

## Physics 2100

### Linear Motion with Constant Acceleration

Here is a collection of measurements as the cart traveled up the ramp then back down.

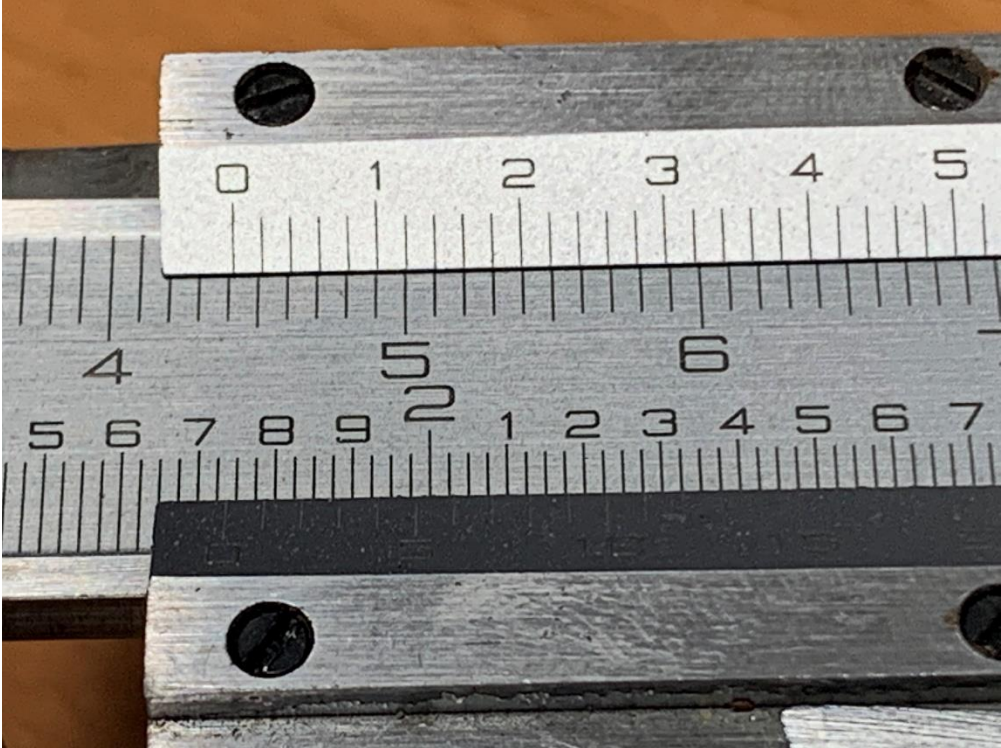
The data was collected with a frequency of 20 Hz with an error in position of +/- 0.0001 m.

Data Point	Position (m)	Data Point	Position (m)
1	0.0677	31	0.8889
2	0.1225	32	0.8853
3	0.1775	33	0.8799
4	0.2311	34	0.8726
5	0.2813	35	0.8634
6	0.3295	36	0.8524
7	0.3766	37	0.8393
8	0.4214	38	0.8245
9	0.4639	39	0.8078
10	0.5043	40	0.7894
11	0.5431	41	0.7692
12	0.5799	42	0.7470
13	0.6141	43	0.7228
14	0.6466	44	0.6971
15	0.6772	45	0.6696
16	0.7055	46	0.6399
17	0.7319	47	0.6085
18	0.7564	48	0.5755
19	0.7787	49	0.5405
20	0.7990	50	0.5038
21	0.8172	51	0.4655
22	0.8337	52	0.4253
23	0.8481	53	0.3834
24	0.8604	54	0.3398
25	0.8707	55	0.2944
26	0.8787	56	0.2473
27	0.8847	57	0.1984
28	0.8886	58	0.1478
29	0.8905	56	0.0954
30	0.8907	60	0.0415

Two identical risers were used to elevate the track. *One* riser underneath each foot. Here is a photo of one of the risers in the jaws of a vernier caliper.



Here is a close up on the caliper's movable scale.



Here is a photo taken of the insert for the track's left foot. The camera lens is positioned directly above the left side of the hole. A meter stick was used so those numbers are in units of cm.



Here is a photo taken of the insert for the track's *right* foot. The camera lens is positioned directly above the left side of the hole.

