

Analemmatic Sundial

Latitude: 25.0° N/S

Earliest Sunrise: 5:09 a.m.    Latest Sunset: 6:51 p.m.  
 Semi-Major Axis (E-W): 1000 mm    Semi-Minor Axis (N-S): 422.6 mm  
 Sunrise/Sunset Markers: X = ± 809.2 mm

Local Time	X	Y	Z	W	Local Time	X	Y	Z	W		
12:00	0.0	422.6	422.6	0.0							
11:55	12:05	21.8	422.5	423.1	21.8	8:25	3:35	806.4	249.9	844.3	824.7
11:50	12:10	43.6	422.2	424.5	43.6	8:20	3:40	819.2	242.4	854.3	838.7
11:45	12:15	65.4	421.7	426.8	65.4	8:15	3:45	831.5	234.8	864.0	852.4
11:40	12:20	87.2	421.0	429.9	87.2	8:10	3:50	843.4	227.1	873.4	865.8
11:35	12:25	108.9	420.1	434.0	108.9	8:05	3:55	854.9	219.2	882.6	878.8
11:30	12:30	130.5	419.0	438.9	130.6	8:00	4:00	866.0	211.3	891.4	891.4
11:25	12:35	152.1	417.7	444.5	152.2	7:55	4:05	876.7	203.3	900.0	903.7
11:20	12:40	173.6	416.2	451.0	173.8	7:50	4:10	887.0	195.1	908.2	915.7
11:15	12:45	195.1	414.5	458.1	195.3	7:45	4:15	896.9	186.9	916.1	927.3
11:10	12:50	216.4	412.6	465.9	216.7	7:40	4:20	906.3	178.6	923.7	938.6
11:05	12:55	237.7	410.5	474.4	238.0	7:35	4:25	915.3	170.2	931.0	949.5
11:00	1:00	258.8	408.2	483.4	259.2	7:30	4:30	923.9	161.7	937.9	960.0
10:55	1:05	279.8	405.7	492.9	280.3	7:25	4:35	932.0	153.2	944.5	970.2
10:50	1:10	300.7	403.1	502.9	301.3	7:20	4:40	939.7	144.5	950.7	980.0
10:45	1:15	321.4	400.2	513.3	322.2	7:15	4:45	946.9	135.8	956.6	989.4
10:40	1:20	342.0	397.1	524.1	343.0	7:10	4:50	953.7	127.1	962.1	998.5
10:35	1:25	362.4	393.9	535.3	363.6	7:05	4:55	960.0	118.3	967.3	1007.1
10:30	1:30	382.7	390.4	546.7	384.0	7:00	5:00	965.9	109.4	972.1	1015.4
10:25	1:35	402.7	386.8	558.4	404.3	6:55	5:05	971.3	100.5	976.5	1023.4
10:20	1:40	422.6	383.0	570.4	424.5	6:50	5:10	976.3	91.5	980.6	1030.9
10:15	1:45	442.3	379.0	582.5	444.4	6:45	5:15	980.8	82.4	984.2	1038.1
10:10	1:50	461.7	374.9	594.8	464.2	6:40	5:20	984.8	73.4	987.5	1044.9
10:05	1:55	481.0	370.5	607.2	483.8	6:35	5:25	988.4	64.3	990.5	1051.3
10:00	2:00	500.0	366.0	619.6	503.2	6:30	5:30	991.4	55.2	993.0	1057.3
9:55	2:05	518.8	361.3	632.2	522.4	6:25	5:35	994.1	46.0	995.1	1063.0
9:50	2:10	537.3	356.4	644.8	541.4	6:20	5:40	996.2	36.8	996.9	1068.3
9:45	2:15	555.6	351.4	657.4	560.1	6:15	5:45	997.9	27.6	998.2	1073.2
9:40	2:20	573.6	346.2	670.0	578.6	6:10	5:50	999.0	18.4	999.2	1077.7
9:35	2:25	591.3	340.8	682.5	596.9	6:05	5:55	999.8	9.2	999.8	1081.9
9:30	2:30	608.8	335.3	695.0	615.0	6:00	6:00	1000.0	0.0	1000.0	1085.6
9:25	2:35	625.9	329.6	707.4	632.8	5:55	6:05	999.8	-9.2	999.8	1089.0
9:20	2:40	642.8	323.7	719.7	650.3	5:50	6:10	999.0	-18.4	999.2	1092.1
9:15	2:45	659.3	317.7	731.9	667.6	5:45	6:15	997.9	-27.6	998.2	1094.7
9:10	2:50	675.6	311.6	744.0	684.7	5:40	6:20	996.2	-36.8	996.9	1097.0
9:05	2:55	691.5	305.3	755.9	701.4	5:35	6:25	994.1	-46.0	995.1	1099.0
9:00	3:00	707.1	298.8	767.7	717.9	5:30	6:30	991.4	-55.2	993.0	1100.6
8:55	3:05	722.4	292.2	779.2	734.0	5:25	6:35	988.4	-64.3	990.5	1101.8
8:50	3:10	737.3	285.5	790.6	749.9	5:20	6:40	984.8	-73.4	987.5	1102.7
8:45	3:15	751.8	278.7	801.8	765.5	5:15	6:45	980.8	-82.4	984.2	1103.2
8:40	3:20	766.0	271.7	812.8	780.8	5:10	6:50	976.3	-91.5	980.6	1103.4
8:35	3:25	779.9	264.5	823.5	795.7	5:05	6:55	971.3	-100.5	976.5	1103.2
8:30	3:30	793.4	257.3	834.0	810.4	5:00	7:00	965.9	-109.4	972.1	1102.7

## Analematic Sundial

Latitude: 25.0° N/S

## Date Scale

Semi-Major Axis (E-W): 1000 mm    Semi-Minor Axis (N-S): 422.6 mm

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	-384.5	-377.3	-375.0	-365.1	-362.1	-349.7	-346.3	-331.5	-327.5	-310.8	-306.4
February	-278.1	-257.8	-252.5	-231.0	-225.6	-203.1	-197.3	-174.0	-168.1	-144.2	-138.0
March	-119.8	-95.3	-89.0	-64.2	-58.0	-32.9	-26.7	-1.6	4.6	29.6	35.8
April	72.9	97.3	103.4	127.4	133.3	156.9	162.6	185.5	191.2	213.2	218.6
May	244.9	265.0	269.8	288.5	293.1	310.3	314.4	330.0	333.8	347.5	350.6
June	367.6	376.5	378.6	385.1	386.6	390.7	391.3	392.8	392.9	390.1	391.4
July	386.6	380.4	378.6	370.2	367.8	357.0	354.1	341.2	337.8	323.1	319.2
August	294.1	275.9	271.2	251.7	246.7	226.1	220.8	199.3	193.8	171.4	165.7
September	131.1	107.4	101.5	77.4	71.3	47.0	41.0	16.5	10.3	-14.4	-20.6
October	-51.3	-75.9	-82.0	-106.5	-112.4	-136.6	-142.6	-166.2	-172.1	-195.1	-200.8
November	-233.9	-255.1	-260.2	-280.2	-285.1	-303.6	-308.0	-324.9	-328.8	-343.7	-347.4
December	-362.9	-373.4	-375.6	-383.2	-384.9	-389.8	-390.7	-392.8	-392.9	-392.0	-391.4

Northern Hemisphere

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	384.5	377.3	375.0	365.1	362.1	349.7	346.3	331.5	327.5	310.8	306.4
February	278.1	257.8	252.5	231.0	225.6	203.1	197.3	174.0	168.1	144.2	138.0
March	119.8	95.3	89.0	64.2	58.0	32.9	26.7	1.6	-4.6	-29.6	-35.8
April	-72.9	-97.3	-103.4	-127.4	-133.3	-156.9	-162.6	-185.5	-191.2	-213.2	-218.6
May	-244.9	-265.0	-269.8	-288.5	-293.1	-310.3	-314.4	-330.0	-333.8	-347.5	-350.6
June	-367.6	-376.5	-378.6	-385.1	-386.6	-390.7	-391.3	-392.8	-392.9	-390.1	-391.4
July	-386.6	-380.4	-378.6	-370.2	-367.8	-357.0	-354.1	-341.2	-337.8	-323.1	-319.2
August	-294.1	-275.9	-271.2	-251.7	-246.7	-226.1	-220.8	-199.3	-193.8	-171.4	-165.7
September	-131.1	-107.4	-101.5	-77.4	-71.3	-47.0	-41.0	-16.5	-10.3	14.4	20.6
October	51.3	75.9	82.0	106.5	112.4	136.6	142.6	166.2	172.1	195.1	200.8
November	233.9	255.1	260.2	280.2	285.1	303.6	308.0	324.9	328.8	343.7	347.4
December	362.9	373.4	375.6	383.2	384.9	389.8	390.7	392.8	392.9	392.0	391.4

Southern Hemisphere

The shaded "Date" boxes identify the two extremes of the "Date Scale" that occur on the Summer and Winter Solstices.

A number of "Date Scale" configurations are available including the following "Date Line" combinations:

- |         |            |                    |
|---------|------------|--------------------|
| a) 1    | c) 1,10,20 | e) 1,5,10,15,20,25 |
| b) 1,15 | d) 1,11,21 | f) 1,6,11,16,21,26 |

## Analemmatic Sundial

Latitude: 25.0° N/S

Earliest Sunrise: 5:09 a.m.    Latest Sunset: 6:51 p.m.  
 Semi-Major Axis (E-W): 1500 mm    Semi-Minor Axis (N-S): 633.9 mm  
 Sunrise/Sunset Markers: X = ± 1213.8 mm

Local Time	X	Y	Z	W	Local Time	X	Y	Z	W		
12:00	0.0	633.9	633.9	0.0							
11:55	12:05	32.7	633.8	634.6	32.7	8:25	3:35	1209.7	374.8	1266.4	1237.1
11:50	12:10	65.4	633.3	636.7	65.4	8:20	3:40	1228.7	363.6	1281.4	1258.1
11:45	12:15	98.1	632.6	640.1	98.1	8:15	3:45	1247.2	352.2	1296.0	1278.6
11:40	12:20	130.7	631.5	644.9	130.8	8:10	3:50	1265.1	340.6	1310.1	1298.6
11:35	12:25	163.3	630.2	651.0	163.3	8:05	3:55	1282.4	328.9	1323.9	1318.2
11:30	12:30	195.8	628.5	658.3	195.9	8:00	4:00	1299.0	317.0	1337.1	1337.1
11:25	12:35	228.2	626.5	666.8	228.3	7:55	4:05	1315.1	304.9	1350.0	1355.6
11:20	12:40	260.5	624.3	676.5	260.7	7:50	4:10	1330.5	292.7	1362.3	1373.6
11:15	12:45	292.6	621.7	687.2	292.9	7:45	4:15	1345.3	280.4	1374.2	1391.0
11:10	12:50	324.7	618.9	698.9	325.0	7:40	4:20	1359.5	267.9	1385.6	1407.9
11:05	12:55	356.5	615.8	711.5	357.0	7:35	4:25	1373.0	255.3	1396.5	1424.2
11:00	1:00	388.2	612.3	725.0	388.8	7:30	4:30	1385.8	242.6	1406.9	1440.0
10:55	1:05	419.7	608.6	739.3	420.5	7:25	4:35	1398.0	229.8	1416.8	1455.3
10:50	1:10	451.1	604.6	754.3	452.0	7:20	4:40	1409.5	216.8	1426.1	1470.0
10:45	1:15	482.2	600.3	769.9	483.3	7:15	4:45	1420.4	203.8	1434.9	1484.1
10:40	1:20	513.0	595.7	786.2	514.5	7:10	4:50	1430.6	190.6	1443.2	1497.7
10:35	1:25	543.7	590.8	802.9	545.4	7:05	4:55	1440.1	177.4	1451.0	1510.7
10:30	1:30	574.0	585.7	820.1	576.0	7:00	5:00	1448.9	164.1	1458.1	1523.2
10:25	1:35	604.1	580.2	837.6	606.5	6:55	5:05	1457.0	150.7	1464.8	1535.1
10:20	1:40	633.9	574.5	855.5	636.7	6:50	5:10	1464.4	137.2	1470.9	1546.4
10:15	1:45	663.4	568.6	873.7	666.6	6:45	5:15	1471.2	123.7	1476.4	1557.2
10:10	1:50	692.6	562.3	892.1	696.3	6:40	5:20	1477.2	110.1	1481.3	1567.3
10:05	1:55	721.5	555.8	910.7	725.7	6:35	5:25	1482.5	96.4	1485.7	1577.0
10:00	2:00	750.0	549.0	929.5	754.8	6:30	5:30	1487.2	82.7	1489.5	1586.0
9:55	2:05	778.2	542.0	948.3	783.6	6:25	5:35	1491.1	69.0	1492.7	1594.5
9:50	2:10	805.9	534.6	967.2	812.0	6:20	5:40	1494.3	55.3	1495.3	1602.4
9:45	2:15	833.4	527.1	986.1	840.2	6:15	5:45	1496.8	41.5	1497.4	1609.8
9:40	2:20	860.4	519.3	1004.9	868.0	6:10	5:50	1498.6	27.7	1498.8	1616.6
9:35	2:25	887.0	511.2	1023.7	895.4	6:05	5:55	1499.6	13.8	1499.7	1622.8
9:30	2:30	913.1	502.9	1042.5	922.5	6:00	6:00	1500.0	0.0	1500.0	1628.5
9:25	2:35	938.9	494.4	1061.1	949.2	5:55	6:05	1499.6	-13.8	1499.7	1633.6
9:20	2:40	964.2	485.6	1079.6	975.5	5:50	6:10	1498.6	-27.7	1498.8	1638.1
9:15	2:45	989.0	476.6	1097.9	1001.5	5:45	6:15	1496.8	-41.5	1497.4	1642.1
9:10	2:50	1013.4	467.4	1116.0	1027.0	5:40	6:20	1494.3	-55.3	1495.3	1645.6
9:05	2:55	1037.3	457.9	1133.9	1052.1	5:35	6:25	1491.1	-69.0	1492.7	1648.5
9:00	3:00	1060.7	448.3	1151.5	1076.8	5:30	6:30	1487.2	-82.7	1489.5	1650.8
8:55	3:05	1083.5	438.4	1168.9	1101.1	5:25	6:35	1482.5	-96.4	1485.7	1652.7
8:50	3:10	1105.9	428.3	1185.9	1124.9	5:20	6:40	1477.2	-110.1	1481.3	1654.0
8:45	3:15	1127.8	418.0	1202.7	1148.2	5:15	6:45	1471.2	-123.7	1476.4	1654.8
8:40	3:20	1149.1	407.5	1219.2	1171.2	5:10	6:50	1464.4	-137.2	1470.9	1655.1
8:35	3:25	1169.8	396.8	1235.3	1193.6	5:05	6:55	1457.0	-150.7	1464.8	1654.8
8:30	3:30	1190.0	385.9	1251.0	1215.6	5:00	7:00	1448.9	-164.1	1458.1	1654.1

## Analematic Sundial

Latitude: 25.0° N/S

## Date Scale

Semi-Major Axis (E-W): 1500 mm    Semi-Minor Axis (N-S): 633.9 mm

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	-576.8	-565.9	-562.6	-547.6	-543.2	-524.6	-519.4	-497.2	-491.3	-466.2	-459.6
February	-417.2	-386.7	-378.8	-346.5	-338.4	-304.6	-295.9	-261.1	-252.2	-216.3	-207.1
March	-179.7	-142.9	-133.5	-96.3	-87.0	-49.4	-40.1	-2.4	6.9	44.4	53.7
April	109.4	146.0	155.1	191.1	200.0	235.3	243.9	278.3	286.7	319.9	327.9
May	367.3	397.5	404.8	432.8	439.6	465.4	471.6	495.1	500.7	521.3	525.9
June	551.5	564.8	567.8	577.6	579.9	586.0	586.9	589.1	589.4	585.2	587.2
July	579.9	570.6	567.8	555.3	551.7	535.5	531.1	511.8	506.7	484.6	478.7
August	441.2	413.8	406.8	377.5	370.1	339.2	331.1	298.9	290.7	257.1	248.5
September	196.6	161.1	152.2	116.1	107.0	70.5	61.5	24.7	15.4	-21.6	-30.9
October	-77.0	-113.9	-123.0	-159.7	-168.6	-204.9	-213.9	-249.3	-258.1	-292.7	-301.1
November	-350.8	-382.6	-390.3	-420.3	-427.6	-455.4	-462.0	-487.3	-493.2	-515.6	-521.0
December	-544.3	-560.1	-563.4	-574.8	-577.3	-584.6	-586.0	-589.1	-589.4	-588.0	-587.2

Northern Hemisphere

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	576.8	565.9	562.6	547.6	543.2	524.6	519.4	497.2	491.3	466.2	459.6
February	417.2	386.7	378.8	346.5	338.4	304.6	295.9	261.1	252.2	216.3	207.1
March	179.7	142.9	133.5	96.3	87.0	49.4	40.1	2.4	-6.9	-44.4	-53.7
April	-109.4	-146.0	-155.1	-191.1	-200.0	-235.3	-243.9	-278.3	-286.7	-319.9	-327.9
May	-367.3	-397.5	-404.8	-432.8	-439.6	-465.4	-471.6	-495.1	-500.7	-521.3	-525.9
June	-551.5	-564.8	-567.8	-577.6	-579.9	-586.0	-586.9	-589.1	-589.4	-585.2	-587.2
July	-579.9	-570.6	-567.8	-555.3	-551.7	-535.5	-531.1	-511.8	-506.7	-484.6	-478.7
August	-441.2	-413.8	-406.8	-377.5	-370.1	-339.2	-331.1	-298.9	-290.7	-257.1	-248.5
September	-196.6	-161.1	-152.2	-116.1	-107.0	-70.5	-61.5	-24.7	-15.4	21.6	30.9
October	77.0	113.9	123.0	159.7	168.6	204.9	213.9	249.3	258.1	292.7	301.1
November	350.8	382.6	390.3	420.3	427.6	455.4	462.0	487.3	493.2	515.6	521.0
December	544.3	560.1	563.4	574.8	577.3	584.6	586.0	589.1	589.4	588.0	587.2

Southern Hemisphere

The shaded "Date" boxes identify the two extremes of the "Date Scale" that occur on the Summer and Winter Solstices.

A number of "Date Scale" configurations are available including the following "Date Line" combinations:

- |         |            |                    |
|---------|------------|--------------------|
| a) 1    | c) 1,10,20 | e) 1,5,10,15,20,25 |
| b) 1,15 | d) 1,11,21 | f) 1,6,11,16,21,26 |

Analemmatic Sundial

Latitude: 25.0° N/S

Earliest Sunrise: 5:09 a.m.    Latest Sunset: 6:51 p.m.  
 Semi-Major Axis (E-W): 2000 mm    Semi-Minor Axis (N-S): 845.2 mm  
 Sunrise/Sunset Markers: X = ± 1618.4 mm

Local Time	X	Y	Z	W	Local Time	X	Y	Z	W		
12:00	0.0	845.2	845.2	0.0							
11:55	12:05	43.6	845.0	846.2	43.6	8:25	3:35	1612.9	499.8	1688.6	1649.5
11:50	12:10	87.2	844.4	848.9	87.2	8:20	3:40	1638.3	484.8	1708.5	1677.5
11:45	12:15	130.8	843.4	853.5	130.8	8:15	3:45	1662.9	469.6	1728.0	1704.8
11:40	12:20	174.3	842.0	859.9	174.3	8:10	3:50	1686.8	454.1	1746.8	1731.5
11:35	12:25	217.7	840.2	868.0	217.8	8:05	3:55	1709.8	438.5	1765.2	1757.5
11:30	12:30	261.1	838.0	877.7	261.2	8:00	4:00	1732.1	422.6	1782.9	1782.9
11:25	12:35	304.2	835.4	889.1	304.4	7:55	4:05	1753.5	406.5	1800.0	1807.5
11:20	12:40	347.3	832.4	901.9	347.5	7:50	4:10	1774.0	390.3	1816.4	1831.4
11:15	12:45	390.2	829.0	916.2	390.5	7:45	4:15	1793.7	373.8	1832.3	1854.7
11:10	12:50	432.9	825.2	931.8	433.3	7:40	4:20	1812.6	357.2	1847.5	1877.2
11:05	12:55	475.4	821.0	948.7	476.0	7:35	4:25	1830.6	340.4	1862.0	1899.0
11:00	1:00	517.6	816.4	966.7	518.4	7:30	4:30	1847.8	323.5	1875.9	1920.0
10:55	1:05	559.7	811.5	985.7	560.7	7:25	4:35	1864.0	306.3	1889.0	1940.3
10:50	1:10	601.4	806.1	1005.7	602.7	7:20	4:40	1879.4	289.1	1901.5	1959.9
10:45	1:15	642.9	800.4	1026.6	644.4	7:15	4:45	1893.9	271.7	1913.2	1978.8
10:40	1:20	684.0	794.3	1048.2	685.9	7:10	4:50	1907.4	254.2	1924.3	1996.9
10:35	1:25	724.9	787.8	1070.5	727.2	7:05	4:55	1920.1	236.5	1934.6	2014.3
10:30	1:30	765.4	780.9	1093.4	768.1	7:00	5:00	1931.9	218.8	1944.2	2030.9
10:25	1:35	805.5	773.7	1116.9	808.7	6:55	5:05	1942.7	200.9	1953.0	2046.8
10:20	1:40	845.2	766.0	1140.7	848.9	6:50	5:10	1952.6	182.9	1961.1	2061.9
10:15	1:45	884.6	758.1	1165.0	888.9	6:45	5:15	1961.6	164.9	1968.5	2076.2
10:10	1:50	923.5	749.7	1189.5	928.4	6:40	5:20	1969.6	146.8	1975.1	2089.8
10:05	1:55	962.0	741.0	1214.3	967.6	6:35	5:25	1976.7	128.6	1980.9	2102.6
10:00	2:00	1000.0	732.0	1239.3	1006.4	6:30	5:30	1982.9	110.3	1986.0	2114.7
9:55	2:05	1037.5	722.6	1264.4	1044.8	6:25	5:35	1988.1	92.0	1990.2	2126.0
9:50	2:10	1074.6	712.9	1289.6	1082.7	6:20	5:40	1992.4	73.7	1993.8	2136.6
9:45	2:15	1111.1	702.8	1314.7	1120.2	6:15	5:45	1995.7	55.3	1996.5	2146.4
9:40	2:20	1147.2	692.4	1339.9	1157.3	6:10	5:50	1998.1	36.9	1998.4	2155.4
9:35	2:25	1182.6	681.6	1365.0	1193.9	6:05	5:55	1999.5	18.4	1999.6	2163.7
9:30	2:30	1217.5	670.6	1390.0	1230.0	6:00	6:00	2000.0	0.0	2000.0	2171.3
9:25	2:35	1251.8	659.2	1414.8	1265.6	5:55	6:05	1999.5	-18.4	1999.6	2178.1
9:20	2:40	1285.6	647.5	1439.4	1300.7	5:50	6:10	1998.1	-36.9	1998.4	2184.1
9:15	2:45	1318.7	635.5	1463.8	1335.3	5:45	6:15	1995.7	-55.3	1996.5	2189.5
9:10	2:50	1351.2	623.2	1488.0	1369.3	5:40	6:20	1992.4	-73.7	1993.8	2194.1
9:05	2:55	1383.0	610.6	1511.8	1402.8	5:35	6:25	1988.1	-92.0	1990.2	2198.0
9:00	3:00	1414.2	597.7	1535.3	1435.7	5:30	6:30	1982.9	-110.3	1986.0	2201.1
8:55	3:05	1444.7	584.5	1558.5	1468.1	5:25	6:35	1976.7	-128.6	1980.9	2203.6
8:50	3:10	1474.6	571.0	1581.3	1499.8	5:20	6:40	1969.6	-146.8	1975.1	2205.3
8:45	3:15	1503.7	557.3	1603.6	1531.0	5:15	6:45	1961.6	-164.9	1968.5	2206.4
8:40	3:20	1532.1	543.3	1625.6	1561.6	5:10	6:50	1952.6	-182.9	1961.1	2206.8
8:35	3:25	1559.8	529.1	1647.1	1591.5	5:05	6:55	1942.7	-200.9	1953.0	2206.5
8:30	3:30	1586.7	514.5	1668.1	1620.8	5:00	7:00	1931.9	-218.8	1944.2	2205.5

## Analemmatic Sundial

Latitude: 25.0° N/S

## Date Scale

Semi-Major Axis (E-W): 2000 mm    Semi-Minor Axis (N-S): 845.2 mm

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	-769.0	-754.5	-750.1	-730.1	-724.3	-699.4	-692.5	-663.0	-655.1	-621.7	-612.8
February	-556.2	-515.7	-505.1	-462.0	-451.3	-406.2	-394.6	-348.1	-336.3	-288.4	-276.1
March	-239.6	-190.5	-178.0	-128.3	-115.9	-65.8	-53.5	-3.2	9.2	59.2	71.5
April	145.8	194.7	206.8	254.7	266.7	313.7	325.2	371.1	382.3	426.5	437.2
May	489.8	530.0	539.7	577.1	586.2	620.6	628.7	660.1	667.6	695.1	701.2
June	735.3	753.0	757.1	770.2	773.1	781.4	782.5	785.5	785.9	780.3	782.9
July	773.1	760.8	757.1	740.5	735.7	714.0	708.2	682.4	675.5	646.2	638.3
August	588.3	551.8	542.4	503.4	493.5	452.3	441.5	398.5	387.6	342.8	331.4
September	262.2	214.9	203.0	154.8	142.7	94.0	82.0	32.9	20.6	-28.8	-41.1
October	-102.6	-151.9	-164.0	-212.9	-224.8	-273.2	-285.1	-332.4	-344.1	-390.2	-401.5
November	-467.8	-510.2	-520.4	-560.4	-570.1	-607.2	-616.0	-649.7	-657.6	-687.5	-694.7
December	-725.7	-746.7	-751.2	-766.4	-769.8	-779.5	-781.4	-785.5	-785.9	-784.0	-782.9

Northern Hemisphere

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	769.0	754.5	750.1	730.1	724.3	699.4	692.5	663.0	655.1	621.7	612.8
February	556.2	515.7	505.1	462.0	451.3	406.2	394.6	348.1	336.3	288.4	276.1
March	239.6	190.5	178.0	128.3	115.9	65.8	53.5	3.2	-9.2	-59.2	-71.5
April	-145.8	-194.7	-206.8	-254.7	-266.7	-313.7	-325.2	-371.1	-382.3	-426.5	-437.2
May	-489.8	-530.0	-539.7	-577.1	-586.2	-620.6	-628.7	-660.1	-667.6	-695.1	-701.2
June	-735.3	-753.0	-757.1	-770.2	-773.1	-781.4	-782.5	-785.5	-785.9	-780.3	-782.9
July	-773.1	-760.8	-757.1	-740.5	-735.7	-714.0	-708.2	-682.4	-675.5	-646.2	-638.3
August	-588.3	-551.8	-542.4	-503.4	-493.5	-452.3	-441.5	-398.5	-387.6	-342.8	-331.4
September	-262.2	-214.9	-203.0	-154.8	-142.7	-94.0	-82.0	-32.9	-20.6	28.8	41.1
October	102.6	151.9	164.0	212.9	224.8	273.2	285.1	332.4	344.1	390.2	401.5
November	467.8	510.2	520.4	560.4	570.1	607.2	616.0	649.7	657.6	687.5	694.7
December	725.7	746.7	751.2	766.4	769.8	779.5	781.4	785.5	785.9	784.0	782.9

Southern Hemisphere

The shaded "Date" boxes identify the two extremes of the "Date Scale" that occur on the Summer and Winter Solstices.

A number of "Date Scale" configurations are available including the following "Date Line" combinations:

- |         |            |                    |
|---------|------------|--------------------|
| a) 1    | c) 1,10,20 | e) 1,5,10,15,20,25 |
| b) 1,15 | d) 1,11,21 | f) 1,6,11,16,21,26 |

## Analemmatic Sundial

Latitude: 25.0° N/S

Earliest Sunrise: 5:09 a.m.    Latest Sunset: 6:51 p.m.  
 Semi-Major Axis (E-W): 2500 mm    Semi-Minor Axis (N-S): 1056.5 mm  
 Sunrise/Sunset Markers: X = ± 2023.0 mm

Local Time	X	Y	Z	W	Local Time	X	Y	Z	W		
12:00	0.0	1056.5	1056.5	0.0							
11:55	12:05	54.5	1056.3	1057.7	54.5	8:25	3:35	2016.1	624.7	2110.7	2061.8
11:50	12:10	109.0	1055.5	1061.2	109.1	8:20	3:40	2047.9	606.0	2135.7	2096.9
11:45	12:15	163.5	1054.3	1066.9	163.5	8:15	3:45	2078.7	587.0	2160.0	2131.0
11:40	12:20	217.9	1052.5	1074.8	217.9	8:10	3:50	2108.5	567.7	2183.6	2164.4
11:35	12:25	272.2	1050.3	1085.0	272.2	8:05	3:55	2137.3	548.1	2206.4	2196.9
11:30	12:30	326.3	1047.5	1097.2	326.4	8:00	4:00	2165.1	528.3	2228.6	2228.6
11:25	12:35	380.3	1044.2	1111.3	380.5	7:55	4:05	2191.8	508.2	2250.0	2259.4
11:20	12:40	434.1	1040.5	1127.4	434.4	7:50	4:10	2217.5	487.9	2270.6	2289.3
11:15	12:45	487.7	1036.2	1145.3	488.1	7:45	4:15	2242.2	467.3	2290.4	2318.3
11:10	12:50	541.1	1031.5	1164.8	541.7	7:40	4:20	2265.8	446.5	2309.3	2346.5
11:05	12:55	594.2	1026.3	1185.9	595.0	7:35	4:25	2288.3	425.5	2327.5	2373.7
11:00	1:00	647.0	1020.5	1208.4	648.0	7:30	4:30	2309.7	404.3	2344.8	2400.0
10:55	1:05	699.6	1014.3	1232.2	700.8	7:25	4:35	2330.0	382.9	2361.3	2425.4
10:50	1:10	751.8	1007.6	1257.2	753.4	7:20	4:40	2349.2	361.4	2376.9	2449.9
10:45	1:15	803.6	1000.5	1283.2	805.6	7:15	4:45	2367.3	339.6	2391.6	2473.5
10:40	1:20	855.1	992.8	1310.3	857.4	7:10	4:50	2384.3	317.7	2405.4	2496.1
10:35	1:25	906.1	984.7	1338.2	908.9	7:05	4:55	2400.1	295.7	2418.3	2517.8
10:30	1:30	956.7	976.1	1366.8	960.1	7:00	5:00	2414.8	273.5	2430.2	2538.6
10:25	1:35	1006.9	967.1	1396.1	1010.8	6:55	5:05	2428.4	251.1	2441.3	2558.4
10:20	1:40	1056.5	957.6	1425.9	1061.2	6:50	5:10	2440.7	228.7	2451.4	2577.3
10:15	1:45	1105.7	947.6	1456.2	1111.1	6:45	5:15	2452.0	206.1	2460.6	2595.3
10:10	1:50	1154.4	937.2	1486.9	1160.5	6:40	5:20	2462.0	183.5	2468.8	2612.2
10:05	1:55	1202.5	926.3	1517.9	1209.5	6:35	5:25	2470.9	160.7	2476.1	2628.3
10:00	2:00	1250.0	915.0	1549.1	1258.0	6:30	5:30	2478.6	137.9	2482.4	2643.4
9:55	2:05	1296.9	903.3	1580.5	1306.0	6:25	5:35	2485.1	115.0	2487.8	2657.5
9:50	2:10	1343.2	891.1	1611.9	1353.4	6:20	5:40	2490.5	92.1	2492.2	2670.7
9:45	2:15	1388.9	878.5	1643.4	1400.3	6:15	5:45	2494.6	69.1	2495.6	2683.0
9:40	2:20	1433.9	865.5	1674.9	1446.6	6:10	5:50	2497.6	46.1	2498.0	2694.3
9:35	2:25	1478.3	852.0	1706.2	1492.4	6:05	5:55	2499.4	23.0	2499.5	2704.7
9:30	2:30	1521.9	838.2	1737.5	1537.5	6:00	6:00	2500.0	0.0	2500.0	2714.1
9:25	2:35	1564.8	824.0	1768.5	1582.0	5:55	6:05	2499.4	-23.0	2499.5	2722.6
9:20	2:40	1607.0	809.4	1799.3	1625.9	5:50	6:10	2497.6	-46.1	2498.0	2730.2
9:15	2:45	1648.4	794.4	1829.8	1669.1	5:45	6:15	2494.6	-69.1	2495.6	2736.8
9:10	2:50	1689.0	779.0	1860.0	1711.6	5:40	6:20	2490.5	-92.1	2492.2	2742.6
9:05	2:55	1728.8	763.2	1889.8	1753.5	5:35	6:25	2485.1	-115.0	2487.8	2747.5
9:00	3:00	1767.8	747.1	1919.2	1794.6	5:30	6:30	2478.6	-137.9	2482.4	2751.4
8:55	3:05	1805.9	730.6	1948.1	1835.1	5:25	6:35	2470.9	-160.7	2476.1	2754.5
8:50	3:10	1843.2	713.8	1976.6	1874.8	5:20	6:40	2462.0	-183.5	2468.8	2756.7
8:45	3:15	1879.6	696.6	2004.5	1913.7	5:15	6:45	2452.0	-206.1	2460.6	2758.0
8:40	3:20	1915.1	679.1	2032.0	1951.9	5:10	6:50	2440.7	-228.7	2451.4	2758.4
8:35	3:25	1949.7	661.3	2058.8	1989.4	5:05	6:55	2428.4	-251.1	2441.3	2758.1
8:30	3:30	1983.4	643.2	2085.1	2026.0	5:00	7:00	2414.8	-273.5	2430.2	2756.9

## Analematic Sundial

Latitude: 25.0° N/S

## Date Scale

Semi-Major Axis (E-W): 2500 mm    Semi-Minor Axis (N-S): 1056.5 mm

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	-961.3	-943.1	-937.6	-912.7	-905.3	-874.3	-865.7	-828.7	-818.9	-777.1	-766.0
February	-695.3	-644.6	-631.3	-577.5	-564.1	-507.7	-493.2	-435.1	-420.3	-360.5	-345.1
March	-299.5	-238.1	-222.6	-160.4	-144.9	-82.3	-66.9	-4.0	11.5	74.0	89.4
April	182.3	243.3	258.6	318.4	333.4	392.2	406.5	463.9	477.9	533.1	546.5
May	612.2	662.6	674.6	721.4	732.7	775.7	785.9	825.1	834.5	868.8	876.6
June	919.1	941.3	946.4	962.7	966.4	976.7	978.1	981.9	982.4	975.3	978.6
July	966.4	951.0	946.4	925.6	919.6	892.5	885.2	853.0	844.4	807.7	797.9
August	735.3	689.7	678.0	629.2	616.9	565.3	551.9	498.2	484.5	428.5	414.2
September	327.7	268.6	253.7	193.4	178.3	117.6	102.5	41.1	25.7	-36.0	-51.4
October	-128.3	-189.9	-205.0	-266.2	-281.0	-341.5	-356.4	-415.4	-430.2	-487.8	-501.9
November	-584.7	-637.7	-650.6	-700.5	-712.7	-759.0	-770.0	-812.2	-822.0	-859.3	-868.4
December	-907.2	-933.4	-939.0	-958.0	-962.2	-974.4	-976.7	-981.9	-982.4	-980.0	-978.6

Northern Hemisphere

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	961.3	943.1	937.6	912.7	905.3	874.3	865.7	828.7	818.9	777.1	766.0
February	695.3	644.6	631.3	577.5	564.1	507.7	493.2	435.1	420.3	360.5	345.1
March	299.5	238.1	222.6	160.4	144.9	82.3	66.9	4.0	-11.5	-74.0	-89.4
April	-182.3	-243.3	-258.6	-318.4	-333.4	-392.2	-406.5	-463.9	-477.9	-533.1	-546.5
May	-612.2	-662.6	-674.6	-721.4	-732.7	-775.7	-785.9	-825.1	-834.5	-868.8	-876.6
June	-919.1	-941.3	-946.4	-962.7	-966.4	-976.7	-978.1	-981.9	-982.4	-975.3	-978.6
July	-966.4	-951.0	-946.4	-925.6	-919.6	-892.5	-885.2	-853.0	-844.4	-807.7	-797.9
August	-735.3	-689.7	-678.0	-629.2	-616.9	-565.3	-551.9	-498.2	-484.5	-428.5	-414.2
September	-327.7	-268.6	-253.7	-193.4	-178.3	-117.6	-102.5	-41.1	-25.7	36.0	51.4
October	128.3	189.9	205.0	266.2	281.0	341.5	356.4	415.4	430.2	487.8	501.9
November	584.7	637.7	650.6	700.5	712.7	759.0	770.0	812.2	822.0	859.3	868.4
December	907.2	933.4	939.0	958.0	962.2	974.4	976.7	981.9	982.4	980.0	978.6

Southern Hemisphere

The shaded "Date" boxes identify the two extremes of the "Date Scale" that occur on the Summer and Winter Solstices.

A number of "Date Scale" configurations are available including the following "Date Line" combinations:

- |         |            |                    |
|---------|------------|--------------------|
| a) 1    | c) 1,10,20 | e) 1,5,10,15,20,25 |
| b) 1,15 | d) 1,11,21 | f) 1,6,11,16,21,26 |