

Biomechanical Analysis of the Long Jump Men

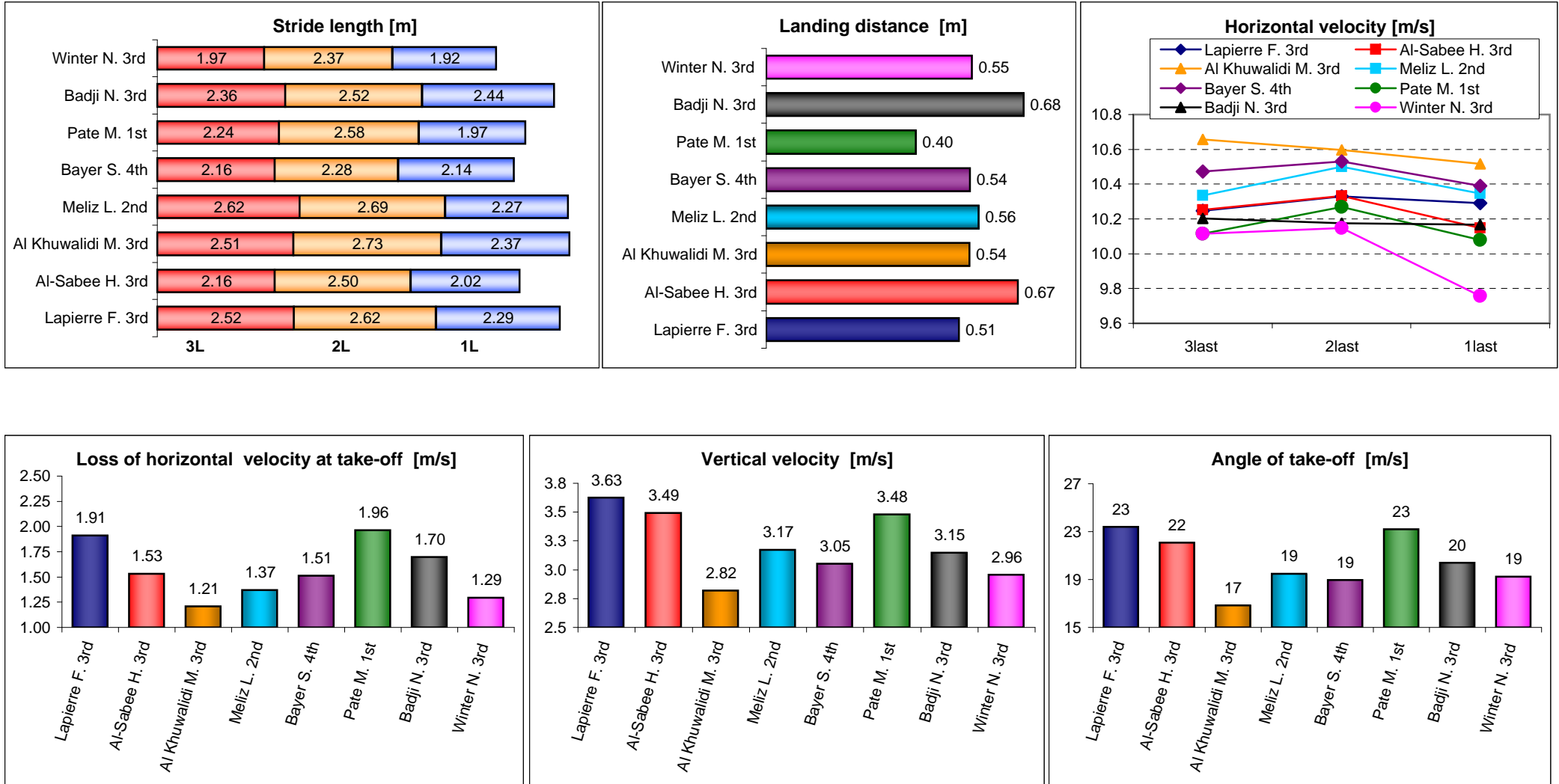
6th IAAF / VTB Bank World Athletics Final - Stuttgart 13./14. September 2008

Name / Attempt	Distance [m]				Stride length [m]					lowering of CM	Velocity [m/s]					
	official measured	effektiv	loss at take-off (toe-to-board)	loss by landing	3last	2last	1last	relativ length 2last / 3last [%]	relativ length 1last / 2last [%]		3last	2last	1last	take-off instant	loss at take-off	vertical velocity at take-off
Lapierre F. 3rd	8.14	8.25	0.11	0.10	2.52	2.62	2.29	104	87	0.10	10.25	10.33	10.29	8.38	1.91	3.63
Al-Sabee H. 3rd	8.13	8.20	0.07	0.00	2.16	2.50	2.02	116	81	0.09	10.25	10.33	10.15	8.62	1.53	3.49
Al Khuwalidi M. 3rd	8.04	8.11	0.07	0.00	2.51	2.73	2.37	109	87	0.05	10.66	10.59	10.52	9.31	1.21	2.82
Meliz L. 2nd	8.03	8.10	0.07	0.28	2.62	2.69	2.27	103	84	0.13	10.34	10.50	10.35	8.98	1.37	3.17
Bayer S. 4th	8.00	8.00	0.00	0.00	2.16	2.28	2.14	105	94	0.08	10.47	10.53	10.39	8.88	1.51	3.05
Pate M. 1st	7.99	8.05	0.02	0.00	2.24	2.58	1.97	115	76	0.16	10.11	10.27	10.08	8.12	1.96	3.48
Badji N. 3rd	7.76	7.92	0.16	0.00	2.36	2.52	2.44	107	97	0.10	10.20	10.17	10.17	8.47	1.70	3.15
Winter N. 3rd	7.54	7.58	0.04	0.00	1.97	2.37	1.92	120	81	0.07	10.11	10.15	9.76	8.46	1.29	2.96

Name / Attempt	Take-off						Lead leg		Landing			
	duration [s]	inclination angle [°]	trunk-angle [°]	trunk rotation [°]	minimal knee-angle [°]	angle of take-off [°]	thigh-angle at take-off [°]	average velocity [°/s]	distance [m]	trunk angle [°]	knee angle [°]	hip angle [°]
Lapierre F. 3rd	0.11	26	101	6	145	23.4	8	928	0.51	68	131	66
Al-Sabee H. 3rd	0.12	24	100	6	135	22.1	-16	707	0.67	114	141	135
Al Khuwalidi M. 3rd	0.12	18	94	-1	135	16.8	-2	767	0.54	95	144	110
Meliz L. 2nd	0.13	27	93	12	134	19.5	-8	752	0.56	77	145	79
Bayer S. 4th	0.12	25	101	4	137	19.0	-2	831	0.54	74	149	88
Pate M. 1st	0.14	31	95	14	132	23.2	-4	744	0.40	25	145	35
Badji N. 3rd	0.13	26	97	8	136	20.4	6	828	0.68	88	144	97
Winter N. 3rd	0.13	25	103	7	135	19.3	-9	728	0.55	76	142	86

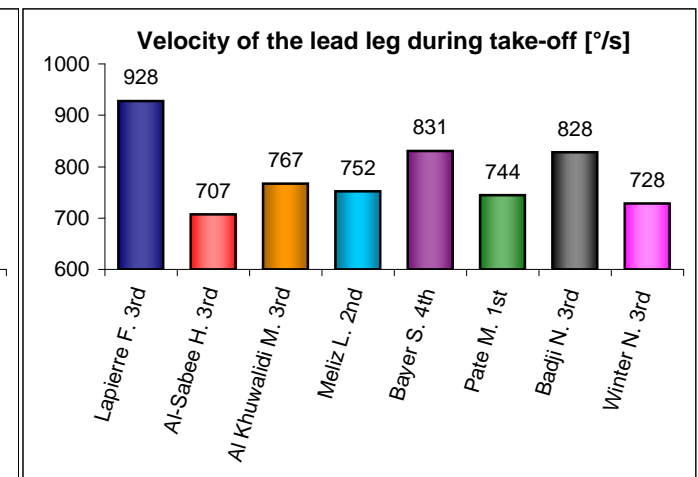
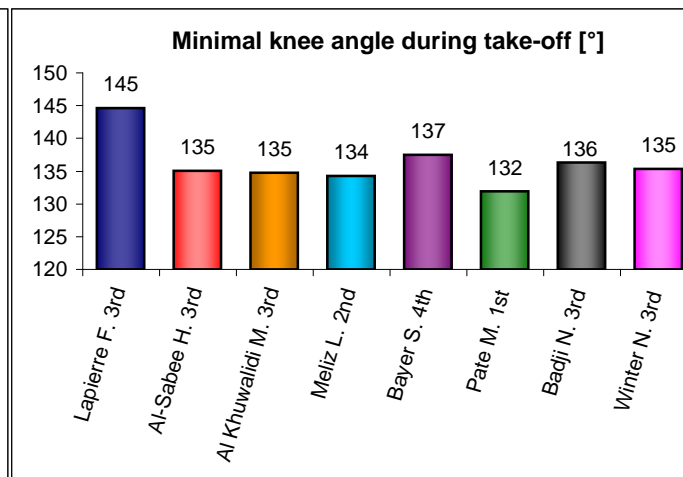
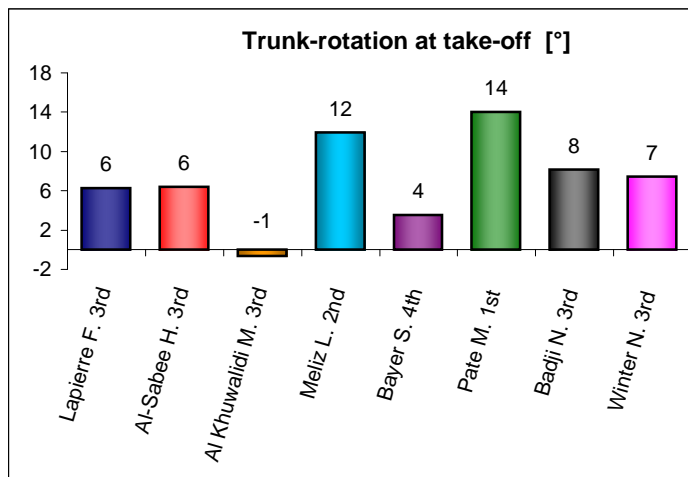
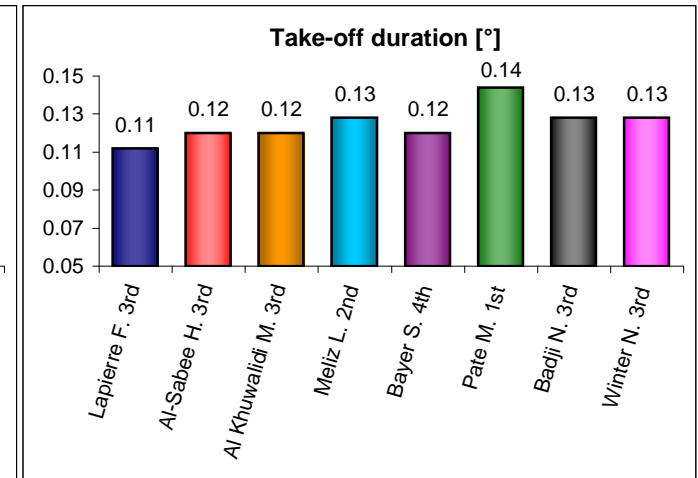
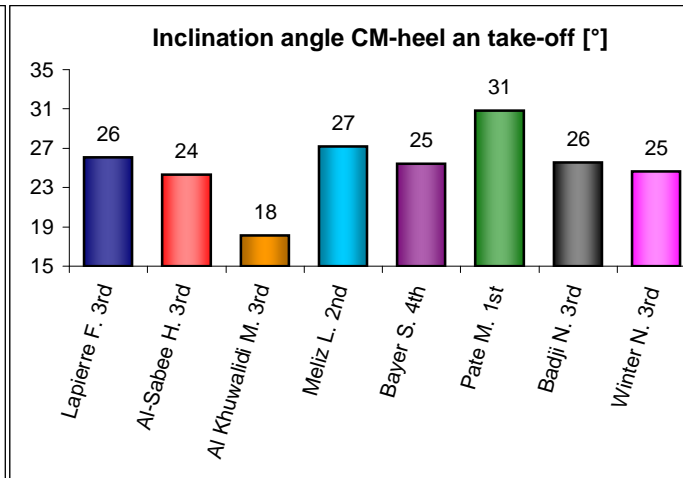
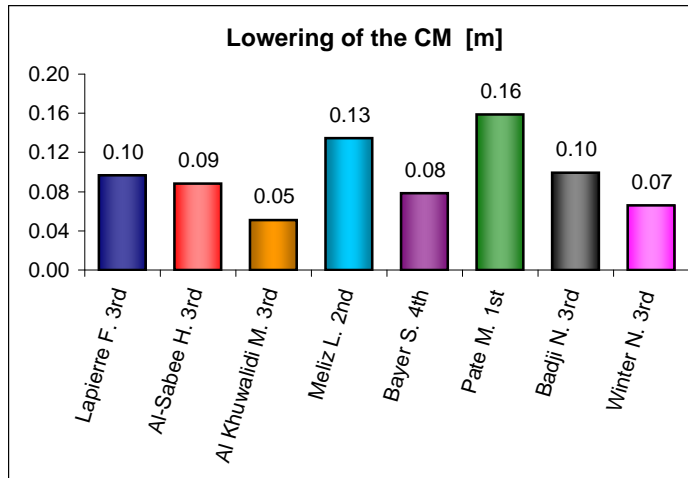
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Lapierre F. 3rd Att.



Al-Sabee H. 3rd Att.



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Al-Khuwalidi M. 3rd Att.



Meliz S. 2nd Att.



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Bayer S. 4th Att.



Pate M. 1st Att.



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Badji N. 3rd Att.



Winter N. 3rd Att.

