

Analemmatic Sundial

Latitude: 55.0° N/S

Earliest Sunrise: 3:19 a.m. Latest Sunset: 8:41 p.m.
 Semi-Major Axis (E-W): 1000 mm Semi-Minor Axis (N-S): 819.2 mm
 Sunrise/Sunset Markers: X = ± 279.9 mm

Local Time		X	Y	Z	W	Local Time		X	Y	Z	W
12:00		0.0	819.2	819.2	0.0						
11:55	12:05	21.8	819.0	819.2	21.8	8:25	3:35	806.4	484.4	940.7	873.2
11:50	12:10	43.6	818.4	819.5	43.6	8:20	3:40	819.2	469.8	944.3	890.5
11:45	12:15	65.4	817.4	820.0	65.4	8:15	3:45	831.5	455.1	947.9	907.7
11:40	12:20	87.2	816.0	820.7	87.2	8:10	3:50	843.4	440.1	951.3	924.6
11:35	12:25	108.9	814.3	821.5	109.0	8:05	3:55	854.9	425.0	954.7	941.4
11:30	12:30	130.5	812.1	822.6	130.7	8:00	4:00	866.0	409.6	958.0	958.0
11:25	12:35	152.1	809.6	823.8	152.4	7:55	4:05	876.7	394.0	961.2	974.4
11:20	12:40	173.6	806.7	825.2	174.1	7:50	4:10	887.0	378.2	964.3	990.6
11:15	12:45	195.1	803.4	826.8	195.7	7:45	4:15	896.9	362.3	967.3	1006.5
11:10	12:50	216.4	799.7	828.5	217.3	7:40	4:20	906.3	346.2	970.2	1022.3
11:05	12:55	237.7	795.7	830.4	238.8	7:35	4:25	915.3	329.9	973.0	1037.9
11:00	1:00	258.8	791.2	832.5	260.3	7:30	4:30	923.9	313.5	975.6	1053.2
10:55	1:05	279.8	786.4	834.7	281.7	7:25	4:35	932.0	296.9	978.2	1068.4
10:50	1:10	300.7	781.2	837.1	303.1	7:20	4:40	939.7	280.2	980.6	1083.3
10:45	1:15	321.4	775.7	839.6	324.4	7:15	4:45	946.9	263.3	982.9	1098.0
10:40	1:20	342.0	769.8	842.3	345.6	7:10	4:50	953.7	246.3	985.0	1112.5
10:35	1:25	362.4	763.5	845.1	366.7	7:05	4:55	960.0	229.2	987.0	1126.8
10:30	1:30	382.7	756.8	848.1	387.7	7:00	5:00	965.9	212.0	988.9	1140.9
10:25	1:35	402.7	749.8	851.1	408.7	6:55	5:05	971.3	194.7	990.7	1154.7
10:20	1:40	422.6	742.4	854.3	429.5	6:50	5:10	976.3	177.3	992.3	1168.4
10:15	1:45	442.3	734.7	857.5	450.3	6:45	5:15	980.8	159.8	993.7	1181.8
10:10	1:50	461.7	726.6	860.9	470.9	6:40	5:20	984.8	142.2	995.0	1195.0
10:05	1:55	481.0	718.2	864.4	491.5	6:35	5:25	988.4	124.6	996.2	1208.0
10:00	2:00	500.0	709.4	867.9	511.9	6:30	5:30	991.4	106.9	997.2	1220.8
9:55	2:05	518.8	700.3	871.5	532.2	6:25	5:35	994.1	89.2	998.0	1233.3
9:50	2:10	537.3	690.9	875.2	552.4	6:20	5:40	996.2	71.4	998.7	1245.6
9:45	2:15	555.6	681.1	879.0	572.5	6:15	5:45	997.9	53.6	999.3	1257.7
9:40	2:20	573.6	671.0	882.7	592.4	6:10	5:50	999.0	35.7	999.7	1269.6
9:35	2:25	591.3	660.6	886.6	612.2	6:05	5:55	999.8	17.9	999.9	1281.2
9:30	2:30	608.8	649.9	890.5	631.9	6:00	6:00	1000.0	0.0	1000.0	1292.7
9:25	2:35	625.9	638.8	894.4	651.4	5:55	6:05	999.8	-17.9	999.9	1303.9
9:20	2:40	642.8	627.5	898.3	670.7	5:50	6:10	999.0	-35.7	999.7	1314.9
9:15	2:45	659.3	615.9	902.2	690.0	5:45	6:15	997.9	-53.6	999.3	1325.7
9:10	2:50	675.6	603.9	906.2	709.0	5:40	6:20	996.2	-71.4	998.7	1336.2
9:05	2:55	691.5	591.7	910.1	728.0	5:35	6:25	994.1	-89.2	998.0	1346.6
9:00	3:00	707.1	579.2	914.1	746.7	5:30	6:30	991.4	-106.9	997.2	1356.7
8:55	3:05	722.4	566.5	918.0	765.3	5:25	6:35	988.4	-124.6	996.2	1366.6
8:50	3:10	737.3	553.4	921.9	783.7	5:20	6:40	984.8	-142.2	995.0	1376.3
8:45	3:15	751.8	540.1	925.7	802.0	5:15	6:45	980.8	-159.8	993.7	1385.8
8:40	3:20	766.0	526.5	929.6	820.0	5:10	6:50	976.3	-177.3	992.3	1395.0
8:35	3:25	779.9	512.7	933.3	837.9	5:05	6:55	971.3	-194.7	990.7	1404.1
8:30	3:30	793.4	498.7	937.1	855.6	5:00	7:00	965.9	-212.0	988.9	1412.9

Analemmatic Sundial

Latitude: 55.0° N/S

Earliest Sunrise: 3:19 a.m. Latest Sunset: 8:41 p.m.
 Semi-Major Axis (E-W): 1000 mm Semi-Minor Axis (N-S): 819.2 mm
 Sunrise/Sunset Markers: $X = \pm 279.9$ mm

Local Time		X	Y	Z	W
4:55	7:05	960.0	-229.2	987.0	1421.5
4:50	7:10	953.7	-246.3	985.0	1430.0
4:45	7:15	946.9	-263.3	982.9	1438.2
4:40	7:20	939.7	-280.2	980.6	1446.2
4:35	7:25	932.0	-296.9	978.2	1454.0
4:30	7:30	923.9	-313.5	975.6	1461.6
4:25	7:35	915.3	-329.9	973.0	1469.1
4:20	7:40	906.3	-346.2	970.2	1476.3
4:15	7:45	896.9	-362.3	967.3	1483.3
4:10	7:50	887.0	-378.2	964.3	1490.1
4:05	7:55	876.7	-394.0	961.2	1496.8
4:00	8:00	866.0	-409.6	958.0	1503.3
3:55	8:05	854.9	-425.0	954.7	1509.5
3:50	8:10	843.4	-440.1	951.3	1515.6
3:45	8:15	831.5	-455.1	947.9	1521.5
3:40	8:20	819.2	-469.8	944.3	1527.3
3:35	8:25	806.4	-484.4	940.7	1532.8
3:30	8:30	793.4	-498.7	937.1	1538.2
3:25	8:35	779.9	-512.7	933.3	1543.4
3:20	8:40	766.0	-526.5	929.6	1548.5
3:15	8:45	751.8	-540.1	925.7	1553.3

Analematic Sundial

Latitude: 55.0° N/S

Date Scale

Semi-Major Axis (E-W): 1000 mm Semi-Minor Axis (N-S): 815.2 mm

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	-243.4	-238.8	-237.3	-231.0	-229.2	-221.3	-219.1	-209.8	-207.3	-196.7	-193.9
February	-176.0	-163.2	-159.8	-146.2	-142.8	-128.5	-124.9	-110.1	-106.4	-91.3	-87.4
March	-75.8	-60.3	-56.3	-40.6	-36.7	-20.8	-16.9	-1.0	2.9	18.7	22.6
April	46.1	61.6	65.5	80.6	84.4	99.3	102.9	117.4	121.0	135.0	138.3
May	155.0	167.7	170.8	182.6	185.5	196.4	199.0	208.9	211.3	219.9	221.9
June	232.7	238.3	239.6	243.7	244.7	247.3	247.6	248.6	248.7	246.9	247.7
July	244.7	240.8	239.6	234.3	232.8	225.9	224.1	215.9	213.8	204.5	202.0
August	186.1	174.6	171.6	159.3	156.2	143.1	139.7	126.1	122.7	108.5	104.9
September	83.0	68.0	64.2	49.0	45.1	29.8	25.9	10.4	6.5	-9.1	-13.0
October	-32.5	-48.1	-51.9	-67.4	-71.1	-86.4	-90.2	-105.2	-108.9	-123.5	-127.1
November	-148.0	-161.4	-164.7	-177.3	-180.4	-192.1	-194.9	-205.6	-208.1	-217.5	-219.8
December	-229.6	-236.3	-237.7	-242.5	-243.6	-246.7	-247.3	-248.6	-248.7	-248.1	-247.7

Northern Hemisphere

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	243.4	238.8	237.3	231.0	229.2	221.3	219.1	209.8	207.3	196.7	193.9
February	176.0	163.2	159.8	146.2	142.8	128.5	124.9	110.1	106.4	91.3	87.4
March	75.8	60.3	56.3	40.6	36.7	20.8	16.9	1.0	-2.9	-18.7	-22.6
April	-46.1	-61.6	-65.5	-80.6	-84.4	-99.3	-102.9	-117.4	-121.0	-135.0	-138.3
May	-155.0	-167.7	-170.8	-182.6	-185.5	-196.4	-199.0	-208.9	-211.3	-219.9	-221.9
June	-232.7	-238.3	-239.6	-243.7	-244.7	-247.3	-247.6	-248.6	-248.7	-246.9	-247.7
July	-244.7	-240.8	-239.6	-234.3	-232.8	-225.9	-224.1	-215.9	-213.8	-204.5	-202.0
August	-186.1	-174.6	-171.6	-159.3	-156.2	-143.1	-139.7	-126.1	-122.7	-108.5	-104.9
September	-83.0	-68.0	-64.2	-49.0	-45.1	-29.8	-25.9	-10.4	-6.5	9.1	13.0
October	32.5	48.1	51.9	67.4	71.1	86.4	90.2	105.2	108.9	123.5	127.1
November	148.0	161.4	164.7	177.3	180.4	192.1	194.9	205.6	208.1	217.5	219.8
December	229.6	236.3	237.7	242.5	243.6	246.7	247.3	248.6	248.7	248.1	247.7

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: 55.0° N/S

Earliest Sunrise: 3:19 a.m. Latest Sunset: 8:41 p.m.
 Semi-Major Axis (E-W): 1500 mm Semi-Minor Axis (N-S): 1228.7 mm
 Sunrise/Sunset Markers: X = ± 419.9 mm

Local Time		X	Y	Z	W	Local Time		X	Y	Z	W
12:00		0.0	1228.7	1228.7	0.0						
11:55	12:05	32.7	1228.4	1228.9	32.7	8:25	3:35	1209.7	726.6	1411.1	1309.8
11:50	12:10	65.4	1227.6	1229.3	65.4	8:20	3:40	1228.7	704.8	1416.5	1335.8
11:45	12:15	98.1	1226.1	1230.0	98.1	8:15	3:45	1247.2	682.6	1421.8	1361.5
11:40	12:20	130.7	1224.1	1231.0	130.8	8:10	3:50	1265.1	660.2	1427.0	1387.0
11:35	12:25	163.3	1221.4	1232.3	163.5	8:05	3:55	1282.4	637.4	1432.1	1412.1
11:30	12:30	195.8	1218.2	1233.8	196.1	8:00	4:00	1299.0	614.4	1437.0	1437.0
11:25	12:35	228.2	1214.4	1235.7	228.6	7:55	4:05	1315.1	591.0	1441.8	1461.6
11:20	12:40	260.5	1210.1	1237.8	261.1	7:50	4:10	1330.5	567.4	1446.4	1485.8
11:15	12:45	292.6	1205.1	1240.1	293.6	7:45	4:15	1345.3	543.5	1450.9	1509.8
11:10	12:50	324.7	1199.6	1242.8	326.0	7:40	4:20	1359.5	519.3	1455.3	1533.4
11:05	12:55	356.5	1193.5	1245.6	358.3	7:35	4:25	1373.0	494.9	1459.4	1556.8
11:00	1:00	388.2	1186.9	1248.7	390.5	7:30	4:30	1385.8	470.2	1463.4	1579.8
10:55	1:05	419.7	1179.6	1252.1	422.6	7:25	4:35	1398.0	445.3	1467.2	1602.5
10:50	1:10	451.1	1171.9	1255.7	454.6	7:20	4:40	1409.5	420.2	1470.9	1624.9
10:45	1:15	482.2	1163.5	1259.5	486.5	7:15	4:45	1420.4	395.0	1474.3	1647.0
10:40	1:20	513.0	1154.6	1263.5	518.4	7:10	4:50	1430.6	369.5	1477.5	1668.8
10:35	1:25	543.7	1145.2	1267.7	550.0	7:05	4:55	1440.1	343.8	1480.6	1690.2
10:30	1:30	574.0	1135.2	1272.1	581.6	7:00	5:00	1448.9	318.0	1483.4	1711.3
10:25	1:35	604.1	1124.7	1276.7	613.0	6:55	5:05	1457.0	292.1	1486.0	1732.1
10:20	1:40	633.9	1113.6	1281.4	644.3	6:50	5:10	1464.4	265.9	1488.4	1752.6
10:15	1:45	663.4	1102.0	1286.3	675.4	6:45	5:15	1471.2	239.7	1490.6	1772.7
10:10	1:50	692.6	1089.9	1291.4	706.4	6:40	5:20	1477.2	213.4	1492.5	1792.5
10:05	1:55	721.5	1077.3	1296.5	737.2	6:35	5:25	1482.5	186.9	1494.3	1812.0
10:00	2:00	750.0	1064.1	1301.9	767.9	6:30	5:30	1487.2	160.4	1495.8	1831.1
9:55	2:05	778.2	1050.5	1307.3	798.3	6:25	5:35	1491.1	133.8	1497.1	1849.9
9:50	2:10	805.9	1036.3	1312.8	828.6	6:20	5:40	1494.3	107.1	1498.1	1868.4
9:45	2:15	833.4	1021.7	1318.4	858.7	6:15	5:45	1496.8	80.4	1498.9	1886.6
9:40	2:20	860.4	1006.5	1324.1	888.6	6:10	5:50	1498.6	53.6	1499.5	1904.4
9:35	2:25	887.0	990.9	1329.9	918.3	6:05	5:55	1499.6	26.8	1499.9	1921.9
9:30	2:30	913.1	974.8	1335.7	947.8	6:00	6:00	1500.0	0.0	1500.0	1939.0
9:25	2:35	938.9	958.3	1341.6	977.1	5:55	6:05	1499.6	-26.8	1499.9	1955.8
9:20	2:40	964.2	941.3	1347.4	1006.1	5:50	6:10	1498.6	-53.6	1499.5	1972.3
9:15	2:45	989.0	923.8	1353.4	1035.0	5:45	6:15	1496.8	-80.4	1498.9	1988.5
9:10	2:50	1013.4	905.9	1359.3	1063.6	5:40	6:20	1494.3	-107.1	1498.1	2004.3
9:05	2:55	1037.3	887.6	1365.2	1091.9	5:35	6:25	1491.1	-133.8	1497.1	2019.8
9:00	3:00	1060.7	868.8	1371.1	1120.1	5:30	6:30	1487.2	-160.4	1495.8	2035.0
8:55	3:05	1083.5	849.7	1377.0	1147.9	5:25	6:35	1482.5	-186.9	1494.3	2049.9
8:50	3:10	1105.9	830.1	1382.8	1175.6	5:20	6:40	1477.2	-213.4	1492.5	2064.4
8:45	3:15	1127.8	810.2	1388.6	1202.9	5:15	6:45	1471.2	-239.7	1490.6	2078.6
8:40	3:20	1149.1	789.8	1394.3	1230.0	5:10	6:50	1464.4	-265.9	1488.4	2092.5
8:35	3:25	1169.8	769.1	1400.0	1256.9	5:05	6:55	1457.0	-292.1	1486.0	2106.1
8:30	3:30	1190.0	748.0	1405.6	1283.5	5:00	7:00	1448.9	-318.0	1483.4	2119.4

Analemmatic Sundial

Latitude: 55.0° N/S

Earliest Sunrise: 3:19 a.m. Latest Sunset: 8:41 p.m.
 Semi-Major Axis (E-W): 1500 mm Semi-Minor Axis (N-S): 1228.7 mm
 Sunrise/Sunset Markers: X = ± 419.9 mm

Local Time		X	Y	Z	W
4:55	7:05	1440.1	-343.8	1480.6	2132.3
4:50	7:10	1430.6	-369.5	1477.5	2145.0
4:45	7:15	1420.4	-395.0	1474.3	2157.3
4:40	7:20	1409.5	-420.2	1470.9	2169.3
4:35	7:25	1398.0	-445.3	1467.2	2181.0
4:30	7:30	1385.8	-470.2	1463.4	2192.5
4:25	7:35	1373.0	-494.9	1459.4	2203.6
4:20	7:40	1359.5	-519.3	1455.3	2214.4
4:15	7:45	1345.3	-543.5	1450.9	2225.0
4:10	7:50	1330.5	-567.4	1446.4	2235.2
4:05	7:55	1315.1	-591.0	1441.8	2245.2
4:00	8:00	1299.0	-614.4	1437.0	2254.9
3:55	8:05	1282.4	-637.4	1432.1	2264.3
3:50	8:10	1265.1	-660.2	1427.0	2273.4
3:45	8:15	1247.2	-682.6	1421.8	2282.3
3:40	8:20	1228.7	-704.8	1416.5	2290.9
3:35	8:25	1209.7	-726.6	1411.1	2299.2
3:30	8:30	1190.0	-748.0	1405.6	2307.3
3:25	8:35	1169.8	-769.1	1400.0	2315.1
3:20	8:40	1149.1	-789.8	1394.3	2322.7
3:15	8:45	1127.8	-810.2	1388.6	2330.0

Analemmatic Sundial

Latitude: 55.0° N/S

Date Scale

Semi-Major Axis (E-W): 1500 mm Semi-Minor Axis (N-S): 1228.7 mm

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	-365.0	-358.1	-356.0	-346.6	-343.8	-332.0	-328.7	-314.7	-310.9	-295.1	-290.9
February	-264.0	-244.8	-239.7	-219.3	-214.2	-192.8	-187.3	-165.2	-159.6	-136.9	-131.0
March	-113.7	-90.4	-84.5	-60.9	-55.0	-31.2	-25.4	-1.5	4.4	28.1	34.0
April	69.2	92.4	98.2	120.9	126.6	148.9	154.3	176.1	181.5	202.4	207.5
May	232.5	251.6	256.2	273.9	278.2	294.6	298.4	313.3	316.9	329.9	332.8
June	349.0	357.4	359.4	365.6	367.0	370.9	371.4	372.8	373.0	370.4	371.6
July	367.0	361.1	359.4	351.5	349.2	338.9	336.1	323.9	320.7	306.7	303.0
August	279.2	261.9	257.5	238.9	234.2	214.7	209.6	189.2	184.0	162.7	157.3
September	124.4	102.0	96.4	73.5	67.7	44.6	38.9	15.6	9.8	-13.7	-19.5
October	-48.7	-72.1	-77.8	-101.1	-106.7	-129.7	-135.3	-157.8	-163.3	-185.2	-190.6
November	-222.0	-242.2	-247.0	-266.0	-270.6	-288.2	-292.4	-308.4	-312.1	-326.3	-329.7
December	-344.5	-354.4	-356.6	-363.8	-365.4	-370.0	-370.9	-372.8	-373.0	-372.1	-371.6

Northern Hemisphere

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	365.0	358.1	356.0	346.6	343.8	332.0	328.7	314.7	310.9	295.1	290.9
February	264.0	244.8	239.7	219.3	214.2	192.8	187.3	165.2	159.6	136.9	131.0
March	113.7	90.4	84.5	60.9	55.0	31.2	25.4	1.5	-4.4	-28.1	-34.0
April	-69.2	-92.4	-98.2	-120.9	-126.6	-148.9	-154.3	-176.1	-181.5	-202.4	-207.5
May	-232.5	-251.6	-256.2	-273.9	-278.2	-294.6	-298.4	-313.3	-316.9	-329.9	-332.8
June	-349.0	-357.4	-359.4	-365.6	-367.0	-370.9	-371.4	-372.8	-373.0	-370.4	-371.6
July	-367.0	-361.1	-359.4	-351.5	-349.2	-338.9	-336.1	-323.9	-320.7	-306.7	-303.0
August	-279.2	-261.9	-257.5	-238.9	-234.2	-214.7	-209.6	-189.2	-184.0	-162.7	-157.3
September	-124.4	-102.0	-96.4	-73.5	-67.7	-44.6	-38.9	-15.6	-9.8	13.7	19.5
October	48.7	72.1	77.8	101.1	106.7	129.7	135.3	157.8	163.3	185.2	190.6
November	222.0	242.2	247.0	266.0	270.6	288.2	292.4	308.4	312.1	326.3	329.7
December	344.5	354.4	356.6	363.8	365.4	370.0	370.9	372.8	373.0	372.1	371.6

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 |

Analemmatic Sundial

Latitude: 55.0° N/S

Earliest Sunrise: 3:19 a.m. Latest Sunset: 8:41 p.m.
 Semi-Major Axis (E-W): 2000 mm Semi-Minor Axis (N-S): 1638.3 mm
 Sunrise/Sunset Markers: X = ± 559.8 mm

Local Time	X	Y	Z	W	Local Time	X	Y	Z	W		
12:00	0.0	1638.3	1638.3	0.0							
11:55	12:05	43.6	1637.9	1638.5	43.6	8:25	3:35	1612.9	968.7	1881.5	1746.3
11:50	12:10	87.2	1636.7	1639.1	87.3	8:20	3:40	1638.3	939.7	1888.7	1781.0
11:45	12:15	130.8	1634.8	1640.0	130.9	8:15	3:45	1662.9	910.2	1895.7	1815.4
11:40	12:20	174.3	1632.1	1641.4	174.4	8:10	3:50	1686.8	880.3	1902.7	1849.3
11:35	12:25	217.7	1628.6	1643.1	218.0	8:05	3:55	1709.8	849.9	1909.4	1882.8
11:30	12:30	261.1	1624.3	1645.1	261.4	8:00	4:00	1732.1	819.2	1916.0	1916.0
11:25	12:35	304.2	1619.2	1647.6	304.8	7:55	4:05	1753.5	788.0	1922.4	1948.7
11:20	12:40	347.3	1613.4	1650.4	348.2	7:50	4:10	1774.0	756.5	1928.6	1981.1
11:15	12:45	390.2	1606.8	1653.5	391.4	7:45	4:15	1793.7	724.6	1934.6	2013.1
11:10	12:50	432.9	1599.5	1657.0	434.6	7:40	4:20	1812.6	692.4	1940.4	2044.6
11:05	12:55	475.4	1591.4	1660.8	477.7	7:35	4:25	1830.6	659.8	1945.9	2075.7
11:00	1:00	517.6	1582.5	1665.0	520.6	7:30	4:30	1847.8	627.0	1951.2	2106.4
10:55	1:05	559.7	1572.9	1669.5	563.5	7:25	4:35	1864.0	593.8	1956.3	2136.7
10:50	1:10	601.4	1562.5	1674.2	606.2	7:20	4:40	1879.4	560.3	1961.1	2166.6
10:45	1:15	642.9	1551.4	1679.3	648.7	7:15	4:45	1893.9	526.6	1965.7	2196.0
10:40	1:20	684.0	1539.5	1684.6	691.1	7:10	4:50	1907.4	492.6	1970.0	2225.0
10:35	1:25	724.9	1526.9	1690.2	733.4	7:05	4:55	1920.1	458.4	1974.1	2253.6
10:30	1:30	765.4	1513.6	1696.1	775.5	7:00	5:00	1931.9	424.0	1977.8	2281.8
10:25	1:35	805.5	1499.6	1702.2	817.4	6:55	5:05	1942.7	389.4	1981.3	2309.5
10:20	1:40	845.2	1484.8	1708.5	859.1	6:50	5:10	1952.6	354.6	1984.5	2336.8
10:15	1:45	884.6	1469.4	1715.1	900.6	6:45	5:15	1961.6	319.6	1987.4	2363.6
10:10	1:50	923.5	1453.2	1721.8	941.9	6:40	5:20	1969.6	284.5	1990.1	2390.0
10:05	1:55	962.0	1436.3	1728.7	982.9	6:35	5:25	1976.7	249.2	1992.4	2416.0
10:00	2:00	1000.0	1418.8	1735.8	1023.8	6:30	5:30	1982.9	213.8	1994.4	2441.5
9:55	2:05	1037.5	1400.6	1743.0	1064.4	6:25	5:35	1988.1	178.4	1996.1	2466.6
9:50	2:10	1074.6	1381.7	1750.4	1104.8	6:20	5:40	1992.4	142.8	1997.5	2491.2
9:45	2:15	1111.1	1362.2	1757.9	1144.9	6:15	5:45	1995.7	107.2	1998.6	2515.4
9:40	2:20	1147.2	1342.0	1765.5	1184.8	6:10	5:50	1998.1	71.5	1999.4	2539.2
9:35	2:25	1182.6	1321.2	1773.2	1224.4	6:05	5:55	1999.5	35.7	1999.8	2562.5
9:30	2:30	1217.5	1299.8	1780.9	1263.7	6:00	6:00	2000.0	0.0	2000.0	2585.4
9:25	2:35	1251.8	1277.7	1788.7	1302.8	5:55	6:05	1999.5	-35.7	1999.8	2607.8
9:20	2:40	1285.6	1255.0	1796.6	1341.5	5:50	6:10	1998.1	-71.5	1999.4	2629.8
9:15	2:45	1318.7	1231.7	1804.5	1379.9	5:45	6:15	1995.7	-107.2	1998.6	2651.3
9:10	2:50	1351.2	1207.9	1812.4	1418.1	5:40	6:20	1992.4	-142.8	1997.5	2672.4
9:05	2:55	1383.0	1183.5	1820.3	1455.9	5:35	6:25	1988.1	-178.4	1996.1	2693.1
9:00	3:00	1414.2	1158.5	1828.1	1493.4	5:30	6:30	1982.9	-213.8	1994.4	2713.4
8:55	3:05	1444.7	1132.9	1836.0	1530.6	5:25	6:35	1976.7	-249.2	1992.4	2733.2
8:50	3:10	1474.6	1106.8	1843.7	1567.4	5:20	6:40	1969.6	-284.5	1990.1	2752.5
8:45	3:15	1503.7	1080.2	1851.5	1603.9	5:15	6:45	1961.6	-319.6	1987.4	2771.5
8:40	3:20	1532.1	1053.1	1859.1	1640.1	5:10	6:50	1952.6	-354.6	1984.5	2790.0
8:35	3:25	1559.8	1025.5	1866.7	1675.8	5:05	6:55	1942.7	-389.4	1981.3	2808.1
8:30	3:30	1586.7	997.3	1874.1	1711.3	5:00	7:00	1931.9	-424.0	1977.8	2825.8

Analemmatic Sundial

Latitude: 55.0° N/S

Earliest Sunrise: 3:19 a.m. Latest Sunset: 8:41 p.m.
 Semi-Major Axis (E-W): 2000 mm Semi-Minor Axis (N-S): 1638.3 mm
 Sunrise/Sunset Markers: X = ± 559.8 mm

Local Time		X	Y	Z	W
4:55	7:05	1920.1	-458.4	1974.1	2843.1
4:50	7:10	1907.4	-492.6	1970.0	2859.9
4:45	7:15	1893.9	-526.6	1965.7	2876.4
4:40	7:20	1879.4	-560.3	1961.1	2892.4
4:35	7:25	1864.0	-593.8	1956.3	2908.1
4:30	7:30	1847.8	-627.0	1951.2	2923.3
4:25	7:35	1830.6	-659.8	1945.9	2938.1
4:20	7:40	1812.6	-692.4	1940.4	2952.6
4:15	7:45	1793.7	-724.6	1934.6	2966.6
4:10	7:50	1774.0	-756.5	1928.6	2980.3
4:05	7:55	1753.5	-788.0	1922.4	2993.6
4:00	8:00	1732.1	-819.2	1916.0	3006.5
3:55	8:05	1709.8	-849.9	1909.4	3019.1
3:50	8:10	1686.8	-880.3	1902.7	3031.2
3:45	8:15	1662.9	-910.2	1895.7	3043.1
3:40	8:20	1638.3	-939.7	1888.7	3054.5
3:35	8:25	1612.9	-968.7	1881.5	3065.6
3:30	8:30	1586.7	-997.3	1874.1	3076.4
3:25	8:35	1559.8	-1025.5	1866.7	3086.8
3:20	8:40	1532.1	-1053.1	1859.1	3096.9
3:15	8:45	1503.7	-1080.2	1851.5	3106.7

Analemmatic Sundial

Latitude: 55.0° N/S

Date Scale

Semi-Major Axis (E-W): 2000 mm Semi-Minor Axis (N-S): 1638.3 mm

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	-486.7	-477.5	-474.7	-462.1	-458.4	-442.6	-438.3	-419.6	-414.6	-393.4	-387.8
February	-352.0	-326.3	-319.6	-292.4	-285.6	-257.0	-249.7	-220.3	-212.8	-182.5	-174.7
March	-151.6	-120.6	-112.7	-81.2	-73.4	-41.7	-33.8	-2.0	5.8	37.5	45.3
April	92.3	123.2	130.9	161.2	168.8	198.6	205.8	234.9	242.0	269.9	276.7
May	310.0	335.5	341.5	365.2	371.0	392.8	397.9	417.8	422.5	439.9	443.8
June	465.3	476.6	479.2	487.4	489.3	494.5	495.2	497.1	497.4	493.8	495.5
July	489.3	481.5	479.2	468.6	465.6	451.9	448.2	431.9	427.5	408.9	404.0
August	372.3	349.2	343.3	318.6	312.3	286.2	279.4	252.2	245.3	217.0	209.7
September	165.9	136.0	128.5	97.9	90.3	59.5	51.9	20.8	13.0	-18.2	-26.0
October	-64.9	-96.1	-103.8	-134.8	-142.3	-172.9	-180.5	-210.3	-217.8	-247.0	-254.1
November	-296.0	-322.9	-329.4	-354.7	-360.8	-384.3	-389.9	-411.2	-416.2	-435.1	-439.7
December	-459.3	-472.6	-475.4	-485.0	-487.2	-493.3	-494.5	-497.1	-497.4	-496.2	-495.5

Northern Hemisphere

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	486.7	477.5	474.7	462.1	458.4	442.6	438.3	419.6	414.6	393.4	387.8
February	352.0	326.3	319.6	292.4	285.6	257.0	249.7	220.3	212.8	182.5	174.7
March	151.6	120.6	112.7	81.2	73.4	41.7	33.8	2.0	-5.8	-37.5	-45.3
April	-92.3	-123.2	-130.9	-161.2	-168.8	-198.6	-205.8	-234.9	-242.0	-269.9	-276.7
May	-310.0	-335.5	-341.5	-365.2	-371.0	-392.8	-397.9	-417.8	-422.5	-439.9	-443.8
June	-465.3	-476.6	-479.2	-487.4	-489.3	-494.5	-495.2	-497.1	-497.4	-493.8	-495.5
July	-489.3	-481.5	-479.2	-468.6	-465.6	-451.9	-448.2	-431.9	-427.5	-408.9	-404.0
August	-372.3	-349.2	-343.3	-318.6	-312.3	-286.2	-279.4	-252.2	-245.3	-217.0	-209.7
September	-165.9	-136.0	-128.5	-97.9	-90.3	-59.5	-51.9	-20.8	-13.0	18.2	26.0
October	64.9	96.1	103.8	134.8	142.3	172.9	180.5	210.3	217.8	247.0	254.1
November	296.0	322.9	329.4	354.7	360.8	384.3	389.9	411.2	416.2	435.1	439.7
December	459.3	472.6	475.4	485.0	487.2	493.3	494.5	497.1	497.4	496.2	495.5

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: 55.0° N/S

Earliest Sunrise: 3:19 a.m. Latest Sunset: 8:41 p.m.
 Semi-Major Axis (E-W): 2500 mm Semi-Minor Axis (N-S): 2047.9 mm
 Sunrise/Sunset Markers: X = ± 699.8 mm

Local Time		X	Y	Z	W	Local Time		X	Y	Z	W
12:00		0.0	2047.9	2047.9	0.0						
11:55	12:05	54.5	2047.4	2048.1	54.5	8:25	3:35	2016.1	1210.9	2351.8	2182.9
11:50	12:10	109.0	2045.9	2048.8	109.1	8:20	3:40	2047.9	1174.6	2360.8	2226.3
11:45	12:15	163.5	2043.5	2050.0	163.6	8:15	3:45	2078.7	1137.7	2369.7	2269.2
11:40	12:20	217.9	2040.1	2051.7	218.0	8:10	3:50	2108.5	1100.3	2378.3	2311.6
11:35	12:25	272.2	2035.7	2053.8	272.4	8:05	3:55	2137.3	1062.4	2386.8	2353.5
11:30	12:30	326.3	2030.4	2056.4	326.8	8:00	4:00	2165.1	1023.9	2395.0	2395.0
11:25	12:35	380.3	2024.0	2059.5	381.1	7:55	4:05	2191.8	985.0	2403.0	2435.9
11:20	12:40	434.1	2016.8	2063.0	435.2	7:50	4:10	2217.5	945.6	2410.7	2476.4
11:15	12:45	487.7	2008.5	2066.9	489.3	7:45	4:15	2242.2	905.8	2418.2	2516.3
11:10	12:50	541.1	1999.3	2071.3	543.3	7:40	4:20	2265.8	865.5	2425.4	2555.7
11:05	12:55	594.2	1989.2	2076.0	597.1	7:35	4:25	2288.3	824.8	2432.4	2594.6
11:00	1:00	647.0	1978.1	2081.2	650.8	7:30	4:30	2309.7	783.7	2439.0	2633.0
10:55	1:05	699.6	1966.1	2086.8	704.3	7:25	4:35	2330.0	742.2	2445.4	2670.9
10:50	1:10	751.8	1953.1	2092.8	757.7	7:20	4:40	2349.2	700.4	2451.4	2708.2
10:45	1:15	803.6	1939.2	2099.1	810.9	7:15	4:45	2367.3	658.3	2457.1	2745.0
10:40	1:20	855.1	1924.4	2105.8	863.9	7:10	4:50	2384.3	615.8	2462.5	2781.3
10:35	1:25	906.1	1908.6	2112.8	916.7	7:05	4:55	2400.1	573.1	2467.6	2817.0
10:30	1:30	956.7	1892.0	2120.1	969.3	7:00	5:00	2414.8	530.0	2472.3	2852.2
10:25	1:35	1006.9	1874.4	2127.8	1021.7	6:55	5:05	2428.4	486.8	2476.7	2886.9
10:20	1:40	1056.5	1856.0	2135.7	1073.8	6:50	5:10	2440.7	443.2	2480.7	2921.0
10:15	1:45	1105.7	1836.7	2143.8	1125.7	6:45	5:15	2452.0	399.5	2484.3	2954.5
10:10	1:50	1154.4	1816.5	2152.3	1177.3	6:40	5:20	2462.0	355.6	2487.6	2987.5
10:05	1:55	1202.5	1795.4	2160.9	1228.7	6:35	5:25	2470.9	311.5	2490.5	3020.0
10:00	2:00	1250.0	1773.5	2169.8	1279.8	6:30	5:30	2478.6	267.3	2493.0	3051.9
9:55	2:05	1296.9	1750.8	2178.8	1330.5	6:25	5:35	2485.1	222.9	2495.1	3083.2
9:50	2:10	1343.2	1727.2	2188.0	1381.0	6:20	5:40	2490.5	178.5	2496.9	3114.0
9:45	2:15	1388.9	1702.8	2197.4	1431.2	6:15	5:45	2494.6	133.9	2498.2	3144.3
9:40	2:20	1433.9	1677.5	2206.9	1481.0	6:10	5:50	2497.6	89.3	2499.2	3174.0
9:35	2:25	1478.3	1651.5	2216.5	1530.5	6:05	5:55	2499.4	44.7	2499.8	3203.1
9:30	2:30	1521.9	1624.7	2226.2	1579.6	6:00	6:00	2500.0	0.0	2500.0	3231.7
9:25	2:35	1564.8	1597.1	2235.9	1628.4	5:55	6:05	2499.4	-44.7	2499.8	3259.7
9:20	2:40	1607.0	1568.8	2245.7	1676.9	5:50	6:10	2497.6	-89.3	2499.2	3287.2
9:15	2:45	1648.4	1539.7	2255.6	1724.9	5:45	6:15	2494.6	-133.9	2498.2	3314.2
9:10	2:50	1689.0	1509.9	2265.5	1772.6	5:40	6:20	2490.5	-178.5	2496.9	3340.5
9:05	2:55	1728.8	1479.3	2275.3	1819.9	5:35	6:25	2485.1	-222.9	2495.1	3366.4
9:00	3:00	1767.8	1448.1	2285.1	1866.8	5:30	6:30	2478.6	-267.3	2493.0	3391.7
8:55	3:05	1805.9	1416.1	2294.9	1913.2	5:25	6:35	2470.9	-311.5	2490.5	3416.5
8:50	3:10	1843.2	1383.5	2304.7	1959.3	5:20	6:40	2462.0	-355.6	2487.6	3440.7
8:45	3:15	1879.6	1350.3	2314.3	2004.9	5:15	6:45	2452.0	-399.5	2484.3	3464.4
8:40	3:20	1915.1	1316.4	2323.9	2050.1	5:10	6:50	2440.7	-443.2	2480.7	3487.5
8:35	3:25	1949.7	1281.8	2333.3	2094.8	5:05	6:55	2428.4	-486.8	2476.7	3510.2
8:30	3:30	1983.4	1246.7	2342.6	2139.1	5:00	7:00	2414.8	-530.0	2472.3	3532.3

Analemmatic Sundial

Latitude: 55.0° N/S

Earliest Sunrise: 3:19 a.m. Latest Sunset: 8:41 p.m.
 Semi-Major Axis (E-W): 2500 mm Semi-Minor Axis (N-S): 2047.9 mm
 Sunrise/Sunset Markers: X = ± 699.8 mm

Local Time		X	Y	Z	W
4:55	7:05	2400.1	-573.1	2467.6	3553.9
4:50	7:10	2384.3	-615.8	2462.5	3574.9
4:45	7:15	2367.3	-658.3	2457.1	3595.5
4:40	7:20	2349.2	-700.4	2451.4	3615.5
4:35	7:25	2330.0	-742.2	2445.4	3635.1
4:30	7:30	2309.7	-783.7	2439.0	3654.1
4:25	7:35	2288.3	-824.8	2432.4	3672.7
4:20	7:40	2265.8	-865.5	2425.4	3690.7
4:15	7:45	2242.2	-905.8	2418.2	3708.3
4:10	7:50	2217.5	-945.6	2410.7	3725.4
4:05	7:55	2191.8	-985.0	2403.0	3742.0
4:00	8:00	2165.1	-1023.9	2395.0	3758.1
3:55	8:05	2137.3	-1062.4	2386.8	3773.8
3:50	8:10	2108.5	-1100.3	2378.3	3789.0
3:45	8:15	2078.7	-1137.7	2369.7	3803.8
3:40	8:20	2047.9	-1174.6	2360.8	3818.2
3:35	8:25	2016.1	-1210.9	2351.8	3832.0
3:30	8:30	1983.4	-1246.7	2342.6	3845.5
3:25	8:35	1949.7	-1281.8	2333.3	3858.5
3:20	8:40	1915.1	-1316.4	2323.9	3871.1
3:15	8:45	1879.6	-1350.3	2314.3	3883.3

Analemmatic Sundial

Latitude: 55.0° N/S

Date Scale

Semi-Major Axis (E-W): 2500 mm Semi-Minor Axis (N-S): 2047.9 mm

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	-608.4	-596.9	-593.4	-577.6	-573.0	-553.3	-547.9	-524.5	-518.2	-491.8	-484.8
February	-440.0	-407.9	-399.6	-365.5	-357.0	-321.3	-312.1	-275.4	-266.0	-228.1	-218.4
March	-189.5	-150.7	-140.9	-101.5	-91.7	-52.1	-42.3	-2.5	7.3	46.8	56.6
April	115.4	154.0	163.6	201.5	211.0	248.2	257.2	293.6	302.4	337.4	345.8
May	387.4	419.3	426.9	456.5	463.7	490.9	497.4	522.2	528.2	549.9	554.7
June	581.7	595.7	598.9	609.3	611.6	618.1	619.0	621.4	621.7	617.3	619.3
July	611.6	601.9	598.9	585.8	582.0	564.8	560.2	539.8	534.4	511.2	505.0
August	465.4	436.5	429.1	398.2	390.4	357.8	349.3	315.3	306.6	271.2	262.1
September	207.4	170.0	160.6	122.4	112.9	74.4	64.9	26.0	16.3	-22.8	-32.5
October	-81.2	-120.2	-129.7	-168.4	-177.8	-216.1	-225.6	-262.9	-272.2	-308.7	-317.6
November	-370.0	-403.6	-411.7	-443.3	-451.0	-480.3	-487.3	-514.0	-520.2	-543.8	-549.6
December	-574.1	-590.7	-594.3	-606.3	-609.0	-616.7	-618.1	-621.4	-621.7	-620.2	-619.3

Northern Hemisphere

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	608.4	596.9	593.4	577.6	573.0	553.3	547.9	524.5	518.2	491.8	484.8
February	440.0	407.9	399.6	365.5	357.0	321.3	312.1	275.4	266.0	228.1	218.4
March	189.5	150.7	140.9	101.5	91.7	52.1	42.3	2.5	-7.3	-46.8	-56.6
April	-115.4	-154.0	-163.6	-201.5	-211.0	-248.2	-257.2	-293.6	-302.4	-337.4	-345.8
May	-387.4	-419.3	-426.9	-456.5	-463.7	-490.9	-497.4	-522.2	-528.2	-549.9	-554.7
June	-581.7	-595.7	-598.9	-609.3	-611.6	-618.1	-619.0	-621.4	-621.7	-617.3	-619.3
July	-611.6	-601.9	-598.9	-585.8	-582.0	-564.8	-560.2	-539.8	-534.4	-511.2	-505.0
August	-465.4	-436.5	-429.1	-398.2	-390.4	-357.8	-349.3	-315.3	-306.6	-271.2	-262.1
September	-207.4	-170.0	-160.6	-122.4	-112.9	-74.4	-64.9	-26.0	-16.3	22.8	32.5
October	81.2	120.2	129.7	168.4	177.8	216.1	225.6	262.9	272.2	308.7	317.6
November	370.0	403.6	411.7	443.3	451.0	480.3	487.3	514.0	520.2	543.8	549.6
December	574.1	590.7	594.3	606.3	609.0	616.7	618.1	621.4	621.7	620.2	619.3

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 |