



Scientific Research Project
Biomechanical Analyses
at the
IAAF World Championships Daegu 2011

Long Jump Men - Final
(September 2, 2011)



Korean Society of Sport Biomechanics

Biomechanical Analysis of Long Jump Men - Final

VARIABLE(unit)		Dwight PHILLIPS (USA) 1 st Place	Mitchell WATT (AUS) 2 nd Place	Ngonidzashe MAKUSHA (ZIM) 3 rd Place
RESULT(m)		8.45	8.33	8.29
Stride Length	3Last(m)	2.13	2.34	2.21
	2Last(m)	2.37	2.53	2.58
	1Last(m)	1.99	2.42	2.22
	Relative Length 2Last/3Last(%)	111	108	117
	Relative Length 1Last/2Last(%)	84.0	96	86
Velocity	Horizontal Vel. at Touch Down(m/s)	10.31	10.34	10.59
	Horizontal Vel. at Take-off (m/s)	9.21	8.42	9.59
	Loss of Horizontal Vel. During Ground Contact(m/s)	1.10	1.92	1.0
	Vertical Velocity at Take-off(m/s)	3.35	3.73	3.13
	Resultant Velocity at Take-off(m/s)	9.80	9.22	10.09
Take-off	Take-off Angle(deg)	20.0	23.9	18.1
	Vertical Height of CoM	1.22	1.33	1.16
	Take-off Distance : Horizontal Position of CoM(m) Relative to Foot	0.55	0.5	0.36

