

# Astronomy 360 – Field Report

## A Measurement of the Radius of the Earth

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### Example Data Table

Date: 8 March 2020

Location: Los Angeles

bucket D1: 10 in.

bucket D2: 10 in.

D: 0 in.

H: 33 in.

smallest z1: 39.4

smallest z2: 56.5

$A = z2 - z1 = 17.1$

$R = 180 * D / (A * \pi) = 3.35$

Time	S	X1	L=S+X1-D	$\tan(z)=L/H$	$z = \text{ATAN}(L/H)$
12:30	45	5	50	1.51	56.5
12:40	35	5	40	1.21	50.4
12:43	29	5	34	1.03	45.8
12:48	26	5	31	0.94	43.2
12:55	27	5	32	0.97	44.1
12:56	28	5	33	1.00	45.0
12:59	24	5	29	0.88	41.3
13:01	24	5	29	0.88	41.3
13:03	22	5	27	0.82	39.4
13:06	26	5	31	0.94	43.2
13:11	28	5	33	1.00	45.0
13:13	29	5	34	1.03	45.8
13:14	29	5	34	1.03	45.8
13:20	33	5	42	1.27	51.8
13:30	39	5	44	1.33	53.2