

Dr Robert Swieislak

Analemma Sundial

Latitude = $36^{\circ} 3.83333333333383'$ Longitude = $86^{\circ} 44.9333333333334'$ Reference Longitude = 90

Location: Tennessee Agricultural Museum

Semi-major axis = 84 Semi-minor axis = 49.45

Gnomon Height = 60 Shadow Length = 13.4 / 101.9

The analemma dial has been adjusted -3.25° or -13 minutes 0 seconds for the difference in the dial longitude and the reference meridian.

Negative x values are to the left of the N-S line and negative y values are below the E-W line.

All angles are all measured from the N-S line.

Time	Hour Points
6:00	x=-83.86 y= 2.8
7:00	x=-79.77 y= 15.49
8:00	x=-70.25 y= 27.11
9:00	x=-55.93 y= 36.89
10:00	x=-37.81 y= 44.16
11:00	x=-17.1 y= 48.41
12:00	x= 4.76 y= 49.37
13:00	x= 26.31 y= 46.96
14:00	x= 46.06 y= 41.35
15:00	x= 62.67 y= 32.93
16:00	x= 75.01 y= 22.26
17:00	x= 82.24 y= 10.07
18:00	x= 83.86 y=-2.8

Scale of Dates

1/1	-28.824
2/1	-20.943
3/1	-9.164
4/1	5.233
5/1	18.153
6/1	27.422
6/21	29.437
7/1	29.005
8/1	22.156
9/1	9.92
10/1	-3.784
11/1	-17.491
12/1	-27.166
12/21	-29.4

Time Central Angles

6:00	-88.1°
7:00	-79°
8:00	-68.9°
9:00	-56.6°
10:00	-40.6°
11:00	-19.5°
12:00	5.5°
13:00	29.3°