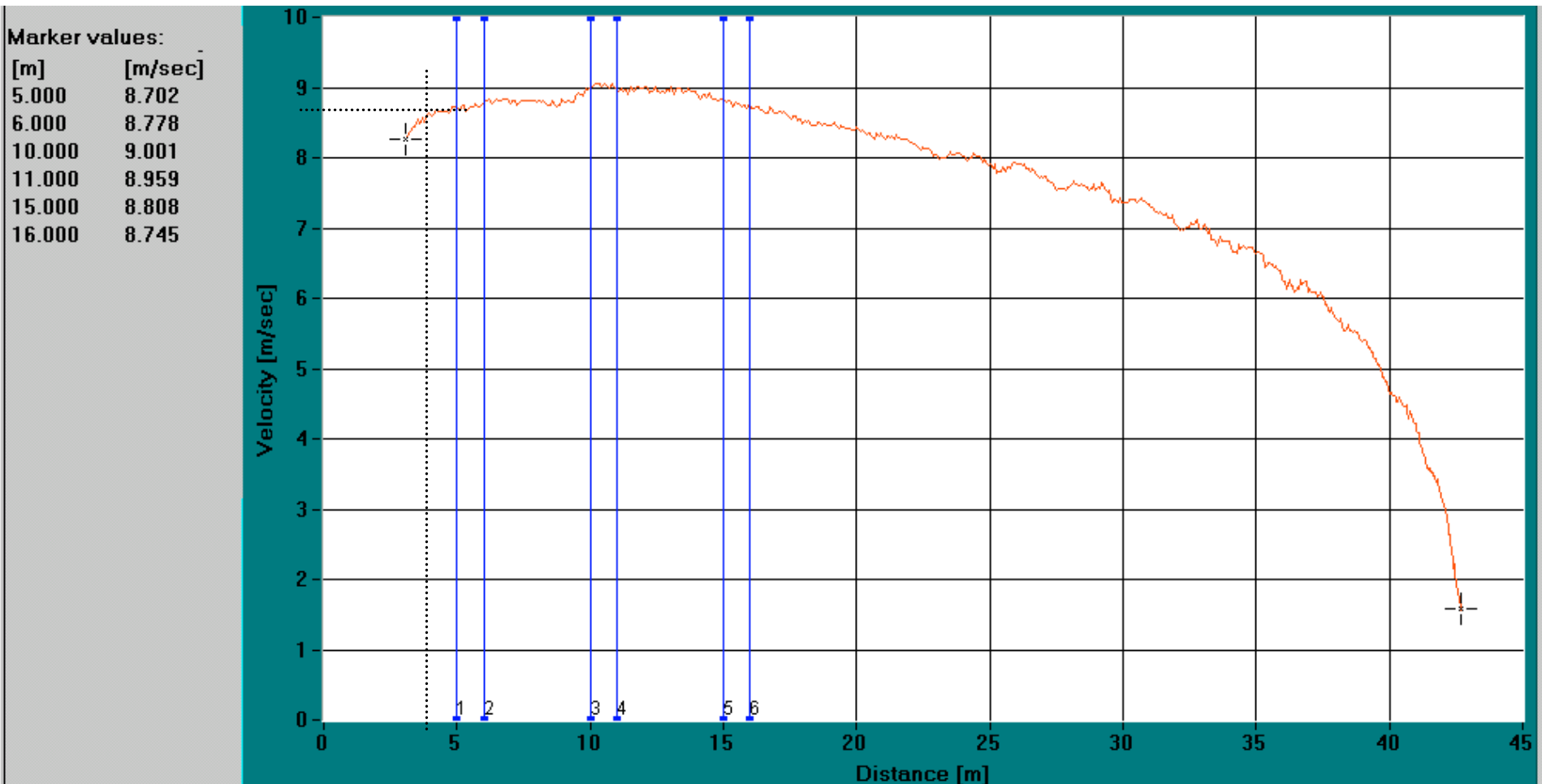




Case study 2: Male Vaulters in Competition (Vaulters Height 202cms & Mass 93 kg.)

Vaulter	Male	Height	Mass					
		202cms	93kg					
5.30m Jump Clear								
Step	Step	Change in	Step	Step	SR x SL			
Number	Length	Step	Step	Step	Average	Step	Pattern	Distance
	(metres)	Length	Length	Rate	Speed			From
		(cms)	% Change	(step/sec)	(m / s)			Back Box
Start							Start at	42.5m
1	1.56			1.67	2.61	first step		40.94
2	1.82	26	16.667	2.2	4.00		longer	39.12
3	1.955	13.5	7.418	2.77	5.42		longer	37.165
4	2.054	9.9	5.064	2.95	6.06		longer	35.111
5	2.2	14.6	7.108	3.11	6.84		longer	32.911
6	2.28	8	3.636	3.08	7.02		longer	30.631
7	2.27	-1	-0.439	3.2	7.26		longer	28.361
8	2.299	2.9	1.278	3.46	7.95		longer	26.062
9	2.281	-1.8	-0.783	3.51	8.01		shorter	23.781
10	2.314	3.3	1.447	3.59	8.31		longer	21.467
11	2.25	-6.4	-2.766	3.78	8.51		shorter	19.217
12	2.328	7.8	3.467	3.73	8.68		longer	16.889
13	2.2	-12.8	-5.498	4.01	8.82		shorter	14.689
14	2.23	3	1.364	4.04	9.01		longer	12.459
15	2.23	0	0.000	4.04	9.01		same	10.229
16	2.125	-10.5	-4.709	4.2	8.93		shorter	8.104
17	2.15	2.5	1.176	4.1	8.82		longer	5.954
TO 18	1.938	-21.2	-9.860	4.48	8.68		shorter	4.016
Key to step pattern								
		No Change						
Note: 2.54 cms is equal to 1.0 inch								
		Increase						
		Decrease						

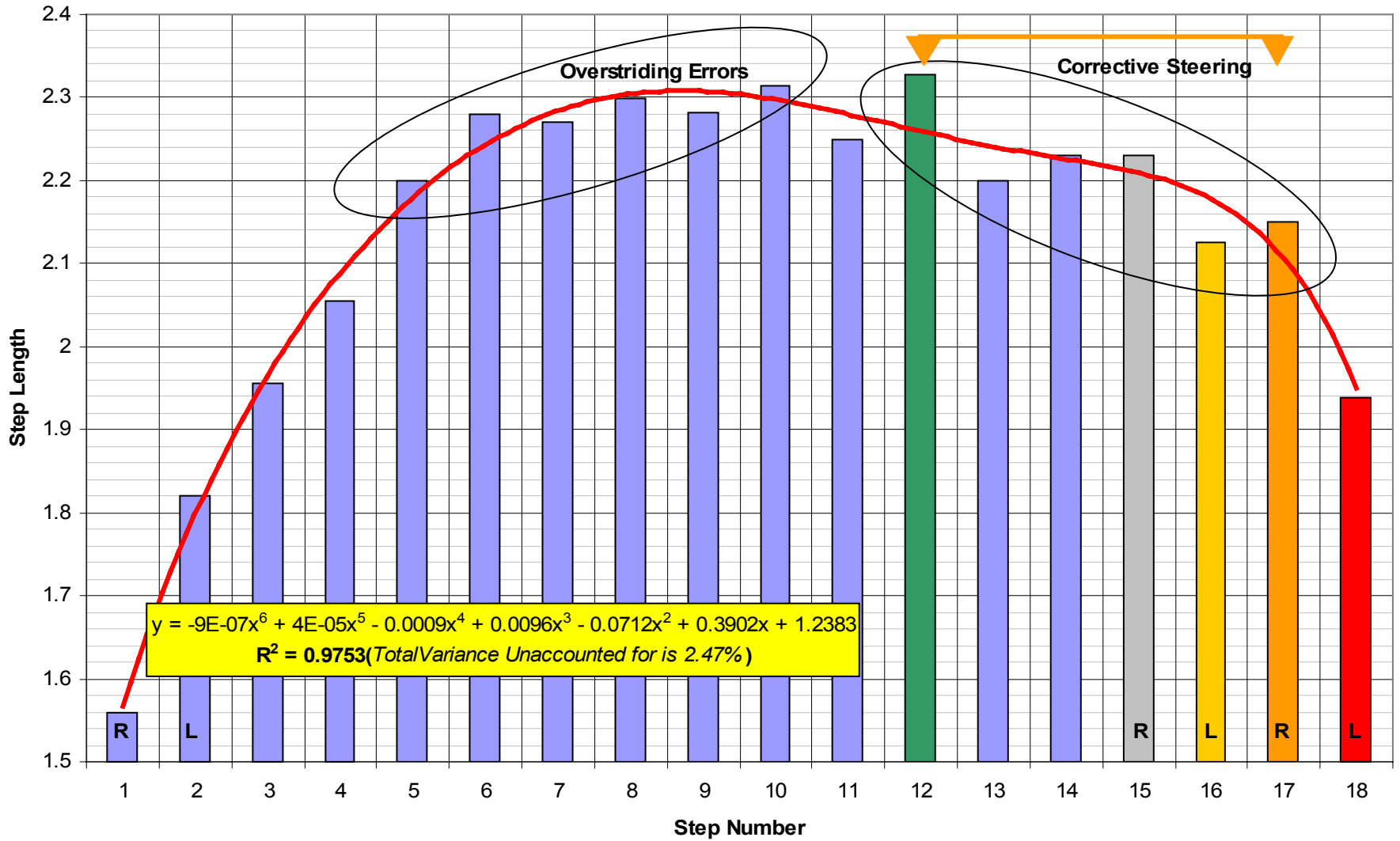
Horizontal Speed v Distance for the 5.30m Clear Jump.



***Raw data have been smoothed using a 25 point moving average technique.*

LAVEG Data from jump shown in previous picture.

18 Step Run 5.30m Clear. (Vaulters Height 202cms & Mass 93 kg.)

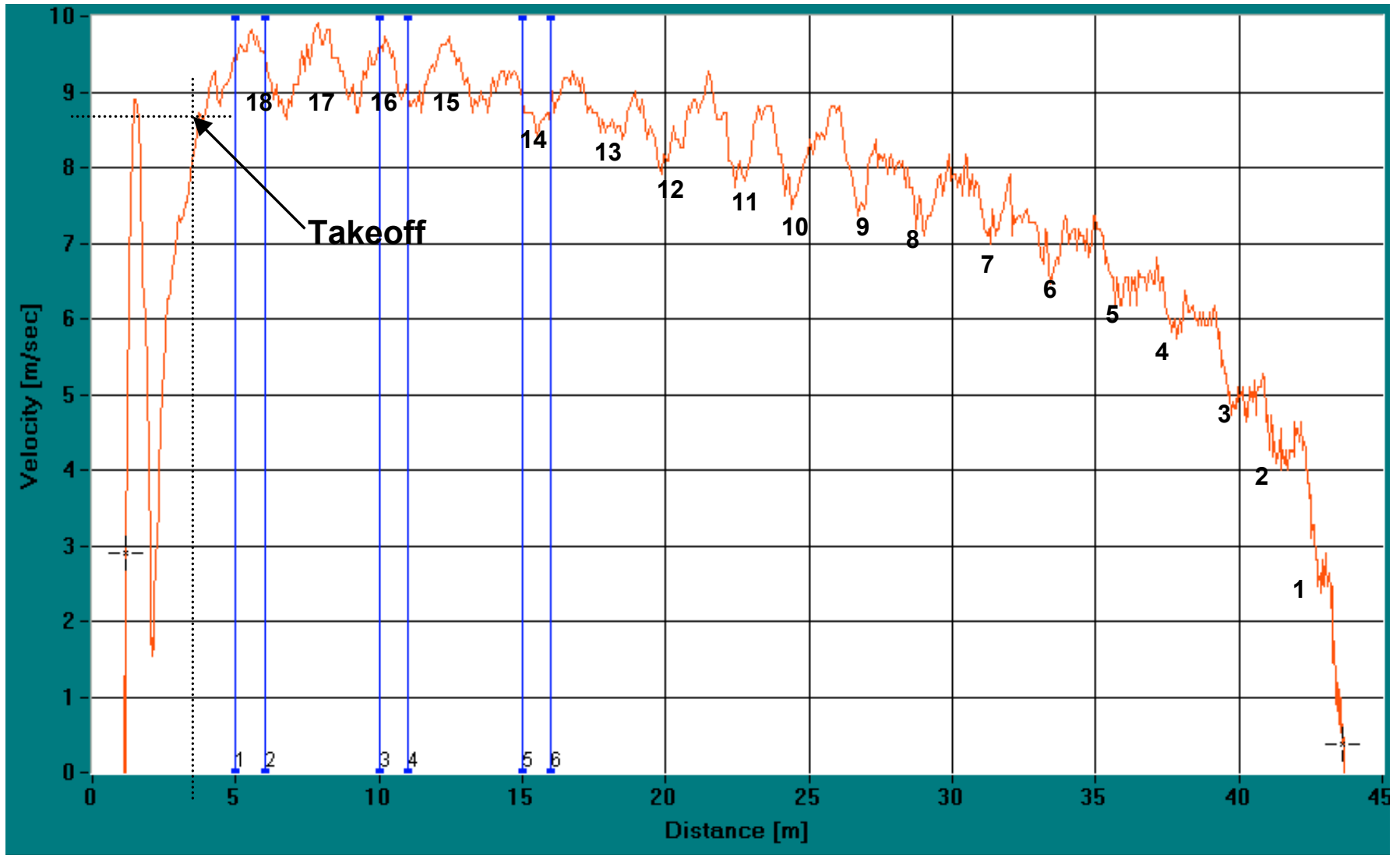




Case study 2: Male Vaulters in Competition (Vaulters Height 202cms & Mass 93 kg.)

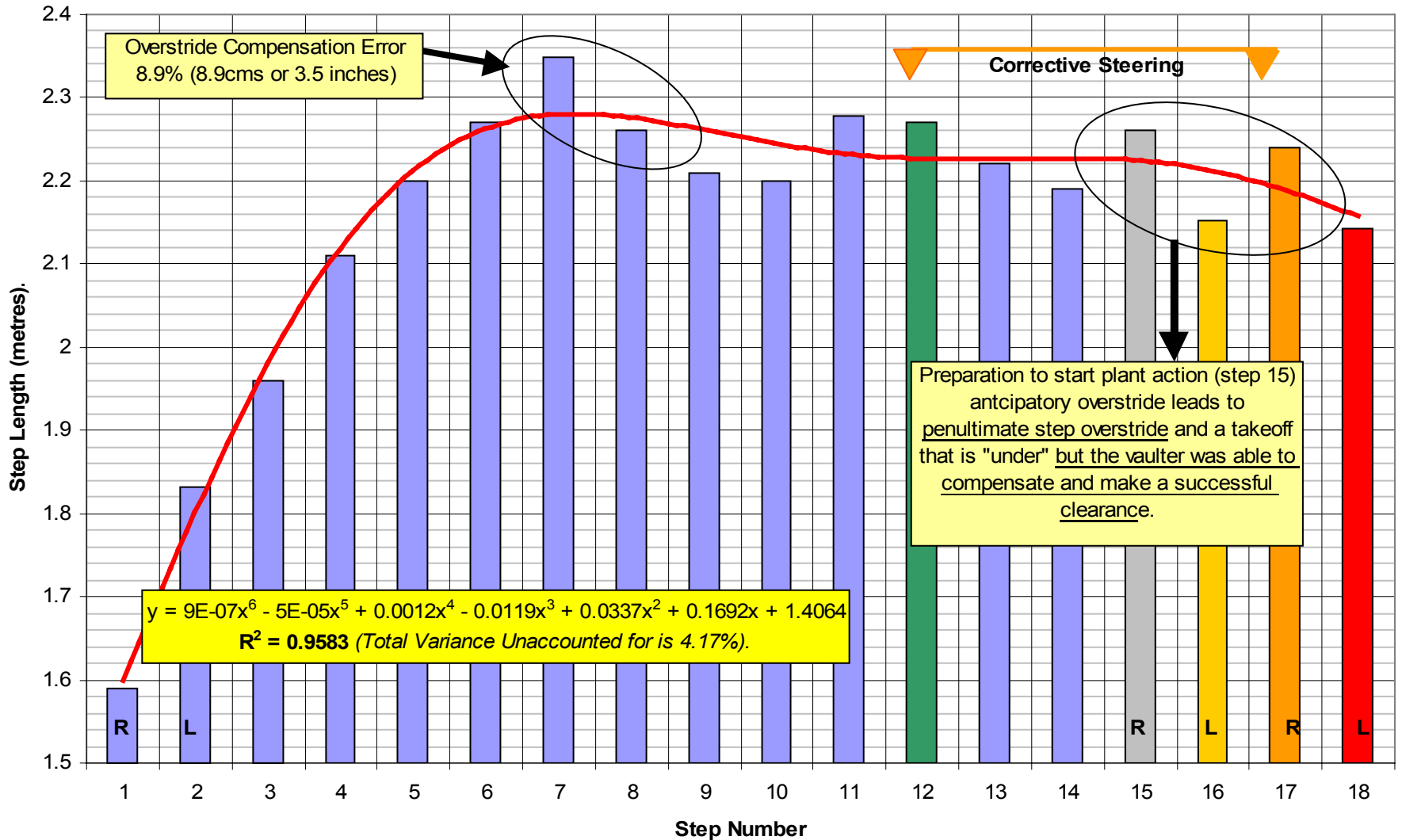
Vaulter	Male	Height 202cms	Mass 93kg					
5.70m Jump Clear								
Step Number	Step Length (metres)	Chang in Step Length (cms)	Step Length % Change	Step Rate (step/sec)	SR x SL Average Speed (m / s)	Step	Pattern	Distance From Back Box
Start							Start at	42.6m
1	1.59			2.78	4.42	first step		41.01
2	1.832	24.2	15.220	3.04	5.57		longer	39.178
3	1.96	12.8	6.987	3.24	6.35		longer	37.218
4	2.11	15	7.653	3.01	6.35		longer	35.108
5	2.2	9	4.265	3.13	6.89		longer	32.908
6	2.27	7	3.182	3.19	7.24		longer	30.638
7	2.349	7.9	3.480	3.23	7.59		longer	28.289
8	2.26	-8.9	-3.789	3.42	7.73		shorter	26.029
9	2.21	-5	-2.212	3.64	8.04		shorter	23.819
10	2.2	-1	-0.452	3.69	8.12		shorter	21.619
11	2.278	7.8	3.545	3.55	8.09		longer	19.341
12	2.27	-0.8	-0.351	3.74	8.49		shorter	17.071
13	2.22	-5	-2.203	3.95	8.77		shorter	14.851
14	2.19	-3	-1.351	4.09	8.96		shorter	12.661
15	2.26	7	3.196	4.07	9.20		longer	10.401
16	2.153	-10.7	-4.735	4.29	9.24		shorter	8.248
17	2.24	8.7	4.041	4.17	9.34		longer	6.008
TO 18	2.143	-9.7	-4.330	4.33	9.28		shorter	3.865
Key to step pattern								
Note: 2.54 cms is equal to 1.0 inch								

Horizontal Speed v Distance for the 5.70m Clear Jump.



***Raw data have been partially smoothed using a 7 point moving average technique.*

18 Step Run 5.70m Clear. (Vaulteer Height 202cms & Mass 93 kg.)





A “Mini-Me” Viktor Chistiakov!

Top Hand Grip 5.05m: Grip width 0.60m approx.

Pole length 5.30m with Flex Rating 11.4!