10.61		11.44		12.84		# of strides	11.65	10.61	11.44	12.84	22.26	24.28	2.02
	velocity		8.58		9.43		8.74		7.79	8.59		8.58	9.43	8.74	7.79	8.98	8.24	

Heat 2

date 06-Aug-02

Graubner (2009) - http://www.fgs.uni-halle.de

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Schultz, Ingo (GER) (1975)	time		11.47		22.06		33.46		45.79	45.79	/ 1							
reaction time 0.159	interval				10.59		11.40		12.33		# of strides	11.47	10.59	11.40	12.33	22.06	23.73	1.67
	velocity		8.72		9.44		8.77		8.11	8.74		8.72	9.44	8.77	8.11	9.07	8.43	
McKee, Paul (IRL) (1977)	time		11.38		22.00		33.47		46.03	46.03	/ 2							
reaction time 0.243	interval				10.62		11.47		12.56		# of strides	11.38	10.62	11.47	12.56	22.00	24.03	2.03
	velocity		8.79		9.42		8.72		7.96	8.69		8.79	9.42	8.72	7.96	9.09	8.32	
Benjamin, Tim (GBR) (1982	time		11.49		22.14		33.55		46.15	46.15	/ 3							
reaction time 0.155	interval				10.65		11.41		12.60		# of strides	11.49	10.65	11.41	12.60	22.14	24.01	1.87
	velocity		8.70		9.39		8.76		7.94	8.67		8.70	9.39	8.76	7.94	9.03	8.33	

Heat 1

date 06-Aug-02

Graubner (2009) - http://www.fgs.uni-halle.de

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Raquil, Marc (FRA) (1977)	time		11.73		22.56		33.98		45.70	45.70	/ 1							
reaction time 0.209	interval				10.83		11.42		11.72		# of strides	11.73	10.83	11.42	11.72	22.56	23.14	0.58
	velocity		8.53		9.23		8.76		8.53	8.75		8.53	9.23	8.76	8.53	8.87	8.64	
Canal, David (ESP) (1978)	time		11.88		22.49		33.57		45.75	45.75	/ 2							
reaction time 0.169	interval				10.61		11.08		12.18		# of strides	11.88	10.61	11.08	12.18	22.49	23.26	0.77
	velocity		8.42		9.43		9.03		8.21	8.74		8.42	9.43	9.03	8.21	8.89	8.60	
Swillims, Bastian (GER) (19	time		11.56		22.27		33.84		46.20	46.20	/ 3							
reaction time 0.158	interval				10.71		11.57		12.36	PB	# of strides	11.56	10.71	11.57	12.36	22.27	23.93	1.66
	velocity		8.65		9.34		8.64		8.09	8.66		8.65	9.34	8.64	8.09	8.98	8.36	
Zachoval, Radek (CZE) (19	time		11.84		22.54		33.81		46.25	46.25	/ 4							
reaction time 0.170	interval				10.70		11.27		12.44	PB	# of strides	11.84	10.70	11.27	12.44	22.54	23.71	1.17
	velocity		8.45		9.35		8.87		8.04	8.65		8.45	9.35	8.87	8.04	8.87	8.44	
Borzakovskiy, Yuriy (RUS)	time		12.04		22.94		34.26		46.28	46.28	/ 5							
reaction time 0.249	interval				10.90		11.32		12.02		# of strides	12.04	10.90	11.32	12.02	22.94	23.34	0.40
	velocity		8.31		9.17		8.83		8.32	8.64		8.31	9.17	8.83	8.32	8.72	8.57	

2002 German National Championships (Bochum, GER)

FINAL

date 06-Jul-02

Graubner (2009) - http://www.fgs.uni-halle.de

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Schultz, Ingo (GER) (1975)	time		11.29		21.38		32.47		44.97	44.97	/ 1							
reaction time 0.179	interval				10.09		11.09		12.50		# of strides	11.29	10.09	11.09	12.50	21.38	23.59	2.21
	velocity		8.86		9.91		9.02		8.00	8.89		8.86	9.91	9.02	8.00	9.35	8.48	

2002 NCAA Championships (Baton Rouge, LA)

FINAL

date 01-Jun-02

Track Newsletter (2002) - NCAA championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kikaya, Gary (COD) (1980)	time				21.5		32.5		44.5	44.53	/ 1							
reaction time	interval						11.00		12.00	NR	# of strides			11.00	12.00	21.50	23.00	1.50
	velocity				9.30		9.09		8.33	8.98				9.09	8.33	9.30	8.70	
Harris, Rickey (USA) (1981)	no information available									44.93	/ 2							
Coley, Pete (JAM) (1981)	time				21.9		32.9		45.1	45.07	/ 3							
reaction time	interval						11.00		12.20		# of strides			11.00	12.20	21.90	23.20	1.30
	velocity				9.13		9.09		8.20	8.88				9.09	8.20	9.13	8.62	
Ayre, Sanjay (JAM) (1980)	no information available								PB	45.10	/ 4							
Williamson, Darold (USA) (	time				21.8				45.3	45.34	/ 5							
reaction time	interval								23.50		# of strides					21.80	23.50	1.70
	velocity				9.17				8.51	8.82						9.17	8.51	

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

2001 IAAF World Championships (Edmonton, CAN)

FINAL date 06-Aug-01

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Moncur, Avard (BAH) (197	0.164	no information available								44.64	4 / 1							
Schultz, Ingo (GER) (1975)	0.162	no information available								44.87	6 / 2							
Haughton, Gregory (JAM)	0.158	no information available								44.98	5 / 3							
Pettigrew, Antonio (USA) (	0.193	no information available								44.99	7 / ~~4~~							
Milazar, Éric (MRI) (1975)	0.147	no information available								45.13	1 / ~~5~~ 4							
Al-Bishi, Hamdan (KSA) (1	0.168	no information available								45.23	2 / ~~6~~ 5							
Francique, Alleyene (GRN)	0.298	no information available								46.23	8 / ~~7~~ 6							
Máckowiak, Robert (POL) (	0.000	no information available								dnf	3 / --							

2001 European Cup (Bremen, GER)

FINAL date 23-Jun-01

Graubner (2007) - http://www.fgs.uni-halle.de

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Raquil, Marc (FRA) (1977)	time		11.39		22.00		33.31		44.95	44.95	/ 1							
reaction time	interval				10.61		11.31		11.64	PB	# of strides	11.39	10.61	11.31	11.64	22.00	22.95	0.95
	velocity		8.78		9.43		8.84		8.59	8.90		8.78	9.43	8.84	8.59	9.09	8.71	
Maćkowiak, Robert (POL) (	time		11.29		21.94		33.18		45.48	45.48	/ 2							
reaction time	interval				10.65		11.24		12.30		# of strides	11.29	10.65	11.24	12.30	21.94	23.54	1.60
	velocity		8.86		9.39		8.90		8.13	8.80		8.86	9.39	8.90	8.13	9.12	8.50	
Canal, David (ESP) (1978)	time		11.50		21.78		32.93		45.52	45.52	/ 3							
reaction time	interval				10.28		11.15		12.59		# of strides	11.50	10.28	11.15	12.59	21.78	23.74	1.96
	velocity		8.70		9.73		8.97		7.94	8.79		8.70	9.73	8.97	7.94	9.18	8.42	
Schultz, Ingo (GER) (1975)	time		11.08		21.41		32.93		45.53	45.53	/ 4							
reaction time	interval				10.33		11.52		12.60		# of strides	11.08	10.33	11.52	12.60	21.41	24.12	2.71
	velocity		9.03		9.68		8.68		7.94	8.79		9.03	9.68	8.68	7.94	9.34	8.29	
Attene, Alessandro (ITA) (1	time		11.47		22.11		33.59		45.92	45.92	/ 5							
reaction time	interval				10.64		11.48		12.33		# of strides	11.47	10.64	11.48	12.33	22.11	23.81	1.70
	velocity		8.72		9.40		8.71		8.11	8.71		8.72	9.40	8.71	8.11	9.05	8.40	
Golovastov, Dmitriy (RUS)	time		11.34		21.90		33.29		46.11	46.11	/ 6							
reaction time	interval				10.56		11.39		12.82		# of strides	11.34	10.56	11.39	12.82	21.90	24.21	2.31
	velocity		8.82		9.47		8.78		7.80	8.67		8.82	9.47	8.78	7.80	9.13	8.26	
Thomas, Iwan (GBR) (1974	time		11.18		21.71		33.17		46.14	46.14	/ 7							
reaction time	interval				10.53		11.46		12.97		# of strides	11.18	10.53	11.46	12.97	21.71	24.43	2.72
	velocity		8.94		9.50		8.73		7.71	8.67		8.94	9.50	8.73	7.71	9.21	8.19	
Goúsis, Anastásios (GRE) (	time		11.50		22.18		33.88		47.05	47.05	/ 8							
reaction time	interval				10.68		11.70		13.17		# of strides	11.50	10.68	11.70	13.17	22.18	24.87	2.69
	velocity		8.70		9.36		8.55		7.59	8.50		8.70	9.36	8.55	7.59	9.02	8.04	

2001 NCAA Championships (Eugene, OR)

FINAL date 02-Jun-01

Track Newsletter (2001) - NCAA championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Moncur, Avard (BAH) (197	time				21.3				44.8	44.84	/ 1							
reaction time	interval								23.50		# of strides					21.30	23.50	2.20
	velocity				9.39				8.51	8.92						9.39	8.51	
Francique, Alleyene (GRN)	time				21.5				45.4	45.36	/ 2							
reaction time	interval								23.90		# of strides					21.50	23.90	2.40
	velocity				9.30				8.37	8.82						9.30	8.37	

2000 Olympic Games (Sydney, AUS)

FINAL date 25-Sep-00

Butler (2016) - IAAF statistics handbook- special edition: Games of the XXXI Olympiad- Rio 2016

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Johnson, Michael (USA) (1	time		11.4		21.6		32.1		43.8	43.84	6 / 1							
reaction time	interval				10.20		10.50		11.70		# of strides	11.40	10.20	10.50	11.70	21.60	22.20	0.60
	velocity		8.77		9.80		9.52		8.55	9.12		8.77	9.80	9.52	8.55	9.26	9.01	
Harrison, Alvin (USA) (197	time		11.5		21.8		32.6		44.4	44.40	4 / 2							
reaction time	interval				10.30		10.80		11.80		# of strides	11.50	10.30	10.80	11.80	21.80	22.60	0.80
	velocity		8.70		9.71		9.26		8.47	9.01		8.70	9.71	9.26	8.47	9.17	8.85	
Haughton, Gregory (JAM)	time		10.9		21.2		32.1		44.7	44.70	8 / 3							
reaction time	interval				10.30		10.90		12.60		# of strides	10.90	10.30	10.90	12.60	21.20	23.50	2.30
	velocity		9.17		9.71		9.17		7.94	8.95		9.17	9.71	9.17	7.94	9.43	8.51	
Parrela, Sanderlei (BRA) (1	time		11.5		21.6		32.7		45.0	45.01	2 / 4							
reaction time	interval				10.10		11.10		12.30		# of strides	11.50	10.10	11.10	12.30	21.60	23.40	1.80
	velocity		8.70		9.90		9.01		8.13	8.89		8.70	9.90	9.01	8.13	9.26	8.55	
Máckowiak, Robert (POL) (	time		11.7		22.0		33.2		45.1	45.14	1 / 5							
reaction time	interval				10.30		11.20		11.90		# of strides	11.70	10.30	11.20	11.90	22.00	23.10	1.10
	velocity		8.55		9.71		8.93		8.40	8.86		8.55	9.71	8.93	8.40	9.09	8.66	
Mokganyetsi, Hendrick (RS	time		11.8		22.3		33.1		45.3	45.26	7 / 6							

reaction time	interval		10.50	10.80	12.20		# of strides	11.80	10.50	10.80	12.20	22.30	23.00	0.70
	velocity	8.47	9.52	9.26	8.20	8.84		8.47	9.52	9.26	8.20	8.97	8.70	
Pettigrew, Antonio (USA) (	time	11.7	22.1	33.0	45.4	45.42	3 / ~~7~~							
reaction time	interval		10.40	10.90	12.40	DV	# of strides	11.70	10.40	10.90	12.40	22.10	23.30	1.20
	velocity	8.55	9.62	9.17	8.06	8.81		8.55	9.62	9.17	8.06	9.05	8.58	
McFarlane, Danny (JAM) (1	time	11.5	22.0	33.0	45.6	45.55	5 / ~~8~~ 7							
reaction time	interval		10.50	11.00	12.60		# of strides	11.50	10.50	11.00	12.60	22.00	23.60	1.60
	velocity	8.70	9.52	9.09	7.94	8.78		8.70	9.52	9.09	7.94	9.09	8.47	

2000 ISTAF (Berlin, GER)

FINAL date 01-Sep-00

Graubner (2009) - http://www.fgs.uni-halle.de

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Johnson, Michael (USA) (1	time		11.42		22.22		33.20		45.00	45.00	/ 1							
reaction time	interval				10.80		10.98		11.80		# of strides	11.42	10.80	10.98	11.80	22.22	22.78	0.56
	velocity		8.76		9.26		9.11		8.47	8.89		8.76	9.26	9.11	8.47	9.00	8.78	
Richardson, Mark (GBR) (1	time		11.24		22.06		33.28		45.46	45.46	/ 2							
reaction time	interval				10.82		11.22		12.18		# of strides	11.24	10.82	11.22	12.18	22.06	23.40	1.34
	velocity		8.90		9.24		8.91		8.21	8.80		8.90	9.24	8.91	8.21	9.07	8.55	
Pettigrew, Antonio (USA) (	time		11.96		22.99		33.82		45.61	45.61	/ ~~3~~							
reaction time	interval				11.03		10.83		11.79	DV	# of strides	11.96	11.03	10.83	11.79	22.99	22.62	-0.37
	velocity		8.36		9.07		9.23		8.48	8.77		8.36	9.07	9.23	8.48	8.70	8.84	
Young, Jerome (USA) (197	time		11.36		22.04		33.06		45.69	45.69	/ ~~4~~							
reaction time	interval				10.68		11.02		12.63	DV	# of strides	11.36	10.68	11.02	12.63	22.04	23.65	1.61
	velocity		8.80		9.36		9.07		7.92	8.75		8.80	9.36	9.07	7.92	9.07	8.46	

2000 USA Olympic Trials (Sacramento, CA)

FINAL date 19-Jul-00

Hymans (2008) - history of the US olympic trials - track and field

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Johnson, Michael (USA) (1	time		11.4		21.6		32.2		43.7	43.68	7 / 1							
reaction time	interval				10.2		10.6		11.5		# of strides	11.40	10.20	10.60	11.50	21.60	22.10	0.50
	velocity		8.77		9.80		9.43		8.70	9.16		8.77	9.80	9.43	8.70	9.26	9.05	
Harrison, Alvin (USA) (197	time		11.4		21.7		32.5		44.6	44.63	4 / 2							
reaction time	interval				10.3		10.8		12.1		# of strides	11.40	10.30	10.80	12.10	21.70	22.90	1.20
	velocity		8.77		9.71		9.26		8.26	8.96		8.77	9.71	9.26	8.26	9.22	8.73	
Pettigrew, Antonio (USA) (	time		11.4		22.0		32.8		44.7	44.66	2 / ~~3~~							
reaction time	interval				10.6		10.8		11.9	DV	# of strides	11.40	10.60	10.80	11.90	22.00	22.70	0.70
	velocity		8.77		9.43		9.26		8.40	8.96		8.77	9.43	9.26	8.40	9.09	8.81	
Young, Jerome (USA) (197	time		11.4		21.7		32.4		44.7	44.70	1 / ~~4~~							
reaction time	interval				10.3		10.7		12.3	DV	# of strides	11.40	10.30	10.70	12.30	21.70	23.00	1.30
	velocity		8.77		9.71		9.35		8.13	8.95		8.77	9.71	9.35	8.13	9.22	8.70	
Harrison, Calvin (USA) (1974)	no information available									44.90	8 / ~~5~~ 3							
McCray, Danny (USA) (1974)	no information available									45.00	5 / ~~6~~ 4							
Hooker, Ja'Warren (USA) (1978)	no information available									45.05	3 / ~~7~~ 5							
Byrd, Leonard (USA) (1975)	no information available									45.32	6 / ~~8~~ 6							

2000 Prefontaine Classic (Eugene, OR)

FINAL date 24-Jun-00

Track Newsletter (2000) - US invitationals- eugene GP

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Johnson, Michael (USA) (1	time				21.5		32.0		43.9	43.92	/ 1							
reaction time	interval						10.50		11.90		# of strides			10.50	11.90	21.50	22.40	0.90
	velocity				9.30		9.52		8.40	9.11				9.52	8.40	9.30	8.93	

2000 Engen (Pretoria, RSA) *(Altitude) (300m)*

FINAL date 24-Mar-00

Track Newsletter (2000) - major internationals- pretoria

		50m	100m	150m	200m	250m	300m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Johnson, Michael (USA) (1	time		10.68		20.11		30.85	30.85	/ 1							**100-300m**
reaction time	interval				9.43		10.74	WR	# of strides	10.68	9.43	10.74		20.11		20.17
	velocity		9.36		10.60		9.31	12.97		9.36	10.60	9.31		9.95		9.92

1999 IAAF World Championships (Sevillla, ESP)

FINAL date 26-Aug-99

Ferro (2001) - biomechanical analysis of the 7th world championships, seville 1999

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Johnson, Michael (USA) (1	time	6.14	11.10	16.10	21.22	26.42	31.66	37.18	43.18	43.18	5 / 1							
reaction time 0.150	interval		4.96	5.00	5.12	5.20	5.24	5.52	6.00	WR	# of strides	11.10	10.12	10.44	11.52	21.22	21.96	0.74
	velocity	8.14	10.08	10.00	9.77	9.62	9.54	9.06	8.33	9.26	180.5	9.01	9.88	9.58	8.68	9.43	9.11	
Parrela, Sanderlei Claro (BF	time	6.22	11.12	16.03	21.13	26.54	32.10	37.93	44.29	44.29	7 / 2							
reaction time 0.169	interval		4.90	4.91	5.10	5.41	5.56	5.83	6.36	AR	# of strides	11.12	10.01	10.97	12.19	21.13	23.16	2.03
	velocity	8.04	10.20	10.18	9.80	9.24	8.99	8.58	7.86	9.03		8.99	9.99	9.12	8.20	9.47	8.64	
Cárdenas, Alejandro (MEX)	time	6.00	10.99	16.01	21.19	26.58	32.11	37.97	44.31	44.31	4 / 3							
reaction time 0.133	interval		4.99	5.02	5.18	5.39	5.53	5.86	6.34	NR	# of strides	10.99	10.20	10.92	12.20	21.19	23.12	1.93
	velocity	8.33	10.02	9.96	9.65	9.28	9.04	8.53	7.89	9.03		9.10	9.80	9.16	8.20	9.44	8.65	

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

Young, Jerome (USA) (197	time	6.15	11.16	16.16	21.33	26.59	31.95	37.77	44.36	44.36	6 / ~~4~~							
reaction time 0.171	interval		5.01	5.00	5.17	5.26	5.36	5.82	6.59	DV	# of strides	11.16	10.17	10.62	12.41	21.33	23.03	1.70
	velocity	8.13	9.98	10.00	9.67	9.51	9.33	8.59	7.59	9.02		8.96	9.83	9.42	8.06	9.38	8.68	
Pettigrew, Antonio (USA) (	time	6.09	11.00	16.02	21.19	26.57	32.15	38.05	44.54	44.54	3 / ~~5~~							
reaction time 0.284	interval		4.91	5.02	5.17	5.38	5.58	5.90	6.49	DV	# of strides	11.00	10.19	10.96	12.39	21.19	23.35	2.16
	velocity	8.21	10.18	9.96	9.67	9.29	8.96	8.47	7.70	8.98		9.09	9.81	9.12	8.07	9.44	8.57	
Richardson, Mark (GBR) (1	time	6.08	10.98	16.02	21.28	26.66	32.27	38.16	44.65	44.65	1 / ~~6~~ 4							
reaction time 0.218	interval		4.90	5.04	5.26	5.38	5.61	5.89	6.49		# of strides	10.98	10.30	10.99	12.38	21.28	23.37	2.09
	velocity	8.22	10.20	9.92	9.51	9.29	8.91	8.49	7.70	8.96		9.11	9.71	9.10	8.08	9.40	8.56	
Haughton, Gregory (JAM)	time	6.03	11.01	16.05	21.22	26.60	32.25	38.32	45.07	45.07	2 / ~~7~~ 5							
reaction time 0.168	interval		4.98	5.04	5.17	5.38	5.65	6.07	6.75		# of strides	11.01	10.21	11.03	12.82	21.22	23.85	2.63
	velocity	8.29	10.04	9.92	9.67	9.29	8.85	8.24	7.41	8.88		9.08	9.79	9.07	7.80	9.43	8.39	
Baulch, Jamie (GBR) (1973	time	6.14	11.06	16.04	21.29	26.76	32.45	38.53	45.18	45.18	8 / ~~8~~ 6							
reaction time 0.148	interval		4.92	4.98	5.25	5.47	5.69	6.08	6.65		# of strides	11.06	10.23	11.16	12.73	21.29	23.89	2.60
	velocity	8.14	10.16	10.04	9.52	9.14	8.79	8.22	7.52	8.85		9.04	9.78	8.96	7.86	9.39	8.37	

1999 USATF National Championship (Eugene, OR)

FINAL date 26-Jun-99

Track Newsletter (1999) - USATF National Championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Young, Jerome (USA) (197	time				21.8				44.2	44.24	/ 1							
reaction time	interval								22.40		# of strides					21.80	22.40	0.60
	velocity				9.17				8.93	9.04						9.17	8.93	
Pettigrew, Antonio (USA) (	time				22.0				44.6	44.59	/ ~~2~~							
reaction time	interval								22.60	DV	# of strides					22.00	22.60	0.60
	velocity				9.09				8.85	8.97						9.09	8.85	
Davis, Jerome (USA) (1977)	time				21.8				44.9	44.91	/ ~~3~~ 2							
reaction time	interval								23.10		# of strides					21.80	23.10	1.30
	velocity				9.17				8.66	8.91						9.17	8.66	
Brew, Derrick (USA) (1977)	no information available									45.11	/ ~~4~~ 3							
McCray, Danny (USA) (197	time				21.7				45.2	45.23	/ ~~5~~ 4							
reaction time	interval								23.50		# of strides					21.70	23.50	1.80
	velocity				9.22				8.51	8.84						9.22	8.51	
Minor, Deon (USA) (1973)	no information available									45.74	/ ~~6~~ 5							
Maybank, Anthuan (USA) (	time				22.2				45.8	45.78	/ ~~7~~ 6							
reaction time	interval								23.60		# of strides					22.20	23.60	1.40
	velocity				9.01				8.47	8.74						9.01	8.47	
Harrison, Alvin (USA) (197	time				21.7				45.9	45.88	/ ~~8~~ 7							
reaction time	interval								24.20		# of strides					21.70	24.20	2.50
	velocity				9.22				8.26	8.72						9.22	8.26	

1999 NCAA Championships (Boise, ID)

FINAL date 05-Jun-99

Track Newsletter (1999) - NCAA Championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Chukwu, Clement (NGR) (	time				21.8				44.8	44.79	/ 1							
reaction time	interval								23.00		# of strides					21.80	23.00	1.20
	velocity				9.17				8.70	8.93						9.17	8.70	
Brew, Derrick (USA) (1977)	time				21.4				45.0	45.04	/ 2							
reaction time	interval								23.60		# of strides					21.40	23.60	2.20
	velocity				9.35				8.47	8.88						9.35	8.47	
Davis, Jerome (USA) (1977)	time				21.8				45.1	45.06	/ 3							
reaction time	interval								23.30		# of strides					21.80	23.30	1.50
	velocity				9.17				8.58	8.88						9.17	8.58	
Moncur, Avard (BAH) (197	time				22.2				45.4	45.35	/ 4							
reaction time	interval								23.20		# of strides					22.20	23.20	1.00
	velocity				9.01				8.62	8.82						9.01	8.62	

1999 SEC Championship (Athens, GA)

FINAL date 16-May-99

Track Newsletter (1999) - SEC Championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Brew, Derrick (USA) (1977)	time				21.4				44.3	44.29	/ 1							
reaction time	interval								22.90	PB	# of strides					21.40	22.90	1.50
	velocity				9.35				8.73	9.03						9.35	8.73	

1998 USATF National Championship (New Orleans, LA)

FINAL date 21-Jun-98

Track Newsletter (1998) - USATF National Championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Young, Jerome (USA) (197	time				21.4		32.4		44.1	44.09	/ 1							

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

reaction time	interval			11.00	11.70	PB	# of strides		11.00	11.70	21.40	22.70	1.30
	velocity		9.35	9.09	8.55	9.07			9.09	8.55	9.35	8.81	
Washington, Tyree (USA) (	time		22.1		44.4	44.38	/ 2						
reaction time	interval				22.30	=PB	# of strides				22.10	22.30	0.20
	velocity		9.05		8.97	9.01					9.05	8.97	
Pettigrew, Antonio (USA) (	time		22.0		44.4	44.40	/ ~~3~~						
reaction time	interval				22.40	DV	# of strides				22.00	22.40	0.40
	velocity		9.09		8.93	9.01					9.09	8.93	
Harrison, Alvin (USA) (1974)	no information available					44.61	/ ~~4~~ 3						
Davis, Jerome (USA) (1977)	time		22.0		45.0	45.04	/ ~~5~~ 4						
reaction time	interval				23.00		# of strides				22.00	23.00	1.00
	velocity		9.09		8.70	8.88					9.09	8.70	

1998 NCAA Championships (Amherst, NY)

FINAL date 06-Jun-98

Track Newsletter (1998) - NCAA Championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Davis, Jerome (USA) (1977)	time				22.0				45.2	45.18	/ 1							
reaction time	interval								23.20		# of strides					22.00	23.20	1.20
	velocity				9.09				8.62	8.85						9.09	8.62	
Clarke, Davian (JAM) (1976	time				21.5				45.3	45.28	/ 2							
reaction time	interval								23.80		# of strides					21.50	23.80	2.30
	velocity				9.30				8.40	8.83						9.30	8.40	
Campbell, Milton (USA) (1	time				21.6				45.8	45.76	/ 3							
reaction time	interval								24.20		# of strides					21.60	24.20	2.60
	velocity				9.26				8.26	8.74						9.26	8.26	
Chukwu, Clement (NGR) (	time				21.8				45.8	45.82	/ 4							
reaction time	interval								24.00		# of strides					21.80	24.00	2.20
	velocity				9.17				8.33	8.73						9.17	8.33	
Couts, Brandon (USA) ((1	time				21.8				46.0	46.03	/ 5							
reaction time	interval								24.20		# of strides					21.80	24.20	2.40
	velocity				9.17				8.26	8.69						9.17	8.26	

1997 Weltklasse (Zurich, SUI)

FINAL date 13-Aug-97

Track Newsletter (1997) - Zurich GP

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Johnson, Michael (USA) (1	time				21.5				44.3	44.31	/ 1							
reaction time	interval								22.80		# of strides					21.50	22.80	1.30
	velocity				9.30				8.77	9.03						9.30	8.77	
Washington, Tyree (USA) (	time				21.5				44.4	44.38	/ 2							
reaction time	interval								22.90	PB	# of strides					21.50	22.90	1.40
	velocity				9.30				8.73	9.01						9.30	8.73	
Kamoga, Davis (UGA) (196	time				21.7				44.4	44.43	/ 3							
reaction time	interval								22.70		# of strides					21.70	22.70	1.00
	velocity				9.22				8.81	9.00						9.22	8.81	

1997 IAAF World Championships (Athens, GRE)

FINAL date 05-Aug-97

Ritzdorf (1997) - biomechanical research project at the VI th world championships in athletics, Athens 1997

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Johnson, Michael (USA) (1	time	6.01	10.99	16.19	21.47	26.75	32.15	37.81	43.95	44.12	4 / 1							
reaction time 0.167	interval		4.98	5.20	5.28	5.28	5.40	5.66	6.14		# of strides	10.99	10.48	10.68	11.80	21.47	22.48	1.01
	velocity	8.32	10.04	9.62	9.47	9.47	9.26	8.83	8.14	9.07		9.10	9.54	9.36	8.47	9.32	8.90	
Kamoga, Davis (UGA) (196	time	6.23	11.27	16.31	21.33	26.57	32.03	37.81	44.15	44.37	7 / 2							
reaction time 0.216	interval		5.04	5.04	5.02	5.24	5.46	5.78	6.34	NR	# of strides	11.27	10.06	10.70	12.12	21.33	22.82	1.49
	velocity	8.03	9.92	9.92	9.96	9.54	9.16	8.65	7.89	9.02		8.87	9.94	9.35	8.25	9.38	8.76	
Washington, Tyree (USA) (	time	6.07	11.07	16.17	21.47	26.93	32.33	38.13	44.23	44.39	3 / 3							
reaction time 0.161	interval		5.00	5.10	5.30	5.46	5.40	5.80	6.10	PB	# of strides	11.07	10.40	10.86	11.90	21.47	22.76	1.29
	velocity	8.24	10.00	9.80	9.43	9.16	9.26	8.62	8.20	9.01		9.03	9.62	9.21	8.40	9.32	8.79	
Richardson, Mark (GBR) (1	time	5.91	10.89	16.09	21.33	26.71	32.25	37.97	44.23	44.47	5 / 4							
reaction time 0.245	interval		4.98	5.20	5.24	5.38	5.54	5.72	6.26	PB	# of strides	10.89	10.44	10.92	11.98	21.33	22.90	1.57
	velocity	8.46	10.04	9.62	9.54	9.29	9.03	8.74	7.99	8.99		9.18	9.58	9.16	8.35	9.38	8.73	
Young, Jerome (USA) (197	time	6.16	11.16	16.24	21.32	26.72	32.20	38.06	44.32	44.51	6 / 5							
reaction time 0.185	interval		5.00	5.08	5.08	5.40	5.48	5.86	6.26		# of strides	11.16	10.16	10.88	12.12	21.32	23.00	1.68
	velocity	8.12	10.00	9.84	9.84	9.26	9.12	8.53	7.99	8.99		8.96	9.84	9.19	8.25	9.38	8.70	
Thomas, Iwan (GBR) (1974	time	5.72	10.74	15.68	20.84	26.24	31.92	37.90	44.36	44.52	2 / 6							
reaction time 0.165	interval		5.02	4.94	5.16	5.40	5.68	5.98	6.46		# of strides	10.74	10.10	11.08	12.44	20.84	23.52	2.68
	velocity	8.74	9.96	10.12	9.69	9.26	8.80	8.36	7.74	8.98		9.31	9.90	9.03	8.04	9.60	8.50	
Pettigrew, Antonio (USA) (	time	6.30	11.26	16.44	21.72	27.00	32.50	38.22	44.30	44.57	8 / ~~7~~							

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

reaction time 0.275	interval		4.96	5.18	5.28	5.28	5.50	5.72	6.08	DV	# of strides	11.26	10.46	10.78	11.80	21.72	22.58	0.86
	velocity	7.94	10.08	9.65	9.47	9.47	9.09	8.74	8.22	8.97		8.88	9.56	9.28	8.47	9.21	8.86	
Baulch, Jamie (GBR) (1973	time	6.08	10.96	15.96	21.16	26.62	32.46	38.46	45.06	45.22	1 / ~~8~~ 7							
reaction time 0.158	interval		4.88	5.00	5.20	5.46	5.84	6.00	6.60		# of strides	10.96	10.20	11.30	12.60	21.16	23.90	2.74
	velocity	8.22	10.25	10.00	9.62	9.16	8.56	8.33	7.58	8.85		9.12	9.80	8.85	7.94	9.45	8.37	

Semi-Final 2

date 04-Aug-97

Bondarchuk (2007) - transfer of training in sports

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Johnson, Michael (USA) (1	time		11.09		21.75		32.50		44.37	44.37	2 / 1							
reaction time 0.160	interval				10.66		10.75		11.87		# of strides	11.09	10.66	10.75	11.87	21.75	22.62	0.87
	velocity		9.02		9.38		9.30		8.42	9.02		9.02	9.38	9.30	8.42	9.20	8.84	

1997 European Cup (Munich, GER)

FINAL

date 21-Jun-97

Jung (2003) - http://www.fgs.uni-halle.de

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Black, Roger (GBR) (1966)	time		11.61		22.41		33.56		45.65	45.63	/ 1							
reaction time	interval				10.80		11.15		12.09		# of strides	11.61	10.80	11.15	12.09	22.41	23.24	0.83
	velocity		8.61		9.26		8.97		8.27	8.77		8.61	9.26	8.97	8.27	8.92	8.61	
Canal, David (ESP) (1978)	time		11.57		22.33		33.79		46.28	46.28	/ 2							
reaction time	interval				10.76		11.46		12.49		# of strides	11.57	10.76	11.46	12.49	22.33	23.95	1.62
	velocity		8.64		9.29		8.73		8.01	8.64		8.64	9.29	8.73	8.01	8.96	8.35	
Vaccari, Marco (ITA) (1966)	time		11.79		22.61		34.09		46.40	46.40	/ 3							
reaction time	interval				10.82		11.48		12.31		# of strides	11.79	10.82	11.48	12.31	22.61	23.79	1.18
	velocity		8.48		9.24		8.71		8.12	8.62		8.48	9.24	8.71	8.12	8.85	8.41	
Zharov, Innokentiy (RUS) (	time		11.51		22.34		34.07		46.42	46.42	/ 4							
reaction time	interval				10.83		11.73		12.35		# of strides	11.51	10.83	11.73	12.35	22.34	24.08	1.74
	velocity		8.69		9.23		8.53		8.10	8.62		8.69	9.23	8.53	8.10	8.95	8.31	
Rapnouil, Jean-Louis (FRA	time		11.70		22.67		34.14		46.46	46.54	/ 5							
reaction time	interval				10.97		11.47		12.32		# of strides	11.70	10.97	11.47	12.32	22.67	23.79	1.12
	velocity		8.55		9.12		8.72		8.12	8.59		8.55	9.12	8.72	8.12	8.82	8.41	
Douglas, Quincy (NOR) (19	time		11.83		22.97		34.33		46.67	46.67	/ 6							
reaction time	interval				11.14		11.36		12.34		# of strides	11.83	11.14	11.36	12.34	22.97	23.70	0.73
	velocity		8.45		8.98		8.80		8.10	8.57		8.45	8.98	8.80	8.10	8.71	8.44	
Dautzenberg, Jens (GER) (	time		11.72		23.01		34.48		46.79	46.79	/ 7							
reaction time	interval				11.29		11.47		12.31		# of strides	11.72	11.29	11.47	12.31	23.01	23.78	0.77
	velocity		8.53		8.86		8.72		8.12	8.55		8.53	8.86	8.72	8.12	8.69	8.41	
Iakovákis, Periklís (GRE) (1	time		11.65		22.70		34.27		47.39	47.39	/ 8							
reaction time	interval				11.05		11.57		13.12		# of strides	11.65	11.05	11.57	13.12	22.70	24.69	1.99
	velocity		8.58		9.05		8.64		7.62	8.44		8.58	9.05	8.64	7.62	8.81	8.10	

1997 USATF Championships (Indianapolis, IN)

FINAL

date 14-Jun-97

Track Newsletter (1997) - USATF National Championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Pettigrew, Antonio (USA) (	time				22.1				44.7	44.65	/ 1							
reaction time	interval								22.60		# of strides					22.10	22.60	0.50
	velocity				9.05				8.85	8.96						9.05	8.85	
Washington, Tyree (USA) (	time				22.7				44.8	44.79	/ 2							
reaction time	interval								22.10		# of strides					22.70	22.10	-0.60
	velocity				8.81				9.05	8.93						8.81	9.05	
Young, Jerome (USA) (197	time				22.2				44.8	44.83	/ 3							
reaction time	interval								22.60		# of strides					22.20	22.60	0.40
	velocity				9.01				8.85	8.92						9.01	8.85	
Jones, Chris (USA) (1973)	no information available									44.93	/ 4							
Campbell, Milton (USA) (1976)	no information available									44.95	/ 5							
Reynolds, Harry (Butch) (U	time				22.0				45.0	44.98	/ 6							
reaction time	interval								23.00		# of strides					22.00	23.00	1.00
	velocity				9.09				8.70	8.89						9.09	8.70	
Rouser, Jason (USA) ((1970)	no information available									45.32	/ 7							
Mills, Derek (USA) (1972)	no information available									dnf	/ --							

Semi-Final 2

date 13-Jun-97

Track Newsletter (1997) - USATF National Championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Reynolds, Harry (Butch) (U	time				21.7				44.8	44.83	/ 1							
reaction time	interval								23.10		# of strides					21.70	23.10	1.40
	velocity				9.22				8.66	8.92						9.22	8.66	
Campbell, Milton (USA) (19	time				22.0		32.7		44.9	44.89	/ 2							
reaction time	interval						10.70		12.20		# of strides			10.70	12.20	22.00	22.90	0.90
	velocity				9.09		9.35		8.20	8.91				9.35	8.20	9.09	8.73	

Washington, Tyree (USA) (	time		21.9	33.2	45.0	44.95	/ 3									
reaction time	interval			11.30	11.80		# of strides			11.30	11.80	21.90	23.10	1.20		
	velocity		9.13	8.85	8.47	8.90				8.85	8.47	9.13	8.66			

1997 NCAA Championships (Bloomington, IN)

FINAL date 07-Jun-97

Track Newsletter (1997) - NCAA Championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Martin, Roxbert (JAM) (196	time				21.9		33.6		44.8	44.77	/ 1							
reaction time	interval						11.70		11.20		# of strides			11.70	11.20	21.90	22.90	1.00
	velocity				9.13		8.55		8.93	8.93				8.55	8.93	9.13	8.73	

1996 Olympic Games (Atlanta, GA)

Butler (2016) - IAAF statistics handbook- special edition: Games of the XXXI Olympiad- Rio 2016

FINAL date 29-Jul-96

Urtebise (1996) - Atlanta 1996 : 400m

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Johnson, Michael (USA) (1	time				21.22		31.80		43.49	43.49	4 / 1							*Urtebise (1996)*
reaction time 0.254	interval						10.58		11.69	OR	# of strides			10.58	11.69	21.22	22.27	1.05
	velocity				9.43		9.45		8.55	9.20	180.7			9.45	8.55	9.43	8.98	
Black, Roger (GBR) (1966)	time				21.36		32.3		44.41	44.41	3 / 2							*Butler (2016)*
reaction time 0.205	interval						10.94		12.11		# of strides			10.94	12.11	21.36	23.05	1.69
	velocity				9.36		9.14		8.26	9.01				9.14	8.26	9.36	8.68	
Kamoga, Davis (UGA) (196	time				21.76		32.5		44.53	44.53	2 / 3							*Butler (2016)*
reaction time 0.264	interval						10.74		12.03		# of strides			10.74	12.03	21.76	22.77	1.01
	velocity				9.19		9.31		8.31	8.98				9.31	8.31	9.19	8.78	
Harrison, Alvin (USA) (197	time				21.41		32.4		44.62	44.62	1 / 4							*Butler (2016)*
reaction time 0.237	interval						10.99		12.22		# of strides			10.99	12.22	21.41	23.21	1.80
	velocity				9.34		9.10		8.18	8.96				9.10	8.18	9.34	8.62	
Thomas, Iwan (GBR) (1974	time				21.30		32.4		44.70	44.70	8 / 5							*Butler (2016)*
reaction time 0.365	interval						11.10		12.30		# of strides			11.10	12.30	21.30	23.40	2.10
	velocity				9.39		9.01		8.13	8.95				9.01	8.13	9.39	8.55	
Martin, Roxbert (JAM) (196	time				21.40		32.6		44.83	44.83	5 / 6							*Butler (2016)*
reaction time 0.283	interval						11.20		12.23		# of strides			11.20	12.23	21.40	23.43	2.03
	velocity				9.35		8.93		8.18	8.92				8.93	8.18	9.35	8.54	
Clarke, Davian (JAM) (1976	time				21.37		32.7		44.99	44.99	6 / 7							*Butler (2016)*
reaction time 0.348	interval						11.33		12.29		# of strides			11.33	12.29	21.37	23.62	2.25
	velocity				9.36		8.83		8.14	8.89				8.83	8.14	9.36	8.47	
Ismail, Ibrahim (QAT) (1972	time				21.65					dnf	7 / --							*Butler (2016)*
reaction time 0.365	interval										# of strides					21.65		
	velocity				9.24											9.24		

1996 Athletissima (Laussane, SUI)

FINAL date 03-Jul-96

ferrari (2009) - Split 100 metri uomini e donne (www.noivelocisti.net/forum?func=view&catid=9&id=1813)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Johnson, Michael (USA) (1	time				21.9				43.66	43.66	/ 1							
reaction time	interval								21.76		# of strides					21.90	21.76	-0.14
	velocity				9.13				9.19	9.16						9.13	9.19	

1996 USA Olympic Trials (Atlanta, GA)

FINAL date 19-Jun-96

USATF Women's Sprint Development (1996)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Johnson, Michael (USA) (1	time		11.02		21.27		31.64	37.34	43.44	43.44	5 / 1							
reaction time	interval				10.25		10.37	5.70	6.10		# of strides	11.02	10.25	10.37	11.80	21.27	22.17	0.90
	velocity		9.07		9.76		9.64	8.77	8.20	9.21		9.07	9.76	9.64	8.47	9.40	9.02	
Reynolds, Harry (Butch) (U	time		11.12		21.36		32.12	37.79	43.91	43.91	4 / 2							
reaction time	interval				10.24		10.76	5.67	6.12		# of strides	11.12	10.24	10.76	11.79	21.36	22.55	1.19
	velocity		8.99		9.77		9.29	8.82	8.17	9.11		8.99	9.77	9.29	8.48	9.36	8.87	
Harrison, Alvin (USA) (197	time		11.44		21.77		32.24	37.80	44.09	44.09	6 / 3							
reaction time	interval				10.33		10.47	5.56	6.29	PB	# of strides	11.44	10.33	10.47	11.85	21.77	22.32	0.55
	velocity		8.74		9.68		9.55	8.99	7.95	9.07		8.74	9.68	9.55	8.44	9.19	8.96	
Smith, LaMont (USA) (197	time		11.08		21.38		32.18	37.92	44.30	44.30	3 / 4							
reaction time	interval				10.30		10.80	5.74	6.38	PB	# of strides	11.08	10.30	10.80	12.12	21.38	22.92	1.54
	velocity		9.03		9.71		9.26	8.71	7.84	9.03		9.03	9.71	9.26	8.25	9.35	8.73	
Maybank, Anthuan (USA) (	time		11.02		21.27		32.22	38.10	44.39	44.39	8 / ~~5~~							
reaction time	interval				10.25		10.95	5.88	6.29	DQ	# of strides	11.02	10.25	10.95	12.17	21.27	23.12	1.85
	velocity		9.07		9.76		9.13	8.50	7.95	9.01		9.07	9.76	9.13	8.22	9.40	8.65	
Mills, Derek (USA) (1972)	time		11.12		21.32		32.16	38.12	44.67	44.67	7 / ~~6~~ 5							
reaction time	interval				10.20		10.84	5.96	6.55		# of strides	11.12	10.20	10.84	12.51	21.32	23.35	2.03
	velocity		8.99		9.80		9.23	8.39	7.63	8.95		8.99	9.80	9.23	7.99	9.38	8.57	
Rouser, Jason (USA) (1970	time		10.98		21.40		32.59	38.39	44.77	44.77	1 / ~~7~~ 6							
reaction time	interval				10.42		11.19	5.80	6.38	=PB	# of strides	10.98	10.42	11.19	12.18	21.40	23.37	1.97

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
	velocity		9.11		9.60		8.94	8.62	7.84	8.93		9.11	9.60	8.94	8.21	9.35	8.56	
Watts, Quincy (USA) (1970	time		10.92		21.16		32.52	38.68	45.64	45.64	2 / ~~8~~ 7							
reaction time	interval				10.24		11.36	6.16	6.96		# of strides	10.92	10.24	11.36	13.12	21.16	24.48	3.32
	velocity		9.16		9.77		8.80	8.12	7.18	8.76		9.16	9.77	8.80	7.62	9.45	8.17	

Semi-Final 2

date 17-Jun-96

USATF Women's Sprint Development (1996)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Smith, LaMont (USA) (197	time		11.42		21.48		33.00	38.54	44.51	44.51	5 / 1							
reaction time	interval				10.06		11.52	5.54	5.97	PB	# of strides	11.42	10.06	11.52	11.51	21.48	23.03	1.55
	velocity		8.76		9.94		8.68	9.03	8.38	8.99		8.76	9.94	8.68	8.69	9.31	8.68	
Reynolds, Harry (Butch) (U	time		11.12		21.84		32.96	38.65	44.58	44.58	3 / 2							
reaction time	interval				10.72		11.12	5.69	5.93		# of strides	11.12	10.72	11.12	11.62	21.84	22.74	0.90
	velocity		8.99		9.33		8.99	8.79	8.43	8.97		8.99	9.33	8.99	8.61	9.16	8.80	
Mills, Derek (USA) (1972)	time		10.92		21.66		32.58	38.36	44.65	44.65	1 / 3							
reaction time	interval				10.74		10.92	5.78	6.29		# of strides	10.92	10.74	10.92	12.07	21.66	22.99	1.33
	velocity		9.16		9.31		9.16	8.65	7.95	8.96		9.16	9.31	9.16	8.29	9.23	8.70	
Rouser, Jason (USA) (1970	time		11.04		21.76		32.80	38.50	44.77	44.77	2 / 4							
reaction time	interval				10.72		11.04	5.70	6.27	PB	# of strides	11.04	10.72	11.04	11.97	21.76	23.01	1.25
	velocity		9.06		9.33		9.06	8.77	7.97	8.93		9.06	9.33	9.06	8.35	9.19	8.69	
Harrison, Calvin (USA) (19	time		11.50		21.38		33.08	38.62	44.78	44.78	6 / 5							
reaction time	interval				9.88		11.70	5.54	6.16	PB	# of strides	11.50	9.88	11.70	11.70	21.38	23.40	2.02
	velocity		8.70		10.12		8.55	9.03	8.12	8.93		8.70	10.12	8.55	8.55	9.35	8.55	
Minor, Deon (USA) (1973)	time		11.11		21.99		33.10	38.68	45.32	45.32	4 / 6							
reaction time	interval				10.88		11.11	5.58	6.64		# of strides	11.11	10.88	11.11	12.22	21.99	23.33	1.34
	velocity		9.00		9.19		9.00	8.96	7.53	8.83		9.00	9.19	9.00	8.18	9.10	8.57	
Young, Jerome (USA) (197	time		11.60		21.66		33.46	39.29	45.57	45.57	8 / 7							
reaction time	interval				10.06		11.80	5.83	6.28		# of strides	11.60	10.06	11.80	12.11	21.66	23.91	2.25
	velocity		8.62		9.94		8.47	8.58	7.96	8.78		8.62	9.94	8.47	8.26	9.23	8.36	
Miller, Tony (USA) (1971)	time		11.72		22.29		34.01	40.04	46.84	46.84	7 / 8							
reaction time	interval				10.57		11.72	6.03	6.80		# of strides	11.72	10.57	11.72	12.83	22.29	24.55	2.26
	velocity		8.53		9.46		8.53	8.29	7.35	8.54		8.53	9.46	8.53	7.79	8.97	8.15	

Semi-Final 1

date 17-Jun-96

USATF Women's Sprint Development (1996)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Harrison, Alvin (USA) (197	time		11.39		21.82		32.74	38.34	44.43	44.43	3 / 1							
reaction time	interval				10.43		10.92	5.60	6.09		# of strides	11.39	10.43	10.92	11.69	21.82	22.61	0.79
	velocity		8.78		9.59		9.16	8.93	8.21	9.00		8.78	9.59	9.16	8.55	9.17	8.85	
Johnson, Michael (USA) (1	time		11.52		21.85		32.70	38.40	44.81	44.81	6 / 2							
reaction time	interval				10.33		10.85	5.70	6.41		# of strides	11.52	10.33	10.85	12.11	21.85	22.96	1.11
	velocity		8.68		9.68		9.22	8.77	7.80	8.93		8.68	9.68	9.22	8.26	9.15	8.71	
Watts, Quincy (USA) (1970	time		11.48		21.67		32.88	38.92	45.10	45.10	5 / 3							
reaction time	interval				10.19		11.21	6.04	6.18		# of strides	11.48	10.19	11.21	12.22	21.67	23.43	1.76
	velocity		8.71		9.81		8.92	8.28	8.09	8.87		8.71	9.81	8.92	8.18	9.23	8.54	
Maybank, Anthuan (USA) (	time		11.28		21.72		33.13	39.05	45.18	45.18	1 / 4							
reaction time	interval				10.44		11.41	5.92	6.13		# of strides	11.28	10.44	11.41	12.05	21.72	23.46	1.74
	velocity		8.87		9.58		8.76	8.45	8.16	8.85		8.87	9.58	8.76	8.30	9.21	8.53	
Pettigrew, Antonio (USA) (	time		11.72		22.12		33.30	39.04	45.19	45.19	4 / 5							
reaction time	interval				10.40		11.18	5.74	6.15		# of strides	11.72	10.40	11.18	11.89	22.12	23.07	0.95
	velocity		8.53		9.62		8.94	8.71	8.13	8.85		8.53	9.62	8.94	8.41	9.04	8.67	
Valmon, Andrew (USA) (19	time		11.63		22.11		33.34	39.90	45.84	45.84	8 / 6							
reaction time	interval				10.48		11.23	6.56	5.94		# of strides	11.63	10.48	11.23	12.50	22.11	23.73	1.62
	velocity		8.60		9.54		8.90	7.62	8.42	8.73		8.60	9.54	8.90	8.00	9.05	8.43	
Moore, Obea (USA) (1979)	time		11.59		21.99		33.26	39.44	46.01	46.01	7 / 7							
reaction time	interval				10.40		11.27	6.18	6.57		# of strides	11.59	10.40	11.27	12.75	21.99	24.02	2.03
	velocity		8.63		9.62		8.87	8.09	7.61	8.69		8.63	9.62	8.87	7.84	9.10	8.33	
Byrd, Leonard (USA) (1975	time		11.53		22.11		33.44	39.48	46.15	46.15	2 / 8							
reaction time	interval				10.58		11.33	6.04	6.67		# of strides	11.53	10.58	11.33	12.71	22.11	24.04	1.93
	velocity		8.67		9.45		8.83	8.28	7.50	8.67		8.67	9.45	8.83	7.87	9.05	8.32	

1996 Atlanta Grand Prix (Atlanta, GA)

FINAL

date 18-May-96

Track Newsletter (1996) - atlanta GP- hot debut for Olympic track

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Johnson, Michael (USA) (1	time				21.7		32.4		44.3	44.33	/ 1							
reaction time	interval						10.70		11.90		# of strides			10.70	11.90	21.70	22.60	0.90
	velocity				9.22		9.35		8.40	9.02				9.35	8.40	9.22	8.85	
Mills, Derek (USA) (1972)	time				22.0		32.7		44.8	44.75	/ 2							
reaction time	interval						10.70		12.10		# of strides			10.70	12.10	22.00	22.80	0.80

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

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
velocity				9.09		9.35		8.26	8.94					9.35	8.26	9.09	8.77	

1995 Weltklasse (Zurich, SUI)

FINAL date 16-Aug-95

Track Newsletter (1995) - major international meets - zurich GP

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Johnson, Michael (USA) (1	time		11.0		21.0		32.2		43.9	43.88	/ 1							
reaction time	interval				10.00		11.20		11.70		# of strides	11.00	10.00	11.20	11.70	21.00	22.90	1.90
	velocity		9.09		10.00		8.93		8.55	9.12		9.09	10.00	8.93	8.55	9.52	8.73	

1995 IAAF World Championships (Göteborg, SWE)

FINAL date 09-Aug-95

Track Newsletter (1995) - World Championships V

Pariente (2003) - la fabuleuse histoire de l'athletisme

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Johnson, Michael (USA) (1	time		11.13		21.26		31.55		43.39	43.39	5 / 1							*Pariente (2003)*
reaction time	interval				10.13		10.29		11.84	CR / PB	# of strides	11.13	10.13	10.29	11.84	21.26	22.13	0.87
	velocity		8.98		9.87		9.72		8.45	9.22	182.0	8.98	9.87	9.72	8.45	9.41	9.04	
Reynolds, Harry (Butch) (USA) (1964)	no information available									44.22	6 / 2		# of strides	164.7				
Haughton, Gregory (JAM)	time		11.4		21.5		32.2		44.6	44.56	3 / 3							*Track Newsletter (1995)*
reaction time	interval				10.10		10.70		12.40		# of strides	11.40	10.10	10.70	12.40	21.50	23.10	1.60
	velocity		8.77		9.90		9.35		8.06	8.98		8.77	9.90	9.35	8.06	9.30	8.66	
Kitur, Samsun (KEN) (1966	time				21.6				44.7	44.71	7 / 4							*Track Newsletter (1995)*
reaction time	interval								23.10		# of strides					21.60	23.10	1.50
	velocity				9.26				8.66	8.95						9.26	8.66	
Richardson, Mark (GBR) (1972)	no information available									44.81	8 / 5							
Hall, Darrell (USA) (1971)	time				20.8				44.8	44.83	1 / 6							*Track Newsletter (1995)*
reaction time	interval								24.00		# of strides					20.80	24.00	3.20
	velocity				9.62				8.33	8.92						9.62	8.33	
Black, Roger (GBR) (1966)	no information available									45.28	2 / 7							
Bada, Sunday (NGR) (1969	time				21.2				45.5	45.50	4 / 8							*Track Newsletter (1995)*
reaction time	interval								24.30		# of strides					21.20	24.30	3.10
	velocity				9.43				8.23	8.79						9.43	8.23	

1995 USATF National Championships (Sacramento, CA)

FINAL date 16-Jun-95

Track Newsletter (1995) - USATF National Championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Johnson, Michael (USA) (1	time		11.2		21.5		31.8		43.7	43.66	/ 1							
reaction time	interval				10.30		10.30		11.90		# of strides	11.20	10.30	10.30	11.90	21.50	22.20	0.70
	velocity		8.93		9.71		9.71		8.40	9.16		8.93	9.71	9.71	8.40	9.30	9.01	
Reynolds, Harry (Butch) (U	time		11.5		21.7		32.8		44.5	44.42	/ 2							
reaction time	interval				10.20		11.10		11.70		# of strides	11.50	10.20	11.10	11.70	21.70	22.80	1.10
	velocity		8.70		9.80		9.01		8.55	9.00		8.70	9.80	9.01	8.55	9.22	8.77	
Hall, Darrell (USA) (1971)	time		11.0		21.2		32.3		44.6	44.56	/ 3							
reaction time	interval				10.20		11.10		12.30		# of strides	11.00	10.20	11.10	12.30	21.20	23.40	2.20
	velocity		9.09		9.80		9.01		8.13	8.98		9.09	9.80	9.01	8.13	9.43	8.55	
Mills, Derek (USA) (1972)	time		11.2		21.5		32.4		44.6	44.58	/ 4							
reaction time	interval				10.30		10.90		12.20		# of strides	11.20	10.30	10.90	12.20	21.50	23.10	1.60
	velocity		8.93		9.71		9.17		8.20	8.97		8.93	9.71	9.17	8.20	9.30	8.66	
Ramsey, Marlon (USA) (1974)	no information available									45.03	/ 5							
Lyles, Kevin (USA) (1973)	no information available									45.03	/ 6							
Pettigrew, Antonio (USA) (1967)	no information available									45.74	/ 7							
Byrd, Leonard (USA) (1975)	no information available									46.12	/ 8							

1995 NCAA Championships (Knoxville, TN)

FINAL date 03-Jun-95

Track Newsletter (1995) - NCAA Championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Haughton, Gregory (JAM)	time				21.5				44.6	44.52	/ 1							
reaction time	interval								23.10	PB	# of strides					21.50	23.10	1.60
	velocity				9.30				8.66	8.98						9.30	8.66	
Ramsey, Marion (USA) (1974)	no information available								PB	44.74	/ 2							
Morris, Andre (USA) (1972)	no information available									45.15	/ 3							
Lyles, Kevin (USA) (1973)	time				21.3				45.3	45.27	/ 4							
reaction time	interval								24.00		# of strides					21.30	24.00	2.70
	velocity				9.39				8.33	8.84						9.39	8.33	

Smith (1994) - 400m pace control

1993 IAAF World Championships (Stuttgart, GER)

FINAL date 17-Aug-93

Butler (2013) - IAAF world championships statistics handbook- moscow 2013

Graubner (2009) - http://www.fgs.uni-halle.de

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Johnson, Michael (USA) (1	time		11.28		21.65		32.12		43.65	43.65	3 / 1							*Graubner (2009)*
reaction time	interval				10.37		10.47		11.53	CR PB	# of strides	11.28	10.37	10.47	11.53	21.65	22.00	0.35
	velocity		8.87		9.64		9.55		8.67	9.16	181.0	8.87	9.64	9.55	8.67	9.24	9.09	

Reynolds, Harry (Butch) (U	time	11.18	21.39	32.22	44.13	44.13	7 / 2									*Graubner (2009)*
reaction time	interval		10.21	10.83	11.91		# of strides	11.18	10.21	10.83	11.91	21.39	22.74	1.35		
	velocity	8.94	9.79	9.23	8.40	9.06	164.0	8.94	9.79	9.23	8.40	9.35	8.80			
Kitur, Samson (KEN) (1966	time		21.83	32.69	44.54	44.54	4 / 3									*Smith (1994)*
reaction time	interval			10.86	11.85		# of strides			10.86	11.85	21.83	22.71	0.88		
	velocity		9.16	9.21	8.44	8.98	167.0			9.21	8.44	9.16	8.81			
Watts, Quincy (USA) (1970	time		21.85		45.05	45.05	5 / 4									*Butler (2013)*
reaction time	interval				23.20		# of strides					21.85	23.20	1.35		
	velocity		9.15		8.62	8.88	175.2					9.15	8.62			
Bada, Sunday (NGR) (1969	time	10.98	21.02	32.26	45.11	45.11	6 / 5									*Smith (1994)*
reaction time	interval		10.04	11.24	12.85		# of strides	10.98	10.04	11.24	12.85	21.02	24.09	3.07		
	velocity	9.11	9.96	8.90	7.78	8.87	177.0	9.11	9.96	8.90	7.78	9.51	8.30			
Haughton, Gregory (JAM)	time		21.88		45.63	45.63	2 / 6									*Butler (2013)*
reaction time	interval				23.75		# of strides					21.88	23.75	1.87		
	velocity		9.14		8.42	8.77	167.0					9.14	8.42			
Kemboi, Simon (KEN) (196	time		22.42		45.65	45.65	1 / 7									*Butler (2013)*
reaction time	interval				23.23		# of strides					22.42	23.23	0.81		
	velocity		8.92		8.61	8.76						8.92	8.61			
Ochieng, Kennedy (KEN) (	time		22.30		45.68	45.68	8 / 8									*Butler (2013)*
reaction time	interval				23.38		# of strides					22.30	23.38	1.08		
	velocity		8.97		8.55	8.76						8.97	8.55			

1992 Olympic Games (Barcelona, ESP)

FINAL date 05-Aug-92

Butler (2016) - IAAF statistics handbook- special edition: Games of the XXXI Olympiad- Rio 2016

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Watts, Quincy (USA) (1970	time				20.8		31.4		43.50	43.50	4 / 1							
reaction time	interval						10.60		12.1	OR	# of strides			10.60	12.10	20.80	22.70	1.90
	velocity				9.62		9.43		8.26	9.20	170.2			9.43	8.26	9.62	8.81	
Lewis, Steve (USA) (1969)	time				21.1		31.8		44.3	44.21	7 / 2							
reaction time	interval						10.70		12.50		# of strides			10.70	12.50	21.10	23.20	2.10
	velocity				9.48		9.35		8.00	9.05				9.35	8.00	9.48	8.62	
Kitur, Samson (KEN) (1966	time				21.5		32.3		44.3	44.24	5 / 3							
reaction time	interval						10.80		12.00		# of strides			10.80	12.00	21.50	22.80	1.30
	velocity				9.30		9.26		8.33	9.04				9.26	8.33	9.30	8.77	
Morris, Ian (TTO) (1961)	time				21.7		32.5		44.3	44.25	6 / 4							
reaction time	interval						10.80		11.80		# of strides			10.80	11.80	21.70	22.60	0.90
	velocity				9.22		9.26		8.47	9.04				9.26	8.47	9.22	8.85	
Hernández, Roberto (CUB	time				21.2		32		44.6	44.52	2 / 5							
reaction time	interval						10.80		12.60		# of strides			10.80	12.60	21.20	23.40	2.20
	velocity				9.43		9.26		7.94	8.98				9.26	7.94	9.43	8.55	
Grindley, David (GBR) (197	time				21.3		32.2		44.8	44.75	3 / 6							
reaction time	interval						10.90		12.60		# of strides			10.90	12.60	21.30	23.50	2.20
	velocity				9.39		9.17		7.94	8.94				9.17	7.94	9.39	8.51	
Ismail, Ibrahim (QAT) (1972	time				21.4		32.5		45.1	45.10	1 / 7							
reaction time	interval						11.10		12.60		# of strides			11.10	12.60	21.40	23.70	2.30
	velocity				9.35		9.01		7.94	8.87				9.01	7.94	9.35	8.44	
Takano, Susumu (JPN) (19	time				21.9		32.9		45.2	45.18	8 / 8							
reaction time	interval						11.00		12.30		# of strides			11.00	12.30	21.90	23.30	1.40
	velocity				9.13		9.09		8.13	8.85				9.09	8.13	9.13	8.58	

1992 French National Championships (Narbonne, FRA)

FINAL date 28-Jun-92

Belloc (1992) - Diagana: 45.18 / 48.13 : 3" d'ecart; incompressibles?

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Diagana, Stéphane (FRA) (	time		11.40		21.68		32.84		45.18	45.18	/ 1							
reaction time	interval				10.28		11.16		12.34	PB	# of strides	11.40	10.28	11.16	12.34	21.68	23.50	1.82
	velocity		8.77		9.73		8.96		8.10	8.85		8.77	9.73	8.96	8.10	9.23	8.51	

1991 IAAF World Championships (Tokyo, JPN)

FINAL date 29-Aug-91

Mochida (2008) - about the race pattern of the men's 400m in the world's top level

Butler (2013) - IAAF world championships statistics handbook- moscow 2013

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Pettigrew, Antonio (USA) (	time		11.35		21.39		32.22		44.57	44.57	4 / 1							*Mochida (2008)*
reaction time	interval				10.04		10.83		12.35		# of strides	11.35	10.04	10.83	12.35	21.39	23.18	1.79
	velocity		8.81		9.96		9.23		8.10	8.97	168.7	8.81	9.96	9.23	8.10	9.35	8.63	
Black, Roger (GBR) (1966)	time		11.00		21.15		32.05		44.62	44.62	3 / 2							*Mochida (2008)*
reaction time	interval				10.15		10.90		12.57		# of strides	11.00	10.15	10.90	12.57	21.15	23.47	2.32
	velocity		9.09		9.85		9.17		7.96	8.96	164.5	9.09	9.85	9.17	7.96	9.46	8.52	
Everett, Danny (USA) (1966	time		11.18		21.52		32.33		44.63	44.63	5 / 3							*Mochida (2008)*

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

reaction time	interval		10.34	10.81	12.30		# of strides	11.18	10.34	10.81	12.30	21.52	23.11	1.59
	velocity	8.94	9.67	9.25	8.13	8.96	172.2	8.94	9.67	9.25	8.13	9.29	8.65	
Hernández, Roberto, (CUB	time		21.51		44.86	44.86	6 / 4							*Butler (2013)*
reaction time	interval				23.35		# of strides					21.51	23.35	1.84
	velocity		9.30		8.57	8.92	169.7					9.30	8.57	
Valmon, Andrew (USA) (19	time		21.49		45.09	45.09	1 / 5							*Butler (2013)*
reaction time	interval				23.60		# of strides					21.49	23.60	2.11
	velocity		9.31		8.47	8.87	175.5					9.31	8.47	
Morris, Ian (TTO) (1961)	time		21.76		45.12	45.12	8 / 6							*Butler (2013)*
reaction time	interval				23.36		# of strides					21.76	23.36	1.60
	velocity		9.19		8.56	8.87	176.5					9.19	8.56	
Takano, Susumu (JPN) (19	time		21.41		45.39	45.39	7 / 7							*Butler (2013)*
reaction time	interval				23.98		# of strides					21.41	23.98	2.57
	velocity		9.34		8.34	8.81	176.7					9.34	8.34	
Garner, Mark (AUS) (1969)	time		21.39		45.47	45.47	2 / 8							*Butler (2013)*
reaction time	interval				24.08		# of strides					21.39	24.08	2.69
	velocity		9.35		8.31	8.80	186.7					9.35	8.31	

1991 KVP-Galan (Malmo, SWE)

FINAL date 05-Aug-91

Behm (1995) - colloque 400m haies

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Black, Roger (GBR) (1966)	time		11.23		21.53		32.63		44.71	44.71	/ 1							
reaction time	interval				10.30		11.10		12.08		# of strides	11.23	10.30	11.10	12.08	21.53	23.18	1.65
	velocity		8.90		9.71		9.01		8.28	8.95		8.90	9.71	9.01	8.28	9.29	8.63	

1991 European Cup (Frankfurt, GER)

FINAL date 29-Jun-91

Federle (2003) - http://www.fgs.uni-halle.de

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Black, Roger (GBR) (1966)	time		11.53		21.91		32.90		44.91	44.91	/ 1							
reaction time	interval				10.38		10.99		12.01		# of strides	11.53	10.38	10.99	12.01	21.91	23.00	1.09
	velocity		8.67		9.63		9.10		8.33	8.91		8.67	9.63	9.10	8.33	9.13	8.70	
Noirot, Oliver (FRA) (1969)	time		11.20		21.55		32.87		45.18	45.18	/ 2							
reaction time	interval				10.35		11.32		12.31		# of strides	11.20	10.35	11.32	12.31	21.55	23.63	2.08
	velocity		8.93		9.66		8.83		8.12	8.85		8.93	9.66	8.83	8.12	9.28	8.46	
Molnár, Tamás (HUN) (196	time		11.48		21.97		33.25		45.78	45.78	/ 3							
reaction time	interval				10.49		11.28		12.53		# of strides	11.48	10.49	11.28	12.53	21.97	23.81	1.84
	velocity		8.71		9.53		8.87		7.98	8.74		8.71	9.53	8.87	7.98	9.10	8.40	
Kocheryagin, Vyacheslav (U	time		11.59		22.39		33.59		45.88	45.88	/ 4							
reaction time	interval				10.80		11.20		12.29		# of strides	11.59	10.80	11.20	12.29	22.39	23.49	1.10
	velocity		8.63		9.26		8.93		8.14	8.72		8.63	9.26	8.93	8.14	8.93	8.51	
Nuti, Andrea (ITA) (1967)	time		11.59		21.99		33.23		46.04	46.04	/ 5							
reaction time	interval				10.40		11.24		12.81		# of strides	11.59	10.40	11.24	12.81	21.99	24.05	2.06
	velocity		8.63		9.62		8.90		7.81	8.69		8.63	9.62	8.90	7.81	9.10	8.32	
Roun, Jindrich (TCH) (196	time		11.56		22.01		33.24		46.17	46.17	/ 6							
reaction time	interval				10.45		11.23		12.93		# of strides	11.56	10.45	11.23	12.93	22.01	24.16	2.15
	velocity		8.65		9.57		8.90		7.73	8.66		8.65	9.57	8.90	7.73	9.09	8.28	
Karsten, Kai (GER) (1968)	time		11.30		21.85		33.53		46.40	46.40	/ 7							
reaction time	interval				10.55		11.68		12.87		# of strides	11.30	10.55	11.68	12.87	21.85	24.55	2.70
	velocity		8.85		9.48		8.56		7.77	8.62		8.85	9.48	8.56	7.77	9.15	8.15	
Stankulov, Tsvetoslav (BUI	time		11.49		22.90		33.56		46.61	46.61	/ 8							
reaction time	interval				11.41		10.66		13.05		# of strides	11.49	11.41	10.66	13.05	22.90	23.71	0.81
	velocity		8.70		8.76		9.38		7.66	8.58		8.70	8.76	9.38	7.66	8.73	8.44	

1988 Olympic Games (Seoul, KOR)

FINAL date 28-Sep-88

Brüggemann (1990) - scientific research project at the games of the XXXIV Olympiad, Seoul 1988

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Lewis, Steve (USA) (1969)	time		11.26		21.41		32.13		43.87	43.87	6 / 1							
reaction time 0.181	interval				10.15		10.72		11.74	WJR	# of strides	11.26	10.15	10.72	11.74	21.41	22.46	1.05
	velocity		8.88		9.85		9.33		8.52	9.12		8.88	9.85	9.33	8.52	9.34	8.90	
Reynolds, Harry (Butch) (U	time		11.29		21.68		32.58		43.93	43.93	3 / 2							
reaction time 0.160	interval				10.39		10.90		11.35		# of strides	11.29	10.39	10.90	11.35	21.68	22.25	0.57
	velocity		8.86		9.62		9.17		8.81	9.11		8.86	9.62	9.17	8.81	9.23	8.99	
Everett, Danny (USA) (1966	time		11.03		21.37		32.18		44.09	44.09	4 / 3							
reaction time 0.205	interval				10.34		10.81		11.91		# of strides	11.03	10.34	10.81	11.91	21.37	22.72	1.35
	velocity		9.07		9.67		9.25		8.40	9.07		9.07	9.67	9.25	8.40	9.36	8.80	
Clark, Darren (AUS) (1965)	time		11.22		21.61		32.55		44.55	44.55	5 / 4							
reaction time 0.176	interval				10.39		10.94		12.00		# of strides	11.22	10.39	10.94	12.00	21.61	22.94	1.33
	velocity		8.91		9.62		9.14		8.33	8.98		8.91	9.62	9.14	8.33	9.25	8.72	

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Egbunike, Innocent (NGR)	time		11.29		21.76		32.74		44.72	44.72	7 / 5							
reaction time 0.255	interval				10.47		10.98		11.98		# of strides	11.29	10.47	10.98	11.98	21.76	22.96	1.20
	velocity		8.86		9.55		9.11		8.35	8.94		8.86	9.55	9.11	8.35	9.19	8.71	
Cameron, Bert (JAM) (1959	time		11.22		21.66		32.68		44.94	44.94	2 / 6							
reaction time 0.176	interval				10.44		11.02		12.26		# of strides	11.22	10.44	11.02	12.26	21.66	23.28	1.62
	velocity		8.91		9.58		9.07		8.16	8.90		8.91	9.58	9.07	8.16	9.23	8.59	
Morris, Ian (TTO) (1961)	time		11.60		21.95		32.78		44.95	44.95	8 / 7							
reaction time 0.306	interval				10.35		10.83		12.17		# of strides	11.60	10.35	10.83	12.17	21.95	23.00	1.05
	velocity		8.62		9.66		9.23		8.22	8.90		8.62	9.66	9.23	8.22	9.11	8.70	
Al-Malky, Mohamed (OMA)	time		11.19		21.49		32.50		45.03	45.03	1 / 8							
reaction time 0.169	interval				10.30		11.01		12.53		# of strides	11.19	10.30	11.01	12.53	21.49	23.54	2.05
	velocity		8.94		9.71		9.08		7.98	8.88		8.94	9.71	9.08	7.98	9.31	8.50	

Semi-Final 2

date 26-Sep-88

Brüggemann (1990) - scientific research project at the games of the XXXIV Olympiad, Seoul 1988

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Reynolds, Harry (Butch) (U	time		11.39		21.80		32.78		44.33	44.33	6 / 1							
reaction time 0.175	interval				10.41		10.98		11.55		# of strides	11.39	10.41	10.98	11.55	21.80	22.53	0.73
	velocity		8.78		9.61		9.11		8.66	9.02		8.78	9.61	9.11	8.66	9.17	8.88	
Morris, Ian (TTO) (1961)	time		11.31		21.83		32.69		44.60	44.60	3 / 2							
reaction time 0.211	interval				10.52		10.86		11.91	PB	# of strides	11.31	10.52	10.86	11.91	21.83	22.77	0.94
	velocity		8.84		9.51		9.21		8.40	8.97		8.84	9.51	9.21	8.40	9.16	8.78	
Al-Malky, Mohamed (OMA)	time		11.35		21.78		32.75		44.69	44.69	5 / 3							
reaction time 0.207	interval				10.43		10.97		11.94		# of strides	11.35	10.43	10.97	11.94	21.78	22.91	1.13
	velocity		8.81		9.59		9.12		8.38	8.95		8.81	9.59	9.12	8.38	9.18	8.73	
Egbunike, Innocent (NGR)	time		11.11		21.44		32.79		44.74	44.74	4 / 4							
reaction time 0.253	interval				10.33		11.35		11.95		# of strides	11.11	10.33	11.35	11.95	21.44	23.30	1.86
	velocity		9.00		9.68		8.81		8.37	8.94		9.00	9.68	8.81	8.37	9.33	8.58	
Schönlebe, Thomas (GDR)	time		11.51		22.18		33.23		44.90	44.90	2 / 5							
reaction time 0.207	interval				10.67		11.05		11.67		# of strides	11.51	10.67	11.05	11.67	22.18	22.72	0.54
	velocity		8.69		9.37		9.05		8.57	8.91		8.69	9.37	9.05	8.57	9.02	8.80	
Davis, Howard (JAM) (1967	time		11.34		22.00		33.28		45.48	45.48	1 / 6							
reaction time 0.177	interval				10.66		11.28		12.20		# of strides	11.34	10.66	11.28	12.20	22.00	23.48	1.48
	velocity		8.82		9.38		8.87		8.20	8.80		8.82	9.38	8.87	8.20	9.09	8.52	
Morris, Devon (JAM) (1961	time		11.51		22.04		33.27		45.68	45.68	8 / 7							
reaction time 0.239	interval				10.53		11.23		12.41		# of strides	11.51	10.53	11.23	12.41	22.04	23.64	1.60
	velocity		8.69		9.50		8.90		8.06	8.76		8.69	9.50	8.90	8.06	9.07	8.46	
Whittle, Brian (GBR) (1964	time		11.34		21.88		33.42		46.07	46.07	7 / 8							
reaction time 0.176	interval				10.54		11.54		12.65		# of strides	11.34	10.54	11.54	12.65	21.88	24.19	2.31
	velocity		8.82		9.49		8.67		7.91	8.68		8.82	9.49	8.67	7.91	9.14	8.27	

Semi-Final 1

date 26-Sep-88

Brüggemann (1990) - scientific research project at the games of the XXXIV Olympiad, Seoul 1988

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Lewis, Steve (USA) (1969)	time		11.16		21.54		32.53		44.35	44.35	3 / 1							
reaction time 0.199	interval				10.38		10.99		11.82		# of strides	11.16	10.38	10.99	11.82	21.54	22.81	1.27
	velocity		8.96		9.63		9.10		8.46	9.02		8.96	9.63	9.10	8.46	9.29	8.77	
Everett, Danny (USA) (1966	time		11.43		22.03		32.87		44.36	44.36	5 / 2							
reaction time	interval				10.60		10.84		11.49		# of strides	11.43	10.60	10.84	11.49	22.03	22.33	0.30
	velocity		8.75		9.43		9.23		8.70	9.02		8.75	9.43	9.23	8.70	9.08	8.96	
Clark, Darren (AUS) (1965)	time		11.15		21.58		32.55		44.38	44.38	6 / 3							
reaction time	interval				10.43		10.97		11.83	AR	# of strides	11.15	10.43	10.97	11.83	21.58	22.80	1.22
	velocity		8.97		9.59		9.12		8.45	9.01		8.97	9.59	9.12	8.45	9.27	8.77	
Cameron, Bert (JAM) (1959	time		11.20		21.58		32.52		44.50	44.50	8 / 4							
reaction time	interval				10.38		10.94		11.98	PB	# of strides	11.20	10.38	10.94	11.98	21.58	22.92	1.34
	velocity		8.93		9.63		9.14		8.35	8.99		8.93	9.63	9.14	8.35	9.27	8.73	
Takano, Susumu (JPN) (19	time		11.43		21.98		32.90		44.90	44.90	4 / 5							
reaction time 0.174	interval				10.55		10.92		12.00	PB	# of strides	11.43	10.55	10.92	12.00	21.98	22.92	0.94
	velocity		8.75		9.48		9.16		8.33	8.91		8.75	9.48	9.16	8.33	9.10	8.73	
Carlowitz, Jens (GDR) (196	time		11.19		21.52		32.67		45.08	45.08	2 / 6							
reaction time 0.230	interval				10.33		11.15		12.41		# of strides	11.19	10.33	11.15	12.41	21.52	23.56	2.04
	velocity		8.94		9.68		8.97		8.06	8.87		8.94	9.68	8.97	8.06	9.29	8.49	
de Souza, Gerson (BRA) (1	time		11.38		21.78		32.83		45.27	45.27	7 / 7							
reaction time	interval				10.40		11.05		12.44		# of strides	11.38	10.40	11.05	12.44	21.78	23.49	1.71
	velocity		8.79		9.62		9.05		8.04	8.84		8.79	9.62	9.05	8.04	9.18	8.51	
Jedrusik, Tomasz (POL) (1	time		11.18		21.71		33.09		46.17	46.17	1 / 8							
reaction time 0.280	interval				10.53		11.38		13.08		# of strides	11.18	10.53	11.38	13.08	21.71	24.46	2.75

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

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
	velocity		8.94		9.50		8.79		7.65	8.66		8.94	9.50	8.79	7.65	9.21	8.18	

1988 Weltklasse (Zurich, SUI)

FINAL

date 17-Aug-88

Vazel (2016) - How van Niekerk broke the 400m world record

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Reynolds, Harry (Butch) (U	time	6.3	11.3	16.3	21.4	26.7	32.1	37.6	43.3	43.29	/ 1							
reaction time	interval		5.00	5.00	5.10	5.30	5.40	5.50	5.70	WR	# of strides	11.30	10.10	10.70	11.20	21.40	21.90	0.50
	velocity	7.94	4.42	3.07	2.34	1.87	1.56	1.33	1.15	9.24	159.7	8.85	9.90	9.35	8.93	9.35	9.13	
Egbunike, Innocent (NGR)	time				20.9		32.3		44.97	44.97	/ 6							
reaction time 0.255	interval						11.40		12.67		# of strides			11.40	12.67	20.90	24.07	3.17
	velocity				9.57		8.77		7.89	8.89				8.77	7.89	9.57	8.31	

Parienté (1978) - la fabuleuse histoire de l'athlétisme

1988 USA Olympic Trials (Indianapolis, IN)

FINAL

date 20-Jul-88

Hymans (2008) - history of the US olympic trials - track and field

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Reynolds, Harry (Butch) (U	time		10.6		21.2		32.0		43.93	43.93	6 / 1							
reaction time	interval				10.6		10.8		11.9	PB	# of strides	10.60	10.60	10.80	11.93	21.20	22.73	1.53
	velocity		9.43		9.43		9.26		8.38	9.11		9.43	9.43	9.26	8.38	9.43	8.80	
Everett, Danny (USA) (1966	time		11.1		21.3		32.0		43.98	43.98	4 / 2							
reaction time	interval				10.2		10.7		12.0	PB	# of strides	11.10	10.20	10.70	11.98	21.30	22.68	1.38
	velocity		9.01		9.80		9.35		8.35	9.10		9.01	9.80	9.35	8.35	9.39	8.82	
Lewis, Steve (USA) (1969)	time		10.5		21.1		31.9		44.37	44.37	7 / 3							
reaction time	interval				10.6		10.8		12.5		# of strides	10.50	10.60	10.80	12.47	21.10	23.27	2.17
	velocity		9.52		9.43		9.26		8.02	9.02		9.52	9.43	9.26	8.02	9.48	8.59	
Robinzine, Kevin (USA) (1966)	no information available									44.61	5 / 4							
McKay, Antonio (USA) (1964)	no information available									44.79	9 / 5							
Valmon, Andrew (USA) (1965)	no information available									44.91	2 / 6							
Daniel, Clarence (USA) (1961)	no information available									45.37	8 / 7							
Haley, Roddie (USA) (1965)	no information available									45.85	3 / 8							

Semi-Final 2

date 18-Jul-88

Quercentani (2000) - athletics: a history of modern track and field athletics (1860-2000)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Lewis, Steve (USA) (1969)	time				20.8				44.11	44.11	/ 1							
reaction time	interval								23.3	WJR	# of strides				44.11	20.80	23.31	2.51
	velocity				9.62				8.58	9.07					2.27	9.62	8.58	

1987 IAAF World Championships (Rome, ITA)

FINAL

date 03-Sep-87

Moravec (1990) - time analyis of the sprints - Rome 1987 Scientific Report (2nd ed)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Schönlebe, Thomas (GDR)	time		11.11		21.40		32.44		44.33	44.33	3 / 1							
reaction time	interval				10.29		11.04		11.89	AR	# of strides	11.11	10.29	11.04	11.89	21.40	22.93	1.53
	velocity		9.00		9.72		9.06		8.41	9.02		9.00	9.72	9.06	8.41	9.35	8.72	
Egbunike, Innocent (NGR)	time		10.91		21.14		32.32		44.56	44.56	5 / 2							
reaction time	interval				10.23		11.18		12.24		# of strides	10.91	10.23	11.18	12.24	21.14	23.42	2.28
	velocity		9.17		9.78		8.94		8.17	8.98		9.17	9.78	8.94	8.17	9.46	8.54	
Reynolds, Harry (Butch) (U	time		11.22		21.71		32.74		44.80	44.80	7 / 3							
reaction time	interval				10.49		11.03		12.06		# of strides	11.22	10.49	11.03	12.06	21.71	23.09	1.38
	velocity		8.91		9.53		9.07		8.29	8.93		8.91	9.53	9.07	8.29	9.21	8.66	
Hernández, Roberto (CUB	time		11.07		21.48		32.66		44.99	44.99	2 / 4							
reaction time	interval				10.41		11.18		12.33		# of strides	11.07	10.41	11.18	12.33	21.48	23.51	2.03
	velocity		9.03		9.61		8.94		8.11	8.89		9.03	9.61	8.94	8.11	9.31	8.51	
Redmond, Derek (GBR) (19	time		11.10		21.36		32.55		45.06	45.06	6 / 5							
reaction time	interval				10.26		11.19		12.51		# of strides	11.10	10.26	11.19	12.51	21.36	23.70	2.34
	velocity		9.01		9.75		8.94		7.99	8.88		9.01	9.75	8.94	7.99	9.36	8.44	
Kitur, David (KEN) (1962)	time		11.41		21.73		32.76		45.34	45.34	8 / 6							
reaction time	interval				10.32		11.03		12.58		# of strides	11.41	10.32	11.03	12.58	21.73	23.61	1.88
	velocity		8.76		9.69		9.07		7.95	8.82		8.76	9.69	9.07	7.95	9.20	8.47	
Tiacoh, Gabriel (CIV) (1963)	time		11.56		22.17		33.56		46.27	46.27	4 / 7							
reaction time	interval				10.61		11.39		12.71		# of strides	11.56	10.61	11.39	12.71	22.17	24.10	1.93
	velocity		8.65		9.43		8.78		7.87	8.64		8.65	9.43	8.78	7.87	9.02	8.30	
Haley, Roddie (USA) (1965)	time		10.88		21.30		32.79		46.77	46.77	1 / 8							
reaction time	interval				10.42		11.49		13.98		# of strides	10.88	10.42	11.49	13.98	21.30	25.47	4.17
	velocity		9.19		9.60		8.70		7.15	8.55		9.19	9.60	8.70	7.15	9.39	7.85	

Semi-Final 2

date 01-Sep-87

Moravec (1990) - time analyis of the sprints - Rome 1987 Scientific Report (2nd ed)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Reynolds, Harry (Butch) (U	time		11.46		21.80		33.00		44.94	44.94	2 / 4							
reaction time	interval				10.34		11.20		11.94		# of strides	11.46	10.34	11.20	11.94	21.80	23.14	1.34
	velocity		8.73		9.67		8.93		8.38	8.90		8.73	9.67	8.93	8.38	9.17	8.64	

Semi-Final 1

date 01-Sep-87

Moravec (1990) - time analyis of the sprints - Rome 1987 Scientific Report (2nd ed)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Egbunike, Innocent (NGR)	time		10.87		20.97		32.10		44.26	44.26	4 / 1							
reaction time	interval				10.10		11.13		12.16	CR	# of strides	10.87	10.10	11.13	12.16	20.97	23.29	2.32
	velocity		9.20		9.90		8.98		8.22	9.04	162.5	9.20	9.90	8.98	8.22	9.54	8.59	
Schönlebe, Thomas (GDR)	time		11.09		21.27		32.28		44.60	44.60	3 / 2							
reaction time	interval				10.18		11.01		12.32		# of strides	11.09	10.18	11.01	12.32	21.27	23.33	2.06
	velocity		9.02		9.82		9.08		8.12	8.97		9.02	9.82	9.08	8.12	9.40	8.57	

Quarter-Final 3

date 31-Aug-87

Moravec (1990) - time analyis of the sprints - Rome 1987 Scientific Report (2nd ed)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Egbunike, Innocent (NGR)	time		11.09		21.23		32.57		45.46	45.46	/ 1							
reaction time	interval				10.14		11.34		12.89		# of strides	11.09	10.14	11.34	12.89	21.23	24.23	3.00
	velocity		9.02		9.86		8.82		7.76	8.80		9.02	9.86	8.82	7.76	9.42	8.25	
Reynolds, Harry (Butch) (U	time		11.58		22.05		33.46		45.49	45.49	/ 3							
reaction time	interval				10.47		11.41		12.03		# of strides	11.58	10.47	11.41	12.03	22.05	23.44	1.39
	velocity		8.64		9.55		8.76		8.31	8.79		8.64	9.55	8.76	8.31	9.07	8.53	

Quarter-Final 2

date 31-Aug-87

Moravec (1990) - time analyis of the sprints - Rome 1987 Scientific Report (2nd ed)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Schönlebe, Thomas (GDR)	time		11.52		21.79		32.76		44.81	44.81	/ 1							
reaction time	interval				10.27		10.97		12.05	CR	# of strides	11.52	10.27	10.97	12.05	21.79	23.02	1.23
	velocity		8.68		9.74		9.12		8.30	8.93		8.68	9.74	9.12	8.30	9.18	8.69	

Heat 4

date 30-Aug-87

Moravec (1990) - tima analyis of the sprints - Rome 1987 Scientific Report (2nd ed)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Schönlebe, Thomas (GDR)	time		11.48		22.00		33.35		45.85	45.85	6 / 2							
reaction time	interval				10.52		11.35		12.50		# of strides	11.48	10.52	11.35	12.50	22.00	23.85	1.85
	velocity		8.71		9.51		8.81		8.00	8.72	172.5	8.71	9.51	8.81	8.00	9.09	8.39	

Heat 2

date 30-Aug-87

Moravec (1990) - time analysis of the sprints - Rome 1987 Scientific Report (2nd ed)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Egbunike, Innocent (NGR)	time		11.32		21.94		33.50		45.84	45.84	6 / 2							
reaction time	interval				10.62		11.56		12.34		# of strides	11.32	10.62	11.56	12.34	21.94	23.90	1.96
	velocity		8.83		9.42		8.65		8.10	8.73	161.0	8.83	9.42	8.65	8.10	9.12	8.37	

Heat 1

date 30-Aug-87

Moravec (1990) - time analysis of the sprints - Rome 1987 Scientific Report (2nd ed)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Reynolds, Harry (Butch) (U	time		11.56		22.50		33.80		45.51	45.51	2 / 1							
reaction time	interval				10.94		11.30		11.71		# of strides	11.56	10.94	11.30	11.71	22.50	23.01	0.51
	velocity		8.65		9.14		8.85		8.54	8.79		8.65	9.14	8.85	8.54	8.89	8.69	

1987 TAC National Championships (San Jose, CA)

FINAL

date 27-Jun-87

Track Newsletter (1987) - TAC National Championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Reynolds, Harry (Butch) (U	time				21.8				44.5	44.46	5 / 1							
reaction time	interval								22.70		# of strides					21.80	22.70	0.90
	velocity				9.17				8.81	9.00						9.17	8.81	

1987 NCAA Championships (Baton Rouge, LA)

FINAL

date 06-Jun-87

Track Newsletter (1987) - NCAA Championships

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Reynolds, Harry (Butch) (U	time				21.9				44.2	44.13	5 / 1							
reaction time	interval								22.30		# of strides					21.90	22.30	0.40
	velocity				9.13				8.97	9.06						9.13	8.97	
Everett, Danny (USA) (1966)	no information available									44.47	6 / 2							
Haley, Roddie (USA) (1965)	time				21.6				44.9	44.82	4 / 3							
reaction time	interval								23.30		# of strides					21.60	23.30	1.70
	velocity				9.26				8.58	8.92						9.26	8.58	

1986 IAAF World Junor Championships (Athens, GRE)

FINAL

date 18-Jul-86

Moravec (1986) - IAAF biomechanical research - Athens 1986 - sprints

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Murphy, Miles (AUS) (1967	time		11.15		21.46		32.74		45.64	45.64	/ 1							
reaction time	interval				10.31		11.28		12.90	CR	# of strides	11.15	10.31	11.28	12.90	21.46	24.18	2.72
	velocity		8.97		9.70		8.87		7.75	8.76		8.97	9.70	8.87	7.75	9.32	8.27	
Hernández, Roberto (CUB	time		11.23		21.36		32.59		45.64	45.64	/ 2							
reaction time	interval				10.13		11.23		13.05		# of strides	11.23	10.13	11.23	13.05	21.36	24.28	2.92
	velocity		8.90		9.87		8.90		7.66	8.76		8.90	9.87	8.90	7.66	9.36	8.24	
Itt, Edgar (FRG) (1967)	time		11.34		21.85		33.08		45.72	45.72	/ 3							
reaction time	interval				10.51		11.23		12.64		# of strides	11.34	10.51	11.23	12.64	21.85	23.87	2.02
	velocity		8.82		9.51		8.90		7.91	8.75		8.82	9.51	8.90	7.91	9.15	8.38	
Mordoche, Eulogio (CUB) (1967)	no information available									46.52	/ 4							
Campbell, Clifton (USA) (1967)	no information available									46.52	/ 5							
Falaye, Joseph (NGR) (1968)	no information available									46.81	/ 6							
Crampton, Peter (GBR) (1969)	no information available									47.26	/ 7							

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

Rish, Chip (USA) (1967)		no information available							47.50	/ 8									

1985 IAAF World Cup (Canberra, AUS)

FINAL date 05-Oct-85 — *Butler (2010) -1st/IAAF VTB bank continental cup, IAAF statistics handbook - split 2010*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Franks, Mike (USA) (1963)		no information available								44.47	/ 1							
Schönlebe, Thomas (GDR) (1965)		no information available								44.72	/ 2							
Egbunike, Innocent (NGR) (1961)		no information available								44.99	/ 3							
Clark, Darren (AUS) (1965)	time				21.1				45.12	45.12	/ 4							
reaction time	interval								24.02		# of strides					21.10	24.02	2.92
	velocity				9.48				8.33	8.87						9.48	8.33	
Krylov, Vladimir (URS) (1964)		no information available								45.73	/ 5							
Daley, Héctor (PAN) (1961)		no information available								46.04	/ 6							
Canti, Aldo (FRA) (1961)		no information available								46.21	/ 7							
Al-Malky, Mohammed (OMA) (1962)		no information available								47.18	/ 8							

1985 NCAA Championships (Austin, TX)

FINAL date 01-Jun-85 — *Track Newsletter (1985) - NCAA Championships*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Haley, Roddie (USA) (1965)	time				21.3		32.5		44.7	44.70	6 / 1							
reaction time	interval						11.20		12.20		# of strides			11.20	12.20	21.30	23.40	2.10
	velocity				9.39		8.93		8.20	8.95				8.93	8.20	9.39	8.55	
Uti, Sunday (NGR) (1962)		no information available								44.91	3 / 2							
Tiacoh, Gabriel (CIV) (1963)	time				22.0		33.0		45.0	44.92	5 / 3							
reaction time	interval						11.00		12.00		# of strides			11.00	12.00	22.00	23.00	1.00
	velocity				9.09		9.09		8.33	8.90				9.09	8.33	9.09	8.70	
Franks, Michael (USA) (196	time				21.6				45.2	45.16	8 / 4							
reaction time	interval								23.60		# of strides					21.60	23.60	2.00
	velocity				9.26				8.47	8.86						9.26	8.47	

1984 Olympic Games (Los Angeles, CA)

Butler (2016) - IAAF statistics handbook- special edition: Games of the XXXI Olympiad- Rio 2016

FINAL date 08-Aug-84 — *Adams (1984) - 1984 olympic games - 200m & 400m*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Babers, Alonzo (USA) (196	time				21.7		32.5		44.3	44.27	4 / 1							*Butler (2016)*
reaction time 0.175	interval						10.80		11.80	PB	# of strides			10.80	11.80	21.70	22.60	0.90
	velocity				9.22		9.26		8.47	9.04				9.26	8.47	9.22	8.85	
Tiacoh, Gabriel (CIV) (1963)	time				21.6		32.4		44.6	44.54	7 / 2							*Butler (2016)*
reaction time 0.191	interval						10.80		12.20	PB	# of strides			10.80	12.20	21.60	23.00	1.40
	velocity				9.26		9.26		8.20	8.98				9.26	8.20	9.26	8.70	
McKay, Antonio (USA) (19	time				21.8		32.7		44.8	44.71	1 / 3							*Butler (2016)*
reaction time 0.281	interval						10.90		12.10	PB	# of strides			10.90	12.10	21.80	23.00	1.20
	velocity				9.17		9.17		8.26	8.95				9.17	8.26	9.17	8.70	
Clark, Darren (AUS) (1965)	time				21.2		32.3		44.8	44.75	5 / 4							*Butler (2016)*
reaction time 0.269	interval						11.10		12.50	AJR	# of strides			11.10	12.50	21.20	23.60	2.40
	velocity				9.43		9.01		8.00	8.94				9.01	8.00	9.43	8.47	
Nix, Sunder (USA) (1961)	time				21.6		32.5		44.8	44.75	6 / 5							*Butler (2016)*
reaction time 0.243	interval						10.90		12.30		# of strides			10.90	12.30	21.60	23.20	1.60
	velocity				9.26		9.17		8.13	8.94				9.17	8.13	9.26	8.62	
Uti, Sunday (NGR) (1962)	time				21.8				44.93	44.93	2 / 6							*Adams (1984)*
reaction time 0.186	interval								23.13		# of strides					21.80	23.13	1.33
	velocity				9.17				8.65	8.90						9.17	8.65	
Egbunike, Innocent (NGR)	time				21.7				45.35	45.35	3 / 7							*Adams (1984)*
reaction time 0.192	interval								23.65		# of strides					21.70	23.65	1.95
	velocity				9.22				8.46	8.82						9.22	8.46	

Semi-Final 2

date 07-Aug-84 — *Butler (2016) - IAAF statistics handbook- special edition: Games of the XXXI Olympiad- Rio 2016*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Cameron, Bert (JAM) (195	time				22.6		34.3		45.1	45.10	2 / 4							
reaction time	interval						11.7		10.8		# of strides			11.70	10.80	22.60	22.50	-0.10
	velocity				8.85		8.55		9.26	8.87	177.0			8.55	9.26	8.85	8.89	

Heat 10 (TV Anal

date 05-Aug-84 — *Adams (1984) - 1984 olympic games - 200m & 400m*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Akabusi, Kriss (GBR) (1958	time				21.95				45.43	45.43	3 / 3							
reaction time	interval								23.48		# of strides					21.95	23.48	1.53
	velocity				9.11				8.52	8.80						9.11	8.52	

Heat 3 (TV Analys

date 05-Aug-84 — *Adams (1984) - 1984 olympic games - 200m & 400m*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Bennett, Todd (GBR) (196	time				21.70				45.51	45.51	6 / 5							
reaction time	interval								23.81	PB	# of strides					21.70	23.81	2.11

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

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
	velocity				9.22				8.40	8.79						9.22	8.40	

Heat 2 (TV Analys date 05-Aug-84 — *Adams (1984) - 1984 olympic games - 200m & 400m*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Brown, Phil (GBR) (1962)	time				22.27				46.63	46.63	8 / 7							
reaction time	interval								24.36		# of strides					22.27	24.36	2.09
	velocity				8.98				8.21	8.58						8.98	8.21	

1984 Olympischen Tag (Potsdam, GDR)

FINAL date 21-Jul-84 — *Heß (1985) - entwicklungsaspekte die leichtathletischen sprint-/hürdendisziplinen im olympiazyklus 1981/84*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Schersing, Mathias (GDR) (	time		11.37		21.83		32.80		44.86	44.86	/ 1							
reaction time	interval				10.46		10.97		12.06	NR	# of strides	11.37	10.46	10.97	12.06	21.83	23.03	1.20
	velocity		8.80		9.56		9.12		8.29	8.92		8.80	9.56	9.12	8.29	9.16	8.68	
Carlowitz, Jens (GDR) (196	time		11.23		21.51		32.60		44.95	44.95	/ 2							
reaction time	interval				10.28		11.09		12.35		# of strides	11.23	10.28	11.09	12.35	21.51	23.44	1.93
	velocity		8.90		9.73		9.02		8.10	8.90		8.90	9.73	9.02	8.10	9.30	8.53	

1984 East German Athletics Sportfest (East Berlin, GDR)

FINAL date 15-Jul-84 — *Heß (1985) - entwicklungsaspekte die leichtathletischen sprint-/hürdendisziplinen im olympiazyklus 1981/84*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Schönlebe, Thomas (GDR)	time		11.40		21.70		32.82		45.01	45.01	/ 1							
reaction time	interval				10.30		11.12		12.19	AJR / PB	# of strides	11.40	10.30	11.12	12.19	21.70	23.31	1.61
	velocity		8.77		9.71		8.99		8.20	8.89		8.77	9.71	8.99	8.20	9.22	8.58	

1983 IAAF World Championships (Helsinki, FIN)

FINAL date 10-Aug-83 — *Butler (2013) - IAAF world championships statistics handbook- moscow 2013*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Cameron, Bert (JAM) (1959	time				21.8				45.05	45.05	4 / 1							
reaction time	interval								23.25	CR	# of strides					21.80	23.25	1.45
	velocity				9.17				8.60	8.88	177.0					9.17	8.60	
Franks, Michael (USA) (196	time				21.7				45.22	45.22	5 / 2							
reaction time	interval								23.52		# of strides					21.70	23.52	1.82
	velocity				9.22				8.50	8.85	179.0					9.22	8.50	
Nix, Sunder (USA) (1961)	time				22.2				45.24	45.24	1 / 3							
reaction time	interval								23.04		# of strides					22.20	23.04	0.84
	velocity				9.01				8.68	8.84						9.01	8.68	
Skamrahl, Erwin (FRG) (19!	time				21.4				45.37	45.37	7 / 4							
reaction time	interval								23.97		# of strides					21.40	23.97	2.57
	velocity				9.35				8.34	8.82						9.35	8.34	
Weber, Hartmut (FRG) (19(	time				21.6				45.49	45.49	3 / 5							
reaction time	interval								23.89		# of strides					21.60	23.89	2.29
	velocity				9.26				8.37	8.79						9.26	8.37	
Schönlebe, Thomas (GDR)	time				22.0				45.50	45.50	6 / 6							
reaction time	interval								23.50		# of strides					22.00	23.50	1.50
	velocity				9.09				8.51	8.79						9.09	8.51	
Paul, Michael (TTO) (1957)	time				21.5				45.80	45.80	8 / 7							
reaction time	interval								24.30		# of strides					21.50	24.30	2.80
	velocity				9.30				8.23	8.73						9.30	8.23	
de Souza, Gerson (BRA) (1	time				21.8				45.91	45.91	2 / 8							
reaction time	interval								24.11		# of strides					21.80	24.11	2.31
	velocity				9.17				8.30	8.71						9.17	8.30	

1982 European Championships (Athîna, GRE)

FINAL date 09-Sep-82 — *Heß (1985) - entwicklungsaspekte die leichtathletischen sprint-/hürdendisziplinen im olympiazyklus 1981/84*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Weber, Hartmut (FRG) (19(	time		11.30		21.74		32.86		44.72	44.72	/ 1							
reaction time	interval				10.44		11.12		11.86	CR / PB	# of strides	11.30	10.44	11.12	11.86	21.74	22.98	1.24
	velocity		8.85		9.58		8.99		8.43	8.94		8.85	9.58	8.99	8.43	9.20	8.70	
Knebel, Andreas (GDR) (1960)	no information available									45.29	/ 2							
Markin, Viktor (URS) (1957)	time		11.58		22.16		33.20		45.30	45.30	/ 3							
reaction time	interval				10.58		11.04		12.10		# of strides	11.58	10.58	11.04	12.10	22.16	23.14	0.98
	velocity		8.64		9.45		9.06		8.26	8.83		8.64	9.45	9.06	8.26	9.03	8.64	
Brown, Phillip (GBR) (1962)	no information available									45.45	/ 4							
Troschilo, Alexandr (URS) (1960)	no information available									45.67	/ 5							
Konovalov, Pavel (URS) (1960)	no information available									45.84	/ 6							
Knapic, Zeljko (YUG) (1957)	no information available									46.20	/ 7							
Giessing, Thomas (FRG) (1961)	no information available									48.70	/ 8							

1981 IAAF World Cup (Rome, ITA)

FINAL date 05-Sep-81 — *Butler (2010) -1st/IAAF VTB bank continental cup, IAAF statistics handbook - split 2010*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Wiley, Cliff (USA) (1955)	time						31.9		44.88	44.88	/ 1							
reaction time	interval								12.98		# of strides				12.98			
	velocity						9.40		7.70	8.91					7.70			
Zuliani, Mauro (ITA) (1959)	no information available								NR	45.26	/ 2							
Cameron, Bert (JAM) (1959)	no information available									45.27	/ 3							
Weber, Hartmut (FRG) (1960)	no information available									45.52	/ 4							
Markin, Viktor (URS) (1957)	no information available									45.78	/ 5							
Knebel, Andreas (GDR) (1960)	no information available									45.86	/ 6							
El Kasheef, Hassan (SUD)	no information available									45.96	/ 7							
Minihan, Gary (AUS) (1962)	no information available									46.85	/ 8							
Isobe, Takeyuki (JPN)	no information available									47.71	/ 9							

1980 Olympic Games (Moscow, URS)

FINAL date 30-Jul-80

Butler (2016) - IAAF statistics handbook- special edition: Games of the XXXI Olympiad- Rio 2016

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Markin, Viktor (URS) (1957)	time				21.2		32.6		44.6	44.60	2 / 1							
reaction time 0.173	interval						11.4		12.00	NR	# of strides			11.40	12.00	21.20	23.40	2.20
	velocity				9.43		8.77		8.33	8.97	175.0			8.77	8.33	9.43	8.55	
Mitchell, Richard (AUS) (19	time				21.8		33.0		44.9	44.84	4 / 2							
reaction time 0.152	interval						11.2		11.90		# of strides			11.20	11.90	21.80	23.10	1.30
	velocity				9.17		8.93		8.40	8.92	171.0			8.93	8.40	9.17	8.66	
Schaffer, Frank (GDR) (195	time				21.2		32.4		44.9	44.87	6 / 3							
reaction time 0.148	interval						11.2		12.50		# of strides			11.20	12.50	21.20	23.70	2.50
	velocity				9.43		8.93		8.00	8.91	173.0			8.93	8.00	9.43	8.44	
Juantorena, Alberto (CUB)	time				21.5		32.9		45.1	45.09	3 / 4							
reaction time 0.220	interval						11.4		12.20		# of strides			11.40	12.20	21.50	23.60	2.10
	velocity				9.30		8.77		8.20	8.87	159.0			8.77	8.20	9.30	8.47	
Brijdenbach, Alfons (BEL)	time				21.1		32.4		45.1	45.10	1 / 5							
reaction time 0.140	interval						11.3		12.70		# of strides			11.30	12.70	21.10	24.00	2.90
	velocity				9.48		8.85		7.87	8.87	173.0			8.85	7.87	9.48	8.33	
Solomon, Michael (TRI) (19	time				21.4		32.7		45.6	45.55	7 / 6							
reaction time 0.164	interval						11.3		12.90		# of strides			11.30	12.90	21.40	24.20	2.80
	velocity				9.35		8.85		7.75	8.78				8.85	7.75	9.35	8.26	
Jenkins, David (GBR) (1982	time				21.2		32.4		45.6	45.56	8 / 7							
reaction time 0.169	interval						11.2		13.20		# of strides			11.20	13.20	21.20	24.40	3.20
	velocity				9.43		8.93		7.58	8.78				8.93	7.58	9.43	8.20	
Coombs, Joseph (TRI) (19	time						32.8		46.4	46.33	5 / 8							
reaction time 0.140	interval								13.60		# of strides				13.60			
	velocity						9.15		7.35	8.63					7.35			

1980 USA Olympic Trials (Eugene, OR)

FINAL date 27-Jun-80

Track Newsletter (1980) - US olympic trials

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Green, Bill (USA) (1961)	time		11.7		22.9		34.2		45.9	45.85	/ 1							
reaction time	interval				11.20		11.30		11.65		# of strides	11.70	11.20	11.30	11.65	22.90	22.95	0.05
	velocity		8.55		8.93		8.85		8.58	8.72		8.55	8.93	8.85	8.58	8.73	8.71	
Smith, Willie (USA) (1956)	time		12.0		22.7		34.0		46.0	45.97	/ 2							
reaction time	interval				10.70		11.30		11.97		# of strides	12.00	10.70	11.30	11.97	22.70	23.27	0.57
	velocity		8.33		9.35		8.85		8.35	8.70		8.33	9.35	8.85	8.35	8.81	8.59	
McCoy, Walter (USA) (1958	time		12.1		23.0		34.0		46.1	46.06	/ 3							
reaction time	interval				10.90		11.00		12.06		# of strides	12.10	10.90	11.00	12.06	23.00	23.06	0.06
	velocity		8.26		9.17		9.09		8.29	8.68		8.26	9.17	9.09	8.29	8.70	8.67	
Frazier, Herman (USA) (195	time		11.5		22.7		34.7		46.2	46.16	/ 4							
reaction time	interval				11.20		12.00		11.46		# of strides	11.50	11.20	12.00	11.46	22.70	23.46	0.76
	velocity		8.70		8.93		8.33		8.73	8.67		8.70	8.93	8.33	8.73	8.81	8.53	
Darden, Tony (USA) (1957)	time		12.3		22.6		34.2		46.4	46.41	/ 5							
reaction time	interval				10.30		11.60		12.21		# of strides	12.30	10.30	11.60	12.21	22.60	23.81	1.21
	velocity		8.13		9.71		8.62		8.19	8.62		8.13	9.71	8.62	8.19	8.85	8.40	
Blair, Anthony (USA) (1957	time		12.1		23.5		34.5		46.6	46.57	/ 6							
reaction time	interval				11.40		11.00		12.07		# of strides	12.10	11.40	11.00	12.07	23.50	23.07	-0.43
	velocity		8.26		8.77		9.09		8.29	8.59		8.26	8.77	9.09	8.29	8.51	8.67	
Oliver, Charles (USA) (1954	time		12.5		22.9		34.2		46.6	46.64	/ 7							
reaction time	interval				10.40		11.30		12.44		# of strides	12.50	10.40	11.30	12.44	22.90	23.74	0.84
	velocity		8.00		9.62		8.85		8.04	8.58		8.00	9.62	8.85	8.04	8.73	8.42	
Shorts, Albert (USA) (1953	time		12.7		22.4		34.1		46.8	46.78	/ 8							
reaction time	interval				9.70		11.70		12.70		# of strides	12.70	9.70	11.70	12.70	22.40	24.40	2.00
	velocity		7.87		10.31		8.55		7.87	8.55		7.87	10.31	8.55	7.87	8.93	8.20	

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

1978 European Championships (Prague, TCH)

FINAL

date 01-Sep-78

Lamare (1978) - championnats d'Europa 1978

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hofmeister, Franz-Peter (FI	time		11.10		21.58		32.78		45.73	45.73	/ 1							
reaction time	interval				10.48		11.20		12.95		# of strides	11.10	10.48	11.20	12.95	21.58	24.15	2.57
	velocity		9.01		9.54		8.93		7.72	8.75		9.01	9.54	8.93	7.72	9.27	8.28	
Kolár, Karel (TCH) (1955)	no information available									45.77	/ 2							
Demarthon, Francois (FRA) (1950)	no information available									45.97	/ 3							
Krieg, Lothar (FRG) (1955)	no information available									46.22	/ 4							
Whitehead, Terry (GBR) (1957)	no information available									46.23	/ 5							
Ashton, Richard (GBR) (1955)	no information available									46.34	/ 6							
Herrmann, Bernd (FRG) (1951)	no information available									46.69	/ 7							

Semi-Final 2

date 31-Aug-78

Lamare (1978) - championnats d'Europa 1978

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Demarthon, Francois (FRA	time		11.90		23.02		34.04		46.26	46.26	/ 3							
reaction time	interval				11.12		11.02		12.22		# of strides	11.90	11.12	11.02	12.22	23.02	23.24	0.22
	velocity		8.40		8.99		9.07		8.18	8.65		8.40	8.99	9.07	8.18	8.69	8.61	

Semi-Final 1

date 31-Aug-78

Lamare (1978) - championnats d'Europa 1978

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Volmar, Maurice (FRA) (19!	time				23.10		34.74		47.50	47.50	/ 8							
reaction time	interval						11.64		12.76		# of strides			11.64	12.76	23.10	24.40	1.30
	velocity				8.66		8.59		7.84	8.42				8.59	7.84	8.66	8.20	

Heat 3

date 30-Aug-78

Lamare (1978) - championnats d'Europa 1978

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Demarthon, Francois (FRA	time				22.50				46.73	46.73	/ 2							
reaction time	interval								24.23		# of strides					22.50	24.23	1.73
	velocity				8.89				8.25	8.56						8.89	8.25	

Heat 2

date 30-Aug-78

Lamare (1978) - championnats d'Europa 1978

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Volmar, Maurice (FRA) (19!	time				22.55				46.94	46.94	/ 4							
reaction time	interval								24.39		# of strides					22.55	24.39	1.84
	velocity				8.87				8.20	8.52						8.87	8.20	

Heat 1

date 30-Aug-78

Lamare (1978) - championnats d'Europa 1978

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Gombault, Cornelien (FRA	time				23.14				47.91	47.91	/ 5							
reaction time	interval								24.77		# of strides					23.14	24.77	1.63
	velocity				8.64				8.07	8.35						8.64	8.07	

1977 IAAF World Cup (Düsseldorf, FRG)

FINAL (*re-run*)

date 04-Sep-77

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Juantorena, Alberto (CUB) (1950)	no information available								45.36	/ 1							
Beck, Volker (GDR) (1956)	no information available							NR	45.50	/ 2							
Taylor, Robert (USA) (1953)	no information available								45.57	/ 3							
Podlas, Ryszard (POL) (1953)	no information available								45.60	/ 4							
Hofmeister, Franz-Peter (FRG) (1951)	no information available								45.78	/ 5							
Pradhu, Uday Khrishna (IND)	no information available								47.75	/ 6							
Imadiyi, Felix (NGR) (1958)	no information available								dns								
Mitchell, Rick (AUS) (1955)	no information available								dns								

FINAL (*original*)

date 03-Sep-77

Butler (2010) -1st/IAAF VTB bank continental cup, IAAF statistics handbook - split 2010

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Beck, Volker (GDR) (1956)	no information available									45.79	/ 1							
Podlas, Ryszard (POL) (1953)	no information available									45.80	/ 2							
Juantorena, Alberto (CUB)	time		12.8						45.83	45.83	8 / 3							
reaction time	interval								33.1		# of strides	12.80						
	velocity		7.81						9.06	8.73		7.81						
Taylor, Robert (USA) (1953)	no information available									46.24	/ 4							
Hofmeister, Franz-Peter (FRG) (1951)	no information available									46.48	/ 5							
Imadiyi, Felix (NGR) (1958)	no information available									46.54	/ 6							
Mitchell, Rick (AUS) (1955)	no information available									46.71	/ 7							
Pradhu, Uday Khrishna (IND)	no information available									48.29	/ 8							

The day after his epic 800m win, Juantorena was at the centre of controversy when, shockingly, he was beaten into third place in the one-lap event. Drawn in lane 8, he protested that he had not heard the starting gun because of the noise of an aeroplane and cameras. He did not begin to run until his opponents were into their stride. The Cuban clocked only 12.8 for the first 100m then ran the last 300m in 33.1, just failing to catch Beck and Podlas.
Juantorena's protest was upheld, and it was decided to re-run the race on the following morning. The Cuban started slowly but moved in front in the home-straight to win by half a metre from Beck. The East German, who said the decision to re-run the race was "a scandal", broke the GDR record and was closing on Juantorena at the finish. - Butler (2010)

1976 Olympic Games (Montreal, CAN)

Butler (2016) - IAAF statistics handbook- special edition: Games of the XXXI Olympiad- Rio 2016

FINAL

date 29-Jul-76

Lamare (1976) - les jeux de la XXI olympia, Montreal 1976

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Juantorena, Alberto (CUB)	time		11.29		21.24		32.03		44.26	44.26	2 / 1							*Lamare (1976)*
reaction time	interval				9.95		10.79		12.23	PB	# of strides	11.29	9.95	10.79	12.23	21.24	23.02	1.78
	velocity		8.86		10.05		9.27		8.18	9.04	158.2	8.86	10.05	9.27	8.18	9.42	8.69	
Newhouse, Fred (USA) (19	time				21.4		32.4		44.4	44.40	4 / 2							*Butler (2016)*
reaction time	interval						11.00		12.00		# of strides			11.00	12.00	21.40	23.00	1.60
	velocity				9.35		9.09		8.33	9.01	168.2			9.09	8.33	9.35	8.70	

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

Frazier, Herman (USA) (195	time		21.6	32.8	45.0	44.95	3 / 3							*Butler (2016)*
reaction time	interval			11.20	12.20		# of strides			11.20	12.20	21.60	23.40	1.80
	velocity		9.26	8.93	8.20	8.90	169.2			8.93	8.20	9.26	8.55	
Brijdenbach, Alfons (BEL)	time		21.8	32.6	45.1	45.04	8 / 4							*Butler (2016)*
reaction time	interval			10.80	12.50		# of strides			10.80	12.50	21.80	23.30	1.50
	velocity		9.17	9.26	8.00	8.88	170.0			9.26	8.00	9.17	8.58	
Parks, Maxie (USA) (1951)	time		21.8	32.7	45.3	45.24	7 / 5							*Butler (2016)*
reaction time	interval			10.90	12.60		# of strides			10.90	12.60	21.80	23.50	1.70
	velocity		9.17	9.17	7.94	8.84	160.5			9.17	7.94	9.17	8.51	
Mitchell, Richard (AUS) (19	time		22.2	33.6	45.4	45.40	6 / 6							*Butler (2016)*
reaction time	interval			11.40	11.80		# of strides			11.40	11.80	22.20	23.20	1.00
	velocity		9.01	8.77	8.47	8.81	170.0			8.77	8.47	9.01	8.62	
Jenkins, David (GBR) (1952	time		21.9	32.9	45.6	45.57	5 / 7							*Butler (2016)*
reaction time	interval			11.00	12.70		# of strides			11.00	12.70	21.90	23.70	1.80
	velocity		9.13	9.09	7.87	8.78	173.0			9.09	7.87	9.13	8.44	
Werner, Jan (POL) (1946)	time		22.1	33.1	45.7	45.63	1 / 8							*Butler (2016)*
reaction time	interval			11.00	12.60		# of strides			11.00	12.60	22.10	23.60	1.50
	velocity		9.05	9.09	7.94	8.77	169.2			9.09	7.94	9.05	8.47	

Semi-Final 2

date 28-Jul-76 — *Lamare (1976) - les jeux de la XXI olympia, Montreal 1976*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Newhouse, Fred (USA) (19	time		11.10		21.49		32.47		44.89	44.89	2 / 1							
reaction time	interval				10.39		10.98		12.42		# of strides	11.10	10.39	10.98	12.42	21.49	23.40	1.91
	velocity		9.01		9.62		9.11		8.05	8.91		9.01	9.62	9.11	8.05	9.31	8.55	

Semi-Final 1

date 28-Jul-76 — *Lamare (1976) - les jeux de la XXI olympia, Montreal 1976*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Juantorena, Alberto (CUB)	time		11.90		22.37		32.47		45.10	45.10	7 / 1							
reaction time	interval				10.47		10.10		12.63		# of strides	11.90	10.47	10.10	12.63	22.37	22.73	0.36
	velocity		8.40		9.55		9.90		7.92	8.87	160.0	8.40	9.55	9.90	7.92	8.94	8.80	

Quarter-Final 4

date 26-Jul-76 — *Lamare (1976) - les jeux de la XXI olympia, Montreal 1976*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Newhouse, Fred (USA) (19	time				21.8		33.0		45.97	45.97	1 / 1							
reaction time	interval						11.2		12.97		# of strides			11.20	12.97	21.80	24.17	2.37
	velocity				9.17		8.93		7.71	8.70				8.93	7.71	9.17	8.27	

Quarter-Final 3

date 26-Jul-76 — *Lamare (1976) - les jeux de la XXI olympia, Montreal 1976*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Parks, Maxie (USA) (1951)	time				22.1		33.3		45.99	45.99	2 / 3							
reaction time	interval						11.2		12.69		# of strides			11.20	12.69	22.10	23.89	1.79
	velocity				9.05		8.93		7.88	8.70				8.93	7.88	9.05	8.37	

Quarter-Final 2

date 26-Jul-76 — *Lamare (1976) - les jeux de la XXI olympia, Montreal 1976*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Juantorena, Alberto (CUB)	time				22.6		34.1		45.92	45.92	7 / 2							
reaction time	interval						11.5		11.82		# of strides			11.50	11.82	22.60	23.32	0.72
	velocity				8.85		8.70		8.46	8.71				8.70	8.46	8.85	8.58	

Quarter-Final 1

date 26-Jul-76 — *Lamare (1976) - les jeux de la XXI olympia, Montreal 1976*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Brijdenbach, Alfons (BEL)	time				22.2		33.7		46.56	46.56	3 / 2							
reaction time	interval						11.5		12.86		# of strides			11.50	12.86	22.20	24.36	2.16
	velocity				9.01		8.70		7.78	8.59				8.70	7.78	9.01	8.21	

1976 USA Olympic Trials (Eugene, OR)

FINAL

date 25-Jun-76 — *Hymans (2008) - history of the US olympic trials - track and field*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Parks, Maxie (USA) (1951)	time				21.6				45.58	45.58	/ 1							
reaction time	interval								24.0		# of strides					21.60	23.98	2.38
	velocity				9.26				8.34	8.78						9.26	8.34	

Newhouse, Fred (USA) (1948)	no information available	45.76	/ 2
Frazier, Herman (USA) (1954)	no information available	45.84	/ 3
Brown, Benny (USA) (1953)	no information available	45.91	/ 4
Peoples, Maurice (USA) (1950)	no information available	45.92	/ 5
Taylor, Robert (USA)	no information available	46.03	/ 6
Jennings, Elvis (USA) (1955)	no information available	46.15	/ 7
Collins, Mark (USA) (1956)	no information available	47.33	/ 8

1972 Olympic Games (Munich, FRG)

Butler (2016) - IAAF statistics handbook- special edition: Games of the XXXI Olympiad- Rio 2016

FINAL

date 07-Sep-72 — *Sultanov (1982) - probleme der vorbereitung für den 400m-lauf*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Matthews, Vince (USA) (19	time		10.8		21.2		32.0		44.66	44.66	2 / 1							
reaction time	interval				10.40		10.80		12.66	PB	# of strides	10.80	10.40	10.80	12.66	21.20	23.46	2.26
	velocity		9.26		9.62		9.26		7.90	8.96	175.2	9.26	9.62	9.26	7.90	9.43	8.53	

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

Collett, Wayne (USA) (1949	time		21.4	32.5	44.8	44.80	3 / 2								
reaction time	interval			11.10	12.30		# of strides			11.10	12.30	21.40	23.40	2.00	
	velocity		9.35	9.01	8.13	8.93	176.7			9.01	8.13	9.35	8.55		
Sang, Julius (KEN) (1948)	time		21.6	32.7	45.0	44.92	5 / 3								
reaction time	interval			11.10	12.30		# of strides			11.10	12.30	21.60	23.40	1.80	
	velocity		9.26	9.01	8.13	8.90	180.0			9.01	8.13	9.26	8.55		
Asati, Charles (KEN) (1946)	time		21.7	32.9	45.2	45.13	8 / 4								
reaction time	interval			11.20	12.30		# of strides			11.20	12.30	21.70	23.50	1.80	
	velocity		9.22	8.93	8.13	8.86				8.93	8.13	9.22	8.51		
Schloske, Horst-Rudiger (F	time		21.7	33.0	45.4	45.31	7 / 5								
reaction time	interval			11.30	12.40		# of strides			11.30	12.40	21.70	23.70	2.00	
	velocity		9.22	8.85	8.06	8.83				8.85	8.06	9.22	8.44		
Kukkoaho, Markku (FIN) (1	time		21.8	33.0	45.5	45.49	4 / 6								
reaction time	interval			11.20	12.50		# of strides			11.20	12.50	21.80	23.70	1.90	
	velocity		9.17	8.93	8.00	8.79	169.5			8.93	8.00	9.17	8.44		
Honz, Karl (FRG) (1951)	time		21.8	33.2	45.7	45.68	1 / 7								
reaction time	interval			11.40	12.50		# of strides			11.40	12.50	21.80	23.90	2.10	
	velocity		9.17	8.77	8.00	8.76	174.5			8.77	8.00	9.17	8.37		
Smith, John (USA) (1950)	no information available					dnf	6 / --								

Quarter-Final 1

date 04-Sep-72

Vazel (2011) - speed reserve in the 400m

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Juantorena, Alberto (CUB)	time		12.2		23.0		34.0		46.00	45.96	2 / 1							
reaction time	interval				10.80		11.00		12.00		# of strides	12.20	10.80	11.00	12.00	23.00	23.00	0.00
	velocity		8.20		9.26		9.09		8.33	8.70		8.20	9.26	9.09	8.33	8.70	8.70	

1972 West German National Championships (Munich, FRG)

FINAL

date 21-Jul-72

Vazel (2015) - Van Niekerk and Merritt were on for the record at 300m

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Honz, Karl (FRG) (1951)	time				20.70				44.70	44.70	/ 1							
reaction time	interval								24.0	PB	# of strides					20.70	24.00	3.30
	velocity				9.66				8.33	8.95						9.66	8.33	

1972 USA Olympic Trials (Eugene, OR)

FINAL

date 09-Jul-72

Hymans (2008) - history of the US olympic trials - track and field

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Collett, Wayne (USA) (1949	time				21.2				44.1	44.1	8 / 1							
reaction time	interval								22.9		# of strides					21.20	22.90	1.70
	velocity				9.43				8.73	9.07						9.43	8.73	
Smith, John (USA) (1950)	time				21.2				44.3	44.3	3 / 2							
reaction time	interval								23.1		# of strides					21.20	23.10	1.90
	velocity				9.43				8.66	9.03						9.43	8.66	
Matthews, Vince (USA) (19	time				21.4				44.9	44.9	5 / 3							
reaction time	interval								23.5		# of strides					21.40	23.50	2.10
	velocity				9.35				8.51	8.91						9.35	8.51	
Evans, Lee (USA) (1947)	time				21.6				45.1	45.1	6 / 4							
reaction time	interval								23.5		# of strides					21.60	23.50	1.90
	velocity				9.26				8.51	8.87						9.26	8.51	
Peoples, Maurice (USA) (1950)	no information available									45.3	1 / 5							
Turner, Tommie (USA) (1947)	no information available									45.4	4 / 6							
Newhouse, Fred (USA) (19	time				20.6				45.4	45.4	7 / 7							
reaction time	interval								24.8		# of strides					20.60	24.80	4.20
	velocity				9.71				8.06	8.81						9.71	8.06	
Mills, Curtis (USA) (1948)	no information available									45.4	2 / 8							

1972 NCAA Championships (Eugene, OR)

FINAL

date 03-Jun-72

Robinson (1974) - modern techniques of track and field

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Smith, John (USA) (1950)	time				22.1				44.5	44.5	5 / 1							
reaction time	interval								22.4		# of strides					22.10	22.40	0.30
	velocity				9.05				8.93	8.99						9.05	8.93	

1972 UCLA Meet of Champions (Westwood, CA) (yards)

FINAL

date 15-Apr-72

Robinson (1974) - modern techniques of track and field

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Collett, Wayne (USA) (1949	time				21.3				44.7	44.4	/ 2							
reaction time	interval								23.4	*(44.7/440y)*	# of strides					21.30	23.40	2.10
	velocity				9.39				8.55	9.01						9.39	8.55	

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

1971 European Championships (Helsinki, FIN)

Quercentani (2000). Athletics: A history of modern track and field athletics (1860-2000)

FINAL date 13-Aug-71

(1971) - Walerij Borsow - ein souveräner Europameister

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Jenkins, David (GBR) (1952	time				21.3		32.4		45.45	45.45	/ 1						*(1971) - Walerij Borsow*	
reaction time	interval						11.1		13.1	**CR NR PB**	# of strides			11.10	13.05	21.30	24.15	2.85
	velocity				9.39		9.01		7.66	8.80				9.01	7.66	9.39	8.28	
Fiasconaro, Marcello (ITA)	time				22.0				45.5	45.59	/ 2						*Quercentani (2000)*	
reaction time	interval								23.5	**NR / PB**	# of strides					22.00	23.50	1.50
	velocity				9.09				8.51	8.77						9.09	8.51	
Werner, Jan (POL) (1946)	no information available									**PB**	45.57	/ 3						
Kukkoaho, Markku (FIN) (1946)	no information available									**NR / PB**	45.74	/ 4						
Jordan, Thomas (FRG) (1949)	no information available										46.01	/ 5						
Köhler, Hermann (FRG) (1950)	no information available										46.07	/ 6						
Bratchikov, Aleksandr (URS) (1947)	no information available										46.40	/ 7						
Hauke, Klaus (GDR) (1946)	no information available										46.88	/ 8						

1971 USA National Championships (Eugene, OR) (yards)

FINAL date 26-Jun-71

Hymans (2015) - progression of IAAF world records - 2015 edition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Smith, John (USA) (1950)	time				22.0				44.2	44.2	2 / 1	*(44.5/440y)*						
reaction time	interval								22.2	**WR** yards	# of strides					22.00	22.20	0.20
	velocity				9.09				9.01	9.05						9.09	9.01	
Collett, Wayne (USA) (1949	time				21.2				44.4	44.4	7 / 2	*(44.7/440y)*						
reaction time	interval								23.2		# of strides					21.20	23.20	2.00
	velocity				9.43				8.62	9.01						9.43	8.62	
Newhouse, Fred (USA) (19	time				22.0				45.4	45.4	/ 3	*(45.7/440y)*						
reaction time	interval								23.4		# of strides					22.00	23.40	1.40
	velocity				9.09				8.55	8.81						9.09	8.55	
Bond, Darwin (USA) (1951)	no information available									45.6	/ 4	*(45.9/440y)*						
Garrison, Edesel (USA) (19	time				22.2				45.6	45.6	/ 5							
reaction time	interval								23.4		# of strides	*(45.9/440y)*				22.20	23.40	1.20
	velocity				9.01				8.55	8.77						9.01	8.55	
Turner, Tommie (USA) (19	time				22.0				45.6	45.6	/ 6							
reaction time	interval								23.6		# of strides	*(45.9/440y)*				22.00	23.60	1.60
	velocity				9.09				8.47	8.77						9.09	8.47	
Alexander, Dale (USA) (1949)	no information available									45.6	/ 7	*(45.9/440y)*						
van Hofwegen, Len (USA) (1947)	no information available									45.9	/ 8	*(46.2/440y)*						

1970 French National Championships (Colombes, FRA)

FINAL date 19-Jul-70

Robinson (1974) - modern techniques of track and field

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Nallet, Jean-Claude (FRA) (	time				21.9				45.1	45.1	/ 1							
reaction time	interval								23.2	**NR**	# of strides					21.90	23.20	1.30
	velocity				9.13				8.62	8.87						9.13	8.62	

1969 NCAA Championships (Knoxville, TN) (yards)

FINAL date 21-Jun-69

Hymans (2015) - progression of IAAF world records - 2015 edition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Mills, Curtis (USA) (1947)	time				21.6				44.4	44.4	/ 1							
reaction time	interval								22.8	**WRy** (44.93)	# of strides					21.60	22.80	1.20
	velocity				9.26				8.77	9.01	*(44.7/440y)*					9.26	8.77	
Evans, Lee (USA) (1947)	time				21.4				44.8	44.8	/ 2							
reaction time	interval								23.4	(45.32)	# of strides					21.40	23.40	2.00
	velocity				9.35				8.55	8.93	*(45.1/440y)*					9.35	8.55	
James, Larry (USA) (1947)	time				20.9				45.5	45.5	/ 5							
reaction time	interval								24.6		# of strides					20.90	24.60	3.70
	velocity				9.57				8.13	8.79	*(45.8/440y)*					9.57	8.13	

1968 Olympic Games (Mexico City, MEX) (Altitude)

Butler (2016) - IAAF statistics handbook- special edition: Games of the XXXI Olympiad- Rio 2016

FINAL date 18-Oct-68

Track & Field News (1979) - olympic track & field: complete results

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Evans, Lee (USA) (1947)	time		10.7		21.1		32.2		43.8	43.86	6 / 1						*Track & Field News (1979)*	
reaction time	interval				10.4		11.1		11.6	**WR**	# of strides	10.70	10.40	11.10	11.60	21.10	22.70	1.60
	velocity		9.35		9.62		9.01		8.62	9.12	168.0	9.35	9.62	9.01	8.62	9.48	8.81	
James, Larry (USA) (1947)	time				21.5		32.6		43.9	43.97	2 / 2						*Butler (2016)*	
reaction time	interval						11.10		11.30	**PB**	# of strides			11.10	11.30	21.50	22.40	0.90
	velocity				9.30		9.01		8.85	9.10				9.01	8.85	9.30	8.93	
Freeman, Ron (USA) (1947)	time				21.6		33.0		44.4	44.41	1 / 3						*Butler (2016)*	
reaction time	interval						11.40		11.40	**PB**	# of strides			11.40	11.40	21.60	22.80	1.20
	velocity				9.26		8.77		8.77	9.01				8.77	8.77	9.26	8.77	

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

Gakou, Amadou (SEN) (19	time		21.7	32.9	45.0	45.01	5 / 4							*Butler (2016)*
reaction time	interval			11.20	12.10	NR	# of strides		11.20	12.10	21.70	23.30	1.60	
	velocity		9.22	8.93	8.26	8.89			8.93	8.26	9.22	8.58		
Jellinghaus, Martin (FRG) (	time		22.0	33.2	45.3	45.33	3 / 5							*Butler (2016)*
reaction time	interval			11.20	12.10		# of strides		11.20	12.10	22.00	23.30	1.30	
	velocity		9.09	8.93	8.26	8.82			8.93	8.26	9.09	8.58		
Bezabeh, Tegegne (ETH) (1	time		21.9	33.1	45.4	45.42	4 / 6							*Butler (2016)*
reaction time	interval			11.20	12.30	NR	# of strides		11.20	12.30	21.90	23.50	1.60	
	velocity		9.13	8.93	8.13	8.81			8.93	8.13	9.13	8.51		
Badenski, Andrzej (POL) (1	time		21.7	33.2	45.4	45.42	7 / 7							*Butler (2016)*
reaction time	interval			11.50	12.20	PB	# of strides		11.50	12.20	21.70	23.70	2.00	
	velocity		9.22	8.70	8.20	8.81			8.70	8.20	9.22	8.44		
Omolo, Amos (UGA) (1937	time		21.5	33.3	47.6	47.61	8 / 8							*Butler (2016)*
reaction time	interval			11.80	14.30		# of strides		11.80	14.30	21.50	26.10	4.60	
	velocity		9.30	8.47	6.99	8.40			8.47	6.99	9.30	7.66		

1968 USA Olympic Trials (Echo Summit, CA) (Altitude)

FINAL date 14-Sep-68

Hymans (2008) - history of the US olympic trials - track and field

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Evans, Lee (USA) (1947)	time				21.2				44.0	44.0	6 / 1							
reaction time	interval								22.8	~~WR~~	# of strides	*illegal "brush" spikes*				21.20	22.80	1.60
	velocity				9.43				8.77	9.09	*(44.06)*					9.43	8.77	
James, Larry (USA) (1947)	time				21.2				44.1	44.1	3 / 2							
reaction time	interval								22.9	WR	# of strides					21.20	22.90	1.70
	velocity				9.43				8.73	9.07	*(44.19)*					9.43	8.73	
Freeman, Ron (USA) (1947)	no information available									44.6	2 / 3	(44.62)						
Matthews, Vince (USA) (19	time				20.7				44.8	44.8	5 / 4							
reaction time	interval								24.1	*(44.86)*	# of strides					20.70	24.10	3.40
	velocity				9.66				8.30	8.93						9.66	8.30	
Kemp, Jim (USA) (1944)	no information available									45.2	1 / 5							
Francis, Hal (USA) (1945)	no information available									45.2	4 / 6							

1968 Pre-Olympic Test (Echo Summit, CA) (Altitude)

FINAL date 31-Aug-68

Hymans (2015) - progression of IAAF world records - 2015 edition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Matthews, Vince (USA) (19	time				21.3				44.4	44.4	/ 1							
reaction time	interval								23.1	~~WR~~	# of strides	*illegal "brush" spikes*				21.30	23.10	1.80
	velocity				9.39				8.66	9.01						9.39	8.66	

1967 San Jose State Invitational (San Jose, CA) (yards)

FINAL date 20-May-67

Drake (1967) - der schnellste sprint der geschichte

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Smith, Tommie (USA) (194	time		11.0		21.6		33.3		44.5	44.5	/ 1							
reaction time	interval				10.6		11.7		11.2	WR yards	# of strides	11.00	10.60	11.70	11.20	21.60	22.90	1.30
	velocity		9.09		9.43		8.55		8.93	8.99	*(44.8/440y)*	9.09	9.43	8.55	8.93	9.26	8.73	
Evans, Lee (USA) (1947)	time		10.9		21.4		33.6		45.0	45.0	/ 2							
reaction time	interval				10.5		12.2		11.4	*(45.3/440y)*	# of strides	10.90	10.50	12.20	11.40	21.40	23.60	2.20
	velocity		9.17		9.52		8.20		8.77	8.89		9.17	9.52	8.20	8.77	9.35	8.47	

1964 Olympic Games (Tokyo, JPN)

Butler (2016) - IAAF statistics handbook- special edition: Games of the XXXI Olympiad- Rio 2016

FINAL date 19-Sep-64

Sultanov (1982) - probleme der vorbereitung für den 400m-lauf

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Larrabee, Mike (USA) (1933	time		11.0		21.6		32.7		45.1	45.1	5 / 1							*Sultanov (1982)*
reaction time	interval				10.6		11.1		12.4	*(45.15)*	# of strides	11.00	10.60	11.10	12.40	21.60	23.50	1.90
	velocity		9.09		9.43		9.01		8.06	8.87		9.09	9.43	9.01	8.06	9.26	8.51	
Mottley, Wendell (TTO) (19	time				21.6		33.2		45.2	45.2	7 / 2							*Butler (2016)*
reaction time	interval						11.60		12.00	*(45.24)*	# of strides			11.60	12.00	21.60	23.60	2.00
	velocity				9.26		8.62		8.33	8.85				8.62	8.33	9.26	8.47	
Badenski, Andrzej (POL) (1	time				21.7		33.8		45.6	45.6	2 / 3							*Butler (2016)*
reaction time	interval						12.10		11.80	*(45.64)*	# of strides			12.10	11.80	21.70	23.90	2.20
	velocity				9.22		8.26		8.47	8.77				8.26	8.47	9.22	8.37	
Brightwell, Robbie (GBR) (	time				21.8		34.1		45.7	45.7	6 / 4							*Butler (2016)*
reaction time	interval						12.30		11.60	*(45.75)*	# of strides			12.30	11.60	21.80	23.90	2.10
	velocity				9.17		8.13		8.62	8.75				8.13	8.62	9.17	8.37	
Williams, Ulis (USA) (1941)	time				21.7		34.1		46.0	46.0	8 / 5							*Butler (2016)*
reaction time	interval						12.40		11.90	*(46.01)*	# of strides			12.40	11.90	21.70	24.30	2.60
	velocity				9.22		8.06		8.40	8.70				8.06	8.40	9.22	8.23	

Graham, Tim (GBR) (1939)	time	22.0	34.2	46.0	46.0	1 / 6								*Butler (2016)*
reaction time	interval		12.20	11.80	*(46.08)*	# of strides			12.20	11.80	22.00	24.00	2.00	
	velocity	9.09	8.20	8.47	8.70				8.20	8.47	9.09	8.33		
Vassella, Peter (AUS) (1941	time	22.0	34.1	46.3	46.3	3 / 7								*Butler (2016)*
reaction time	interval		12.10	12.20	*(46.32)*	# of strides			12.10	12.20	22.00	24.30	2.30	
	velocity	9.09	8.26	8.20	8.64				8.26	8.20	9.09	8.23		
Skinner, Edwin (TTO) (1940	time	22.2	34.1	46.8	46.8	4 / 8								*Butler (2016)*
reaction time	interval		11.90	12.70		# of strides			11.90	12.70	22.20	24.60	2.40	
	velocity	9.01	8.40	7.87	8.55				8.40	7.87	9.01	8.13		

1964 USA Olympic Trials (Los Angeles, CA)

FINAL date 12-Sep-64

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Larrabee, Mike (USA) (1933	time		10.4		20.9		32.1		44.9	44.9	/ 1							
reaction time	interval				10.5		11.2		12.8	**=WR**	# of strides	10.40	10.50	11.20	12.80	20.90	24.00	3.10
	velocity		9.62		9.52		8.93		7.81	8.91		9.62	9.52	8.93	7.81	9.57	8.33	
Williams, Ulis (USA) (1941)	no information available									45.0	/ 2							
Cassell, Ollan (USA) (1936)	no information available									45.6	/ 3							
Lewis, Theron (USA) (1944)	no information available									46.3	/ 4							
Archibald, Dave (USA) (1943)	no information available									46.3	/ 5							
Tobler, Bob (USA) (1942)	no information available									46.5	/ 6							
Boyle, Bill (USA) (1942)	no information available									46.6	/ 7							

1963 Western Athletic Conference Championships (Tempe, AZ) (yards)

FINAL date 25-May-63

Drake (1967) - der schnellste sprint der geschichte

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Plummer, Adolph (USA) (1	time				21.6				44.6	44.6	/ 1							
reaction time	interval								23.0	**=WR** yards	# of strides					21.60	23.00	1.40
	velocity				9.26				8.70	8.97	*(44.9/440y)*					9.26	8.70	

1960 Olympic Games (Rome, ITA)

FINAL date 06-Sep-60

Martini (2010) - Ricordi romani (1) - analisi dell distribuzione dello sforzo di Otis Davis

Khomenkov (1982) - a textbook for a track and field coach

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Davis, Otis (USA) (1932)	time		10.9		21.5		32.4		44.9	44.9	3 / 1							*Khomenkov (1982)*
reaction time	interval				10.6		10.9		12.5	**WR**	# of strides	10.90	10.60	10.90	12.50	21.50	23.40	1.90
	velocity		9.17		9.43		9.17		8.00	8.91	*(45.07)*	9.17	9.43	9.17	8.00	9.30	8.55	
Kaufmann, Carl (EUA/FRG	time		10.9		21.5		32.7		44.9	44.9	1 / 2							*Khomenkov (1982)*
reaction time	interval				10.6		11.2		12.2	**=WR**	# of strides	10.90	10.60	11.20	12.20	21.50	23.40	1.90
	velocity		9.17		9.43		8.93		8.20	8.91	*(45.08)*	9.17	9.43	8.93	8.20	9.30	8.55	
Spence, Malcolm (RSA) (19	time		11.1		21.4		32.7		45.5	45.5	4 / 3							*Khomenkov (1982)*
reaction time	interval				10.3		11.3		12.8	*(45.60)*	# of strides	11.10	10.30	11.30	12.80	21.40	24.10	2.70
	velocity		9.01		9.71		8.85		7.81	8.79		9.01	9.71	8.85	7.81	9.35	8.30	
Singh, Milkha (IND) (1935)	time		11.2		21.6		32.8		44.9	45.6	5 / 4							*Khomenkov (1982)*
reaction time	interval				10.4		11.2		12.1	*(45.73)*	# of strides	11.20	10.40	11.20	12.10	21.60	23.30	1.70
	velocity		8.93		9.62		8.93		8.26	8.77		8.93	9.62	8.93	8.26	9.26	8.58	
Kinder, Manfred (EUA/FRG	time				22.1		33.5		45.9	45.9	6 / 5							*Martini (2010)*
reaction time	interval						11.4		12.4	*(46.04)*	# of strides			11.40	12.40	22.10	23.80	1.70
	velocity				9.05		8.77		8.06	8.71				8.77	8.06	9.05	8.40	
Young, Earl (USA) (1941)	time				22.0		33.1		45.9	45.9	2 / 6							*Martini (2010)*
reaction time	interval						11.1		12.8	*(46.07)*	# of strides			11.10	12.80	22.00	23.90	1.90
	velocity				9.09		9.01		7.81	8.71				9.01	7.81	9.09	8.37	

Semi-Final 1

date 06-Sep-60

Quercentani (2000). Athletics: A history of modern track and field athletics (1860-2000)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Davis, Otis (USA) (1932)	time				22.5				45.5	45.5	/ 1							
reaction time	interval								23.0	**OR**	# of strides					22.50	23.00	0.50
	velocity				8.89				8.70	8.79	*(45.62)*					8.89	8.70	

1960 West German National Championships (Berlin, FRG)

FINAL date 24-Jul-60

Quercentani (2000). Athletics: A history of modern track and field athletics (1860-2000)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kaufmann, Carl (FRG) (193	time				21.9				45.4	45.4	/ 1							
reaction time	interval								23.5	**AR**	# of strides					21.90	23.50	1.60
	velocity				9.13				8.51	8.81						9.13	8.51	

1959 West Germany v Poland (Köln, FRG) (500m track)

FINAL date 19-Sep-59

Quercentani (2000). Athletics: A history of modern track and field athletics (1860-2000)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Kaufmann, Carl (FRG) (193	time				22.3				45.8	45.8	/ 1							
reaction time	interval								23.5	**AR**	# of strides					22.30	23.50	1.20
	velocity				8.97				8.51	8.73						8.97	8.51	

1958 European Championships (Stockholm, SWE)

FINAL date 21-Aug-58

(1959) - der 400-m-hürdenlauf in stockholm

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Wrighton, John (GBR) (19	time				22.4				46.3	46.5	/ 1							
reaction time	interval								23.9		# of strides					22.40	23.90	1.50
	velocity				8.93				8.37	8.60						8.93	8.37	
Salisbury, John (GBR) (1934)	no information available									46.5	/ 2							
Haas, Karl-Friedrich (FRG)	time				22.5				47.0	47.0	/ 3							
reaction time	interval								24.5		# of strides					22.50	24.50	2.00
	velocity				8.89				8.16	8.51						8.89	8.16	
Kaufmann, Carl (FRG) (1936)	no information available									47.0	/ 4							
Petersson, Alf (SWE) (1933)	no information available									47.5	/ 5							
Swatowski, Stanislaw (POL	time				21.8				47.8	47.8	/ 6							
reaction time	interval								26.0		# of strides					21.80	26.00	4.20
	velocity				9.17				7.69	8.37						9.17	7.69	

1958 NCAA Championships (Berkeley, CA) (yards)

FINAL date 14-Jun-58

Track & Field News (1963)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Davis, Glenn (USA) (1934)	time				21.9				45.4	45.4	/ 1							
reaction time	interval								23.5	**WR** yards	# of strides					21.90	23.50	1.60
	velocity				9.13				8.51	8.81	*(45.7/440y)*					9.13	8.51	

1958 Big 10 Championships (Lafayette, IN) (yards)

FINAL date 24-May-58

Hymans (2015) - progression of IAAF world records - 2015 edition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Davis, Glenn (USA) (1934)	time				22.3				45.5	45.5	/ 1							
reaction time	interval								23.2	**=WR** yards	# of strides					22.30	23.20	0.90
	velocity				8.97				8.62	8.79	*(45.8/440y)*					8.97	8.62	

1956 Olympic Games (Melbourne, AUS)

FINAL date 29-Nov-56

Butler (2016) - IAAF statistics handbook- special edition: Games of the XXXI Olympiad- Rio 2016

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Jenkins, Charlie (USA) (193	time				22.2		33.9		46.7	46.7	4 / 1							
reaction time	interval						11.7		12.8	*(46.86)*	# of strides		11.70	12.80		22.20	24.50	2.30
	velocity				9.01		8.55		7.81	8.57	183.7		8.55	7.81		9.01	8.16	
Haas, Karl-Friedrich (EUA/I	time				22.7		34.3		46.8	46.8	5 / 2							
reaction time	interval						11.6		12.5	*(47.12)*	# of strides		11.60	12.50		22.70	24.10	1.40
	velocity				8.81		8.62		8.00	8.55	183.2		8.62	8.00		8.81	8.30	
Hellstén, Voitto (FIN) (1932	time				22.3		33.6		47.0	47.0	3 / 3							
reaction time	interval						11.3		13.4	*(47.15)*	# of strides		11.30	13.40		22.30	24.70	2.40
	velocity				8.97		8.85		7.46	8.57	195.0		8.85	7.46		8.97	8.10	
Ignatyev, Ardalion (URS) (1	time				22.0		33.5		47.0	47.0	2 / 3							
reaction time	interval						11.5		13.5	*(47.15)*	# of strides		11.50	13.50		22.00	25.00	3.00
	velocity				9.09		8.70		7.41	8.57	183.5		8.70	7.41		9.09	8.00	
Jones, Louis (USA) (1932)	time				21.8		33.4		48.1	48.1	6 / 5							
reaction time	interval						11.6		14.7	*(48.35)*	# of strides		11.60	14.70		21.80	26.30	4.50
	velocity				9.17		8.62		6.80	8.57			8.62	6.80		9.17	7.60	
Spence, Malcolm (RSA) (19	time				22.0		34.1		48.3	48.3	1 / 6							
reaction time	interval						12.1		14.2	*(48.40)*	# of strides		12.10	14.20		22.00	26.30	4.30
	velocity				9.09		8.26		7.04	8.57			8.26	7.04		9.09	7.60	

1956 USA Olympic Trials (Los Angeles, CA)

FINAL date 30-Jun-56

Hymans (2008) - history of the US olympic trials - track and field

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Jones, Louis (USA) (1932)	time				21.3				45.2	45.2	8 / 1							
reaction time	interval								23.9	**WR**	# of strides					21.30	23.90	2.60
	velocity				9.39				8.37	8.85						9.39	8.37	
Lea, Jim (USA) (1932)	time				21.6				45.7	45.7	7 / 2							
reaction time	interval								24.1		# of strides					21.60	24.10	2.50
	velocity				9.26				8.30	8.75						9.26	8.30	
Jenkin, Charlie (USA) (1934)	no information available									46.1	3 / 3							
Mashburn, Jessie (USA) (1934)	no information available									46.4	5 / 4							
Ellis, Russ (USA) (1935)	no information available									47.2	6 / 5							
White, Jerry (USA)	no information available									47.4	2 / 6							
Pearman, Reggie (USA) (1924)	no information available									47.9	1 / 7							
Larrabee, Mike (USA) (1933)	no information available									48.4	4 / 8							

1956 California Relays (Modesto, CA) (yards)

FINAL date 26-May-56

Quercentani (2000). Athletics: A history of modern track and field athletics (1860-2000)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential

Lea, Jim (USA) (1932)	time				22.7			45.5	45.5	/ 1							
reaction time	interval							22.8	WR yards	# of strides					22.70	22.80	0.10
	velocity				8.81			8.77	8.79	*(45.8/440y)*					8.81	8.77	

1955 Znamenskiy Memorial (Moscow, URS)

FINAL date 25-Jun-55

Quercentani (2000). Athletics: A history of modern track and field athletics (1860-2000)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Ignatyev, Ardalion (URS) (1	time				21.5				46.0	46.0	/ 1							
reaction time	interval								24.5	AR	# of strides					21.50	24.50	3.00
	velocity				9.30				8.16	8.70						9.30	8.16	

1955 Pan American Games (Mexico City, MEX) (Altitude)

FINAL date 18-Mar-55

Drake (1967) - der schnellste sprint der geschichte

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Jones, Louis (USA) (1932)	time				21.1				45.4	45.4	5 / 1							
reaction time	interval								24.3	WR	# of strides					21.10	24.30	3.20
	velocity				9.48				8.23	8.81	*(45.68)*					9.48	8.23	
Lea, Jim (USA) (1932)	no information available								*(45.78)*	45.6	7 / 2							
Mashburn, Jesse (USA) (1933)	no information available								*(46.44)*	46.2	3 / 3							

1952 Olympic Games (Helsinki, FIN)

FINAL date 25-Jul-52

Quercentani (2000). Athletics: A history of modern track and field athletics (1860-2000)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Rhoden, George (JAM) (19	time				22.2				45.9	45.9	6 / 1							
reaction time	interval								23.7	OR	# of strides					22.20	23.70	1.50
	velocity				9.01				8.44	8.71	*(46.09)*					9.01	8.44	
McKenley, Herb (JAM) (192	time				22.7				45.9	45.9	4 / 2							
reaction time	interval								23.2	=OR	# of strides					22.70	23.20	0.50
	velocity				8.81				8.62	8.71	*(46.20)*					8.81	8.62	
Matson, Ollie (USA) (1930)	no information available									46.8	5 / 3	(46.94)						
Hass, Karl-Friedrich (FRG) (1931)	no information available									47.0	3 / 4	(47.22)						
Wint, Arthur (JAM) (1920)	time				21.7				47.0	47.0	2 / 5							
reaction time	interval								25.3		# of strides					21.70	25.30	3.60
	velocity				9.22				7.91	8.51	*(47.24)*					9.22	7.91	
Whitfield, Mal (USA) (1924)	no information available									47.1	1 / 6	(47.30)						

1950 International Athletics Meeting (Eskilstuna, SWE) (427m track)

FINAL date 22-Aug-50

Drake (1967) - der schnellste sprint der geschichte

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Rhoden, George (JAM) (19	time				20.9				45.8	45.8	/ 1							
reaction time	interval								24.9	WR	# of strides					20.90	24.90	4.00
	velocity				9.57				8.03	8.73						9.57	8.03	

1948 Olympic Games (London, GBR)

FINAL date 05-Aug-48

Parienté (1978) - la fabuleuse histoire de l'athlétisme

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Wint, Arthur (JAM) (1920)	time				22.2				46.2	46.2	3 / 1							
reaction time	interval								24.0	=OR	# of strides					22.20	24.00	1.80
	velocity				9.01				8.33	8.66	*(46.30)*					9.01	8.33	
McKenley, Herb (JAM) (192	time				21.4				46.4	46.4	2 / 2							
reaction time	interval								25.0		# of strides					21.40	25.00	3.60
	velocity				9.35				8.00	8.62	*(46.53)*					9.35	8.00	
Whitfield, Mal (USA) (1924)	no information available									46.9	4 / 3							
Bolen, Dave (USA) (1923)	no information available									47.2	1 / 4							
Curotta, Morris (AUS) (1929)	no information available									47.9	5 / 5							
Guida, George (USA) (1924)	no information available									50.2	6 / 6							

1948 AAU Championships (Milwaukee, WI)

Heat 1 date 02-Jul-48

Drake (1967) - der schnellste sprint der geschichte

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
McKenley, Herb (JAM) (192	time				20.9				45.9	45.9	/ 1							
reaction time	interval								25.0	WR	# of strides					20.90	25.00	4.10
	velocity				9.57				8.00	8.71	*(46.00)*					9.57	8.00	

1948 Pacific Association Championships (Berkeley, CA) (*yards*)

FINAL date 06-Jun-48

Track & Field News (1963)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
McKenley, Herb (JAM) (192	time				21.1				45.7	45.7	/ 1							
reaction time	interval								24.6	WR yards	# of strides					21.10	24.60	3.50
	velocity				9.48				8.13	8.75	*(46.0/440y)*					9.48	8.13	

1947 (Long Branch, NJ) *(440y straightaway)*

FINAL date 23-Aug-47

Parienté (1978) - la fabuleuse histoire de l'athlétisme

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential

McKenley, Herb (JAM) (192	time			22.7			45.0	44.7	/ 1									
reaction time	interval						22.3		# of strides							22.70	22.30	-0.40
	velocity			8.81			8.97	8.95	*(45.0/440y)*							8.81	8.97	

1947 PCC vs Big 10 (Berkley, CA) *(yards)*

FINAL date 28-Jun-47

Hymans (2015) - progression of IAAF world records - 2015 edition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
McKenley, Herb (JAM) (192	time				20.9				46.0	46.0	/ 1							
reaction time	interval								25.1	**WR** yards	# of strides					20.90	25.10	4.20
	velocity				9.57				7.97	8.70	*(46.3/440y)*					9.57	7.97	

1947 NCAA Championships (Salt Lake City, UT) (Altitude)

FINAL date 21-Jun-47

Hymans (2015) - progression of IAAF world records - 2015 edition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
McKenley, Herb (JAM) (192	time				20.7				45.9	45.9	/ 1							
reaction time	interval								25.2		# of strides					20.70	25.20	4.50
	velocity				9.66				7.94	8.71	*(46.2/440y)*					9.66	7.94	

1946 Big 10 Championships (Champaign, IL)

FINAL date 01-Jun-46

Hymans (2015) - progression of IAAF world records - 2015 edition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
McKenley, Herb (JAM) (192	time				20.8				45.9	45.9	/ 1							
reaction time	interval								25.1		# of strides					20.80	25.10	4.30
	velocity				9.62				7.97	8.71	*(46.2/440y)*					9.62	7.97	

1941 AAU Championship (Philadelphia, PA)

FINAL date 29-Jun-41

Hymans (2015) - progression of IAAF world records - 2015 edition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Klemmer, Grover (USA) (19	time		10.8		21.8		33.4		46.0	46.0	/ 1							
reaction time	interval				11.0		11.6		12.6	**=WR**	# of strides	10.80	11.00	11.60	12.60	21.80	24.20	2.40
	velocity		9.26		9.09		8.62		7.94	8.70		9.26	9.09	8.62	7.94	9.17	8.26	

1941 Pacific Coast Conference Championship (Berkley, CA)

FINAL date 31-May-41

Hymans (2015) - progression of IAAF world records - 2015 edition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Klemmer, Grover (USA) (19	time				22.6				46.1	46.1	/ 1							
reaction time	interval								23.5	**=WR** yards	# of strides					22.60	23.50	0.90
	velocity				8.85				8.51	8.68	*(46.4/440y)*					8.85	8.51	

1939 Internationale Leichtathletik Wettkampf (Frankfurt-am-Main, GER) (500m track)

FINAL date 12-Aug-39

Quercetani (2005) - a world history of the one-lap race: 1850-2004

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Harbig, Rudolf (GER) (191	time		11.3		22.0		33.6		46.0	46.0	3 / 1							
reaction time	interval				10.7		11.6		12.4	**WR**	# of strides	11.30	10.70	11.60	12.40	22.00	24.00	2.00
	velocity		8.85		9.35		8.62		8.06	8.70		8.85	9.35	8.62	8.06	9.09	8.33	
Lanzi, Mario (ITA) (1914)	time		11.2		21.7		33.5		47.2	47.2	6 / 2							
reaction time	interval				10.5		11.8		13.7		# of strides	11.20	10.50	11.80	13.70	21.70	25.50	3.80
	velocity		8.93		9.52		8.47		7.30	8.47		8.93	9.52	8.47	7.30	9.22	7.84	

1939 Italy vs. Germany (Milan, ITA) (500m track)

FINAL date 16-Jul-39

Quercentani (2000). Athletics: A history of modern track and field athletics (1860-2000)

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Harbig, Rudolf (GER) (191	time				22.8				46.7	46.7	/ 1							
reaction time	interval								23.9	**=AR**	# of strides					22.80	23.90	1.10
	velocity				8.77				8.37	8.57						8.77	8.37	
Lanzi, Mario (ITA) (1914)	time				22.2				46.7	46.7	/ 2							
reaction time	interval								24.5	**=AR**	# of strides					22.20	24.50	2.30
	velocity				9.01				8.16	8.57						9.01	8.16	

1936 Olympic Games (Berlin, GER)

FINAL date 07-Aug-36

Butler (2016) - IAAF statistics handbook- special edition: Games of the XXXI Olympiad- Rio 2016

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Williams, Archie (USA) (19	time				22.0				46.50	46.5	5 / 1	(46.66)						
reaction time	interval								24.5		# of strides					22.00	24.50	2.50
	velocity				9.09				8.16	8.60	189.7					9.09	8.16	
Brown, Godfrey (GBR) (1915)	no information available									46.7	6 / 2	(46.68)					# of strides	189.0
LuValle, James (USA) (1912	time				22.1				46.80	46.8	2 / 3	(46.84)						
reaction time	interval								24.7		# of strides					22.10	24.70	2.60
	velocity				9.05				8.10	8.55						9.05	8.10	
Roberts, Bill (GBR) (1912)	no information available									46.8	3 / 4	(46.87)						
Fritz, William (CAN) (1914)	no information available									47.8	1 / 5							
Loaring, John (CAN) (1915)	no information available									48.2	4 / 6							

1936 NCAA Championships (Chicago, IL)

Heat 2 date 19-Jun-36

Quercetani (2005) - a world history of the one-lap race: 1850-2004

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential

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

Williams, Archie (USA) (19	time			21.6			46.1	46.1	/ 1								
reaction time	interval						24.5	WR	# of strides						21.60	24.50	2.90
	velocity			9.26			8.16	8.68							9.26	8.16	

1932 Olympic Games (Los Angeles, CA)

FINAL date 05-Aug-32

Quercetani (2005) - a world history of the one-lap race: 1850-2004

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Carr, William (USA) (1909)	time		10.9		22.1		33.8		46.2	46.2	4 / 1							
reaction time	interval				11.2		11.7		12.4	WR	# of strides	10.90	11.20	11.70	12.40	22.10	24.10	2.00
	velocity		9.17		8.93		8.55		8.06	8.66	*(46.28)*	9.17	8.93	8.55	8.06	9.05	8.30	
Eastman, Benjamin (USA) (	time		10.8		21.9		33.7		46.4	46.4	2 / 2							
reaction time	interval				11.1		11.8		12.7	*(46.50)*	# of strides	10.80	11.10	11.80	12.70	21.90	24.50	2.60
	velocity		9.26		9.01		8.47		7.87	8.62		9.26	9.01	8.47	7.87	9.13	8.16	
Wilson, Alex (CAN) (1907)	no information available									47.4	3 / 3							
Walters, Willie (RSA) (1907)	no information available									48.2	1 / 4							
Gordon, James (USA) (1908)	no information available									48.2	5 / 5							
Golding, George (AUS) (1906)	no information available									48.8	6 / 6							

1932 USA Olympic Trials (Palo Alto, CA)

FINAL date 16-Jul-32

Hymans (2008) - history of the US olympic trials - track and field

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Carr, William (USA) (1909)	no information available									46.9	/ 1							
Eastman, Benjamin (USA) (	time				22.2				47.1	47.1	/ 2							
reaction time	interval								24.9		# of strides					22.20	24.90	2.70
	velocity				9.01				8.03	8.49						9.01	8.03	
Gordon, James (USA) (1908)	no information available									47.4	/ 3							
Ablowick, Ed (USA)	no information available									47.5	/ 4							
Fuqua, Ivan (USA)	no information available									47.6	/ 5							
Adams, Arnold (USA)	no information available									47.6	/ 6							
Warner, Karl (USA)	no information available									47.7	/ 7							

1932 Los Angeles AC vs. Stanford University (Stanford, CA) (yards)

FINAL date 26-Mar-32

Hymans (2015) - progression of IAAF world records - 2015 edition

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Eastman, Benjamin (USA) (	time				21.2				46.1	46.1	/ 1							
reaction time	interval								24.9	WR yards	# of strides					21.20	24.90	3.70
	velocity				9.43				8.03	8.68	*(46.4/440y)*					9.43	8.03	

1928 Olympic Games (Amsterdam, NED)

FINAL date 03-Aug-28

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Barbuti, Ray (USA) (1905)	no information available								47.8	1 / 1							
Ball, James (CAN) (1903)	no information available								48.2/47.9e	5 / 2							
Büchner, Joachim (GER) (1905)	no information available								48.4/48.1e	3 / 3							
Rinkel, John (GBR) (1905)	no information available								48.4e	2 / 4							
Storz, Harry (GER) (1904)	no information available								48.8e	4 / 5							
Phillips, Hermon (USA) (1903)	no information available								49.0e	6 / 6							

1928 Pacific AAU Championships (Palo Alto, CA)

FINAL date 12-May-28

Parienté (1978) - la fabuleuse histoire de l'athlétisme

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Spencer, Emerson (USA) (1	time				21.8				47.0	47.0	/ 1							
reaction time	interval								25.2	WR	# of strides					21.80	25.20	3.40
	velocity				9.17				7.94	8.51						9.17	7.94	

1924 Olympic Games (Paris, FRA) (500m Track)

FINAL date 11-Jul-24

Parienté (1978) - la fabuleuse histoire de l'athlétisme

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Liddell, Eric (GBR) (1902)	time				22.2				47.6	47.6	6 / 1							
reaction time	interval								25.4	WR	# of strides					22.20	25.40	3.20
	velocity				9.01				7.87	8.40						9.01	7.87	
Fitch, Horatio (USA) (1900)	no information available									48.4	5 / 2							
Butler, Guy (GBR) (1899)	no information available									48.6	2 / 3							
Johnson, Don (CAN) (1902)	no information available									48.8	1 / 4							
Taylor, John C. (USA) (1901)	no information available									67.0	4 / 5							
Imbach, Josef (SUI) (1894)	no information available										3 / dnf							

1920 Olympic Games (Antwerp, BEL)

FINAL date 20-Aug-20

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Rudd, Bevil (RSA) (1895)	no information available								49.6	1 / 1							
Butler, Guy (GBR) (1899)	no information available								49.9e	5 / 2							
Engdahl, Nils (SWE) (1898)	no information available								50.0e	6 / 3							
Shea, Frank (USA) (1894)	no information available								50.2e	3 / 4							
Ainsworth-Davis, John (GBR) (1895)	no information available								50.4e	4 / 5							
Dafel, Harry (RSA) (1889)	no information available								50.4e	2 / 6							

1912 Olympic Games (Stockholm, SWE)

FINAL date 13-Jul-12

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Reidpath, Charles (USA) (1889)	no information available							OR	48.2	3 / 1							
Braun, Hanns (GER) (1886)	no information available								48.3	2 / 2							
Lindberg, Edward (USA) (1886)	no information available								48.3	5 / 3							
Meredith, Ted (USA) (1891)	no information available								49.2e	1 / 4							
Haff, Carroll (USA) (1892)	no information available								49.5e	4 / 5							

1908 Olympic Games (London, GBR) (587yd Track)

FINAL date 25-Jul-08

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Halswelle, Wyndham (GBR) (1882)	no information available								50.0	/ 1							

1906 Intercalated Games (Athens, GRE) (Run in Clockwise Direction)

FINAL date 29-Apr-06

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Pilgrim, Paul (USA) (1883)	no information available								53.2	/ 1							
Halswelle, Wyndham (GBR) (1882)	no information available								53.8e	/ 2							
Barker, Nigel (AUS) (1883)	no information available								54.1e	/ 3							
Hillman, Harry (USA) (1881)	no information available									/ 4							
Bacon, Charles (USA) (1885)	no information available									/ 5							
Moulton, Fay (USA) (1876)	no information available									/ 6							
Anderson, William (GBR)	no information available									/ 7							
Bellin du Coteau, Marc (FRA) (1883)	no information available									/ 8							

1904 Olympic Games (St. Louis, MO)

FINAL date 29-Aug-04

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Hillman, Harry (USA) (1881)	no information available							OR	49.2	/ 1							
Waller, Frank (USA) (1884)	no information available								49.9e	/ 2							
Groman, Herman (USA) (1882)	no information available								50.0e	/ 3							
Fleming, Joseph (USA) (1883)	no information available								50.5e	/ 4							
Prinstein, Myer (USA) (1878)	no information available								50.6e	/ 5							
Poage, George (USA) (1880)	no information available								51.0e	/ 6							

1900 Olympic Games (Paris, FRA) (500m Grass Track)

FINAL date 15-Jul-00

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Long, Maxwell (USA) (1878)	no information available							OR	49.2	/ 1							
Holland, William (USA) (1874)	no information available								49.9e	/ 2							
Schultz, Ernst (DEN) (1879)	no information available								50.0e	/ 3							

1900 Exhibition Handicap (Guttenberg, NY) (440y Straightaway)

FINAL date 10-Apr-00 *Hymans (2015) - progression of IAAF world records - 2015 edition*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Long, Maxwell (USA) (1878	time				22.4				46.7	46.7	/ 1							
reaction time	interval								24.3		# of strides					22.40	24.30	1.90
	velocity				8.93				8.23	8.57	*(47.0/440y)*					8.93	8.23	

1896 Olympic Games (Athens, GRE) (333.33m Track)

FINAL date 06-Apr-96

	50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Burke, Thomas (USA) (1875)	no information available							OR	54.2	/ 1							
Jamison, Herbert (USA) (1875)	no information available								56.1e	/ 2							
Gmelin, Charles (GBR) (1872)	no information available								58.0e	/ 3							
Hofmann, Fritz (FER) (1871)	no information available									/ 4							

1890 ??? Beacon Park (Boston, MA) (440y Straightaway)

FINAL date 09-Jul-90 *Quercentani (2000) - athletics: a history of modern track and field athletics (1860-2000)*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Downs, William (USA) ???	time				23.1				47.1	47.1	/ 1							
reaction time	interval								24.0		# of strides					23.10	24.00	
	velocity				8.66				8.33	8.49	*(47 2/5 /440y)*					8.66	8.33	

1886 ??? Beacon Park (Boston, MA) (440y Straightaway) *New York Times - July 2, 1886, Page 1*

FINAL date 01-Jul-86 *Quercentani (2000) - athletics: a history of modern track and field athletics (1860-2000)*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Baker, Wendell (USA) ???	time				23.2				47.5	47.5	/ 1							
reaction time	interval								24.3		# of strides					23.20	24.30	
	velocity				8.62				8.23	8.42	*(47 3/4 /440y)*					8.62	8.23	

1881 Time Trial in Solo Effort (New York, NY) (640y Circuit)

FINAL date 22-Oct-81 *Hymans (2015) - progression of IAAF world records - 2015 edition*

		50m	100m	150m	200m	250m	300m	350m	400m	Official Time	Lane / Place	0-100m	100-200m	200-300m	300-400m	0-200m	200m-400m	Differential
Myers, Lon (USA) (1858)	time						34.8		48.5	48.5	/ 1							
reaction time	interval								13.7		# of strides				13.70			
	velocity						8.62		7.30	8.25	*(48 4/5 /440y)*				7.30			

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