

Analemmatic Sundial

Latitude: 58.0° N/S

Earliest Sunrise: 2:54 a.m. Latest Sunset: 9:06 p.m.
 Semi-Major Axis (E-W): 1000 mm Semi-Minor Axis (N-S): 848.0 mm
 Sunrise/Sunset Markers: X = ± 227.0 mm

Local Time		X	Y	Z	W	Local Time		X	Y	Z	W
12:00		0.0	848.0	848.0	0.0						
11:55	12:05	21.8	847.8	848.1	21.8	8:25	3:35	806.4	501.5	949.6	877.8
11:50	12:10	43.6	847.2	848.4	43.6	8:20	3:40	819.2	486.4	952.7	895.4
11:45	12:15	65.4	846.2	848.8	65.4	8:15	3:45	831.5	471.2	955.7	912.9
11:40	12:20	87.2	844.8	849.3	87.2	8:10	3:50	843.4	455.7	958.6	930.2
11:35	12:25	108.9	843.0	850.0	109.0	8:05	3:55	854.9	439.9	961.5	947.3
11:30	12:30	130.5	840.8	850.9	130.7	8:00	4:00	866.0	424.0	964.3	964.3
11:25	12:35	152.1	838.2	851.9	152.4	7:55	4:05	876.7	407.9	967.0	981.0
11:20	12:40	173.6	835.2	853.0	174.1	7:50	4:10	887.0	391.6	969.6	997.6
11:15	12:45	195.1	831.8	854.3	195.8	7:45	4:15	896.9	375.1	972.1	1013.9
11:10	12:50	216.4	827.9	855.8	217.4	7:40	4:20	906.3	358.4	974.6	1030.1
11:05	12:55	237.7	823.7	857.4	238.9	7:35	4:25	915.3	341.5	977.0	1046.1
11:00	1:00	258.8	819.2	859.1	260.4	7:30	4:30	923.9	324.5	979.2	1061.9
10:55	1:05	279.8	814.2	860.9	281.9	7:25	4:35	932.0	307.4	981.4	1077.5
10:50	1:10	300.7	808.8	862.9	303.3	7:20	4:40	939.7	290.0	983.4	1092.9
10:45	1:15	321.4	803.0	865.0	324.6	7:15	4:45	946.9	272.6	985.4	1108.1
10:40	1:20	342.0	796.9	867.2	345.8	7:10	4:50	953.7	255.0	987.2	1123.1
10:35	1:25	362.4	790.4	869.5	367.0	7:05	4:55	960.0	237.3	988.9	1137.8
10:30	1:30	382.7	783.5	872.0	388.1	7:00	5:00	965.9	219.5	990.5	1152.4
10:25	1:35	402.7	776.2	874.5	409.1	6:55	5:05	971.3	201.6	992.0	1166.8
10:20	1:40	422.6	768.6	877.1	430.0	6:50	5:10	976.3	183.6	993.4	1181.0
10:15	1:45	442.3	760.6	879.8	450.9	6:45	5:15	980.8	165.4	994.6	1194.9
10:10	1:50	461.7	752.2	882.6	471.6	6:40	5:20	984.8	147.3	995.8	1208.7
10:05	1:55	481.0	743.5	885.5	492.2	6:35	5:25	988.4	129.0	996.7	1222.2
10:00	2:00	500.0	734.4	888.5	512.7	6:30	5:30	991.4	110.7	997.6	1235.6
9:55	2:05	518.8	725.0	891.5	533.2	6:25	5:35	994.1	92.3	998.3	1248.7
9:50	2:10	537.3	715.2	894.6	553.5	6:20	5:40	996.2	73.9	998.9	1261.6
9:45	2:15	555.6	705.1	897.7	573.7	6:15	5:45	997.9	55.5	999.4	1274.3
9:40	2:20	573.6	694.7	900.9	593.7	6:10	5:50	999.0	37.0	999.7	1286.8
9:35	2:25	591.3	683.9	904.1	613.7	6:05	5:55	999.8	18.5	999.9	1299.1
9:30	2:30	608.8	672.8	907.3	633.5	6:00	6:00	1000.0	0.0	1000.0	1311.2
9:25	2:35	625.9	661.4	910.6	653.2	5:55	6:05	999.8	-18.5	999.9	1323.0
9:20	2:40	642.8	649.6	913.9	672.7	5:50	6:10	999.0	-37.0	999.7	1334.7
9:15	2:45	659.3	637.6	917.2	692.1	5:45	6:15	997.9	-55.5	999.4	1346.1
9:10	2:50	675.6	625.2	920.5	711.4	5:40	6:20	996.2	-73.9	998.9	1357.4
9:05	2:55	691.5	612.6	923.8	730.5	5:35	6:25	994.1	-92.3	998.3	1368.4
9:00	3:00	707.1	599.7	927.1	749.5	5:30	6:30	991.4	-110.7	997.6	1379.2
8:55	3:05	722.4	586.4	930.4	768.3	5:25	6:35	988.4	-129.0	996.7	1389.8
8:50	3:10	737.3	572.9	933.7	786.9	5:20	6:40	984.8	-147.3	995.8	1400.2
8:45	3:15	751.8	559.2	937.0	805.4	5:15	6:45	980.8	-165.4	994.6	1410.4
8:40	3:20	766.0	545.1	940.2	823.8	5:10	6:50	976.3	-183.6	993.4	1420.3
8:35	3:25	779.9	530.8	943.4	841.9	5:05	6:55	971.3	-201.6	992.0	1430.1
8:30	3:30	793.4	516.3	946.5	859.9	5:00	7:00	965.9	-219.5	990.5	1439.7

Analemmatic Sundial

Latitude: 58.0° N/S

Earliest Sunrise: 2:54 a.m. Latest Sunset: 9:06 p.m.
 Semi-Major Axis (E-W): 1000 mm Semi-Minor Axis (N-S): 848.0 mm
 Sunrise/Sunset Markers: X = ± 227.0 mm

Local Time		X	Y	Z	W	Local Time		X	Y	Z	W
4:55	7:05	960.0	-237.3	988.9	1449.0	2:55	9:05	691.5	-612.6	923.8	1616.1
4:50	7:10	953.7	-255.0	987.2	1458.2	2:50	9:10	675.6	-625.2	920.5	1620.8
4:45	7:15	946.9	-272.6	985.4	1467.1	2:45	9:15	659.3	-637.6	917.2	1625.4
4:40	7:20	939.7	-290.0	983.4	1475.9						
4:35	7:25	932.0	-307.4	981.4	1484.5						
4:30	7:30	923.9	-324.5	979.2	1492.8						
4:25	7:35	915.3	-341.5	977.0	1501.0						
4:20	7:40	906.3	-358.4	974.6	1508.9						
4:15	7:45	896.9	-375.1	972.1	1516.7						
4:10	7:50	887.0	-391.6	969.6	1524.3						
4:05	7:55	876.7	-407.9	967.0	1531.7						
4:00	8:00	866.0	-424.0	964.3	1538.9						
3:55	8:05	854.9	-439.9	961.5	1545.9						
3:50	8:10	843.4	-455.7	958.6	1552.7						
3:45	8:15	831.5	-471.2	955.7	1559.4						
3:40	8:20	819.2	-486.4	952.7	1565.8						
3:35	8:25	806.4	-501.5	949.6	1572.1						
3:30	8:30	793.4	-516.3	946.5	1578.2						
3:25	8:35	779.9	-530.8	943.4	1584.1						
3:20	8:40	766.0	-545.1	940.2	1589.9						
3:15	8:45	751.8	-559.2	937.0	1595.5						
3:10	8:50	737.3	-572.9	933.7	1600.9						
3:05	8:55	722.4	-586.4	930.4	1606.1						
3:00	9:00	707.1	-599.7	927.1	1611.2						

Analematic Sundial

Latitude: 58.0° N/S

Date Scale

Semi-Major Axis (E-W): 1000 mm Semi-Minor Axis (N-S): 848.0 mm

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	-224.8	-220.6	-219.3	-213.5	-211.7	-204.5	-202.5	-193.8	-191.5	-181.7	-179.2
February	-162.6	-150.8	-147.7	-135.1	-131.9	-118.7	-115.3	-101.8	-98.3	-84.3	-80.7
March	-70.0	-55.7	-52.1	-37.5	-33.9	-19.2	-15.6	-0.9	2.7	17.3	20.9
April	42.6	56.9	60.5	74.5	78.0	91.7	95.1	108.5	111.8	124.7	127.8
May	143.2	155.0	157.8	168.7	171.4	181.4	183.8	193.0	195.2	203.2	205.0
June	215.0	220.2	221.3	225.2	226.0	228.4	228.8	229.6	229.8	228.1	228.9
July	226.0	222.4	221.3	216.5	215.1	208.7	207.0	199.5	197.5	188.9	186.6
August	172.0	161.3	158.6	147.2	144.3	132.2	129.1	116.5	113.3	100.2	96.9
September	76.6	62.8	59.3	45.2	41.7	27.5	24.0	9.6	6.0	-8.4	-12.0
October	-30.0	-44.4	-47.9	-62.3	-65.7	-79.9	-83.4	-97.2	-100.6	-114.1	-117.4
November	-136.8	-149.2	-152.2	-163.8	-166.7	-177.5	-180.1	-189.9	-192.2	-201.0	-203.1
December	-212.2	-218.3	-219.6	-224.1	-225.0	-227.9	-228.4	-229.6	-229.8	-229.2	-228.9

Northern Hemisphere

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	224.8	220.6	219.3	213.5	211.7	204.5	202.5	193.8	191.5	181.7	179.2
February	162.6	150.8	147.7	135.1	131.9	118.7	115.3	101.8	98.3	84.3	80.7
March	70.0	55.7	52.1	37.5	33.9	19.2	15.6	0.9	-2.7	-17.3	-20.9
April	-42.6	-56.9	-60.5	-74.5	-78.0	-91.7	-95.1	-108.5	-111.8	-124.7	-127.8
May	-143.2	-155.0	-157.8	-168.7	-171.4	-181.4	-183.8	-193.0	-195.2	-203.2	-205.0
June	-215.0	-220.2	-221.3	-225.2	-226.0	-228.4	-228.8	-229.6	-229.8	-228.1	-228.9
July	-226.0	-222.4	-221.3	-216.5	-215.1	-208.7	-207.0	-199.5	-197.5	-188.9	-186.6
August	-172.0	-161.3	-158.6	-147.2	-144.3	-132.2	-129.1	-116.5	-113.3	-100.2	-96.9
September	-76.6	-62.8	-59.3	-45.2	-41.7	-27.5	-24.0	-9.6	-6.0	8.4	12.0
October	30.0	44.4	47.9	62.3	65.7	79.9	83.4	97.2	100.6	114.1	117.4
November	136.8	149.2	152.2	163.8	166.7	177.5	180.1	189.9	192.2	201.0	203.1
December	212.2	218.3	219.6	224.1	225.0	227.9	228.4	229.6	229.8	229.2	228.9

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: 58.0° N/S

Earliest Sunrise: 2:54 a.m. Latest Sunset: 9:06 p.m.
 Semi-Major Axis (E-W): 1500 mm Semi-Minor Axis (N-S): 1272.1 mm
 Sunrise/Sunset Markers: X = ± 340.5 mm

Local Time		X	Y	Z	W	Local Time		X	Y	Z	W
12:00		0.0	1272.1	1272.1	0.0						
11:55	12:05	32.7	1271.8	1272.2	32.7	8:25	3:35	1209.7	752.2	1424.5	1316.7
11:50	12:10	65.4	1270.9	1272.5	65.4	8:20	3:40	1228.7	729.6	1429.0	1343.1
11:45	12:15	98.1	1269.3	1273.1	98.1	8:15	3:45	1247.2	706.7	1433.5	1369.4
11:40	12:20	130.7	1267.2	1274.0	130.8	8:10	3:50	1265.1	683.5	1437.9	1395.3
11:35	12:25	163.3	1264.5	1275.0	163.5	8:05	3:55	1282.4	659.9	1442.2	1421.0
11:30	12:30	195.8	1261.2	1276.3	196.1	8:00	4:00	1299.0	636.0	1446.4	1446.4
11:25	12:35	228.2	1257.3	1277.8	228.7	7:55	4:05	1315.1	611.9	1450.5	1471.5
11:20	12:40	260.5	1252.7	1279.5	261.2	7:50	4:10	1330.5	587.4	1454.4	1496.4
11:15	12:45	292.6	1247.6	1281.5	293.7	7:45	4:15	1345.3	562.6	1458.2	1520.9
11:10	12:50	324.7	1241.9	1283.7	326.1	7:40	4:20	1359.5	537.6	1461.9	1545.2
11:05	12:55	356.5	1235.6	1286.0	358.4	7:35	4:25	1373.0	512.3	1465.4	1569.2
11:00	1:00	388.2	1228.7	1288.6	390.6	7:30	4:30	1385.8	486.8	1468.8	1592.8
10:55	1:05	419.7	1221.3	1291.4	422.8	7:25	4:35	1398.0	461.0	1472.1	1616.2
10:50	1:10	451.1	1213.2	1294.3	454.9	7:20	4:40	1409.5	435.1	1475.2	1639.3
10:45	1:15	482.2	1204.6	1297.5	486.9	7:15	4:45	1420.4	408.9	1478.1	1662.1
10:40	1:20	513.0	1195.4	1300.8	518.7	7:10	4:50	1430.6	382.5	1480.8	1684.6
10:35	1:25	543.7	1185.6	1304.3	550.5	7:05	4:55	1440.1	356.0	1483.4	1706.8
10:30	1:30	574.0	1175.2	1307.9	582.1	7:00	5:00	1448.9	329.2	1485.8	1728.6
10:25	1:35	604.1	1164.3	1311.7	613.7	6:55	5:05	1457.0	302.4	1488.1	1750.2
10:20	1:40	633.9	1152.9	1315.7	645.0	6:50	5:10	1464.4	275.3	1490.1	1771.5
10:15	1:45	663.4	1140.9	1319.8	676.3	6:45	5:15	1471.2	248.2	1492.0	1792.4
10:10	1:50	692.6	1128.3	1324.0	707.4	6:40	5:20	1477.2	220.9	1493.6	1813.0
10:05	1:55	721.5	1115.3	1328.3	738.3	6:35	5:25	1482.5	193.5	1495.1	1833.4
10:00	2:00	750.0	1101.6	1332.7	769.1	6:30	5:30	1487.2	166.0	1496.4	1853.4
9:55	2:05	778.2	1087.5	1337.2	799.7	6:25	5:35	1491.1	138.5	1497.5	1873.1
9:50	2:10	805.9	1072.9	1341.9	830.2	6:20	5:40	1494.3	110.9	1498.4	1892.4
9:45	2:15	833.4	1057.7	1346.5	860.5	6:15	5:45	1496.8	83.2	1499.1	1911.5
9:40	2:20	860.4	1042.0	1351.3	890.6	6:10	5:50	1498.6	55.5	1499.6	1930.2
9:35	2:25	887.0	1025.9	1356.1	920.5	6:05	5:55	1499.6	27.8	1499.9	1948.7
9:30	2:30	913.1	1009.2	1361.0	950.2	6:00	6:00	1500.0	0.0	1500.0	1966.8
9:25	2:35	938.9	992.1	1365.9	979.7	5:55	6:05	1499.6	-27.8	1499.9	1984.6
9:20	2:40	964.2	974.5	1370.8	1009.1	5:50	6:10	1498.6	-55.5	1499.6	2002.0
9:15	2:45	989.0	956.4	1375.8	1038.2	5:45	6:15	1496.8	-83.2	1499.1	2019.2
9:10	2:50	1013.4	937.9	1380.8	1067.1	5:40	6:20	1494.3	-110.9	1498.4	2036.0
9:05	2:55	1037.3	918.9	1385.8	1095.7	5:35	6:25	1491.1	-138.5	1497.5	2052.6
9:00	3:00	1060.7	899.5	1390.7	1124.2	5:30	6:30	1487.2	-166.0	1496.4	2068.8
8:55	3:05	1083.5	879.7	1395.7	1152.4	5:25	6:35	1482.5	-193.5	1495.1	2084.7
8:50	3:10	1105.9	859.4	1400.6	1180.4	5:20	6:40	1477.2	-220.9	1493.6	2100.3
8:45	3:15	1127.8	838.7	1405.5	1208.1	5:15	6:45	1471.2	-248.2	1492.0	2115.5
8:40	3:20	1149.1	817.7	1410.3	1235.7	5:10	6:50	1464.4	-275.3	1490.1	2130.5
8:35	3:25	1169.8	796.2	1415.1	1262.9	5:05	6:55	1457.0	-302.4	1488.1	2145.2
8:30	3:30	1190.0	774.4	1419.8	1289.9	5:00	7:00	1448.9	-329.2	1485.8	2159.5

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 Semi-Major Axis (E-W): 1500 mm Semi-Minor Axis (N-S): 1272.1 mm
 Sunrise/Sunset Markers: X = ± 340.5 mm

Local Time		X	Y	Z	W	Local Time		X	Y	Z	W
4:55	7:05	1440.1	-356.0	1483.4	2173.5	2:55	9:05	1037.3	-918.9	1385.8	2424.1
4:50	7:10	1430.6	-382.5	1480.8	2187.3	2:50	9:10	1013.4	-937.9	1380.8	2431.2
4:45	7:15	1420.4	-408.9	1478.1	2200.7	2:45	9:15	989.0	-956.4	1375.8	2438.1
4:40	7:20	1409.5	-435.1	1475.2	2213.9						
4:35	7:25	1398.0	-461.0	1472.1	2226.7						
4:30	7:30	1385.8	-486.8	1468.8	2239.2						
4:25	7:35	1373.0	-512.3	1465.4	2251.5						
4:20	7:40	1359.5	-537.6	1461.9	2263.4						
4:15	7:45	1345.3	-562.6	1458.2	2275.1						
4:10	7:50	1330.5	-587.4	1454.4	2286.4						
4:05	7:55	1315.1	-611.9	1450.5	2297.5						
4:00	8:00	1299.0	-636.0	1446.4	2308.3						
3:55	8:05	1282.4	-659.9	1442.2	2318.8						
3:50	8:10	1265.1	-683.5	1437.9	2329.1						
3:45	8:15	1247.2	-706.7	1433.5	2339.1						
3:40	8:20	1228.7	-729.6	1429.0	2348.7						
3:35	8:25	1209.7	-752.2	1424.5	2358.2						
3:30	8:30	1190.0	-774.4	1419.8	2367.3						
3:25	8:35	1169.8	-796.2	1415.1	2376.2						
3:20	8:40	1149.1	-817.7	1410.3	2384.8						
3:15	8:45	1127.8	-838.7	1405.5	2393.2						
3:10	8:50	1105.9	-859.4	1400.6	2401.3						
3:05	8:55	1083.5	-879.7	1395.7	2409.1						
3:00	9:00	1060.7	-899.5	1390.7	2416.8						

Analemmatic Sundial

Latitude: 58.0° N/S

Date Scale

Semi-Major Axis (E-W): 1500 mm Semi-Minor Axis (N-S): 1272.1 mm

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	-337.2	-330.9	-328.9	-320.2	-317.6	-306.7	-303.7	-290.7	-287.3	-272.6	-268.7
February	-243.9	-226.1	-221.5	-202.6	-197.9	-178.1	-173.0	-152.6	-147.5	-126.5	-121.1
March	-105.1	-83.5	-78.1	-56.3	-50.8	-28.9	-23.5	-1.4	4.0	26.0	31.4
April	64.0	85.4	90.7	111.7	117.0	137.6	142.6	162.7	167.7	187.0	191.7
May	214.8	232.4	236.7	253.1	257.0	272.1	275.7	289.5	292.8	304.8	307.5
June	322.4	330.2	332.0	337.7	339.0	342.7	343.2	344.5	344.6	342.2	343.3
July	339.0	333.6	332.0	324.7	322.6	313.1	310.5	299.3	296.2	283.4	279.9
August	258.0	242.0	237.9	220.7	216.4	198.3	193.6	174.8	170.0	150.3	145.3
September	115.0	94.2	89.0	67.9	62.6	41.2	36.0	14.4	9.0	-12.6	-18.0
October	-45.0	-66.6	-71.9	-93.4	-98.6	-119.8	-125.0	-145.7	-150.9	-171.1	-176.1
November	-205.1	-223.7	-228.2	-245.8	-250.0	-266.3	-270.1	-284.9	-288.4	-301.5	-304.6
December	-318.3	-327.5	-329.4	-336.1	-337.6	-341.8	-342.7	-344.5	-344.6	-343.8	-343.3

Northern Hemisphere

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	337.2	330.9	328.9	320.2	317.6	306.7	303.7	290.7	287.3	272.6	268.7
February	243.9	226.1	221.5	202.6	197.9	178.1	173.0	152.6	147.5	126.5	121.1
March	105.1	83.5	78.1	56.3	50.8	28.9	23.5	1.4	-4.0	-26.0	-31.4
April	-64.0	-85.4	-90.7	-111.7	-117.0	-137.6	-142.6	-162.7	-167.7	-187.0	-191.7
May	-214.8	-232.4	-236.7	-253.1	-257.0	-272.1	-275.7	-289.5	-292.8	-304.8	-307.5
June	-322.4	-330.2	-332.0	-337.7	-339.0	-342.7	-343.2	-344.5	-344.6	-342.2	-343.3
July	-339.0	-333.6	-332.0	-324.7	-322.6	-313.1	-310.5	-299.3	-296.2	-283.4	-279.9
August	-258.0	-242.0	-237.9	-220.7	-216.4	-198.3	-193.6	-174.8	-170.0	-150.3	-145.3
September	-115.0	-94.2	-89.0	-67.9	-62.6	-41.2	-36.0	-14.4	-9.0	12.6	18.0
October	45.0	66.6	71.9	93.4	98.6	119.8	125.0	145.7	150.9	171.1	176.1
November	205.1	223.7	228.2	245.8	250.0	266.3	270.1	284.9	288.4	301.5	304.6
December	318.3	327.5	329.4	336.1	337.6	341.8	342.7	344.5	344.6	343.8	343.3

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 |

Analemmatic Sundial

Latitude: 58.0° N/S

Earliest Sunrise: 2:54 a.m. Latest Sunset: 9:06 p.m.
 Semi-Major Axis (E-W): 2000 mm Semi-Minor Axis (N-S): 1696.1 mm
 Sunrise/Sunset Markers: X = ± 453.9 mm

Local Time	X	Y	Z	W	Local Time	X	Y	Z	W		
12:00	0.0	1696.1	1696.1	0.0							
11:55	12:05	43.6	1695.7	1696.3	43.6	8:25	3:35	1612.9	1002.9	1899.3	1755.5
11:50	12:10	87.2	1694.5	1696.7	87.3	8:20	3:40	1638.3	972.8	1905.4	1790.8
11:45	12:15	130.8	1692.5	1697.5	130.9	8:15	3:45	1662.9	942.3	1911.4	1825.8
11:40	12:20	174.3	1689.6	1698.6	174.4	8:10	3:50	1686.8	911.3	1917.2	1860.4
11:35	12:25	217.7	1686.0	1700.0	218.0	8:05	3:55	1709.8	879.9	1922.9	1894.6
11:30	12:30	261.1	1681.6	1701.7	261.5	8:00	4:00	1732.1	848.0	1928.5	1928.5
11:25	12:35	304.2	1676.4	1703.7	304.9	7:55	4:05	1753.5	815.8	1933.9	1962.0
11:20	12:40	347.3	1670.3	1706.1	348.3	7:50	4:10	1774.0	783.2	1939.2	1995.1
11:15	12:45	390.2	1663.5	1708.7	391.5	7:45	4:15	1793.7	750.2	1944.3	2027.9
11:10	12:50	432.9	1655.9	1711.5	434.7	7:40	4:20	1812.6	716.8	1949.2	2060.2
11:05	12:55	475.4	1647.5	1714.7	477.9	7:35	4:25	1830.6	683.1	1953.9	2092.2
11:00	1:00	517.6	1638.3	1718.1	520.9	7:30	4:30	1847.8	649.1	1958.4	2123.8
10:55	1:05	559.7	1628.3	1721.8	563.7	7:25	4:35	1864.0	614.7	1962.8	2155.0
10:50	1:10	601.4	1617.6	1725.8	606.5	7:20	4:40	1879.4	580.1	1966.9	2185.8
10:45	1:15	642.9	1606.1	1730.0	649.1	7:15	4:45	1893.9	545.2	1970.8	2216.1
10:40	1:20	684.0	1593.8	1734.4	691.6	7:10	4:50	1907.4	510.0	1974.4	2246.1
10:35	1:25	724.9	1580.8	1739.1	734.0	7:05	4:55	1920.1	474.6	1977.9	2275.7
10:30	1:30	765.4	1567.0	1743.9	776.2	7:00	5:00	1931.9	439.0	1981.1	2304.9
10:25	1:35	805.5	1552.5	1749.0	818.2	6:55	5:05	1942.7	403.1	1984.1	2333.6
10:20	1:40	845.2	1537.2	1754.2	860.0	6:50	5:10	1952.6	367.1	1986.8	2362.0
10:15	1:45	884.6	1521.2	1759.7	901.7	6:45	5:15	1961.6	330.9	1989.3	2389.9
10:10	1:50	923.5	1504.5	1765.3	943.2	6:40	5:20	1969.6	294.5	1991.5	2417.4
10:05	1:55	962.0	1487.0	1771.0	984.4	6:35	5:25	1976.7	258.0	1993.5	2444.5
10:00	2:00	1000.0	1468.9	1777.0	1025.5	6:30	5:30	1982.9	221.4	1995.2	2471.2
9:55	2:05	1037.5	1450.0	1783.0	1066.3	6:25	5:35	1988.1	184.6	1996.7	2497.4
9:50	2:10	1074.6	1430.5	1789.1	1106.9	6:20	5:40	1992.4	147.8	1997.9	2523.2
9:45	2:15	1111.1	1410.3	1795.4	1147.3	6:15	5:45	1995.7	110.9	1998.8	2548.7
9:40	2:20	1147.2	1389.4	1801.7	1187.5	6:10	5:50	1998.1	74.0	1999.5	2573.6
9:35	2:25	1182.6	1367.8	1808.2	1227.3	6:05	5:55	1999.5	37.0	1999.9	2598.2
9:30	2:30	1217.5	1345.6	1814.7	1267.0	6:00	6:00	2000.0	0.0	2000.0	2622.4
9:25	2:35	1251.8	1322.8	1821.2	1306.3	5:55	6:05	1999.5	-37.0	1999.9	2646.1
9:20	2:40	1285.6	1299.3	1827.8	1345.4	5:50	6:10	1998.1	-74.0	1999.5	2669.4
9:15	2:45	1318.7	1275.2	1834.4	1384.2	5:45	6:15	1995.7	-110.9	1998.8	2692.3
9:10	2:50	1351.2	1250.5	1841.0	1422.8	5:40	6:20	1992.4	-147.8	1997.9	2714.7
9:05	2:55	1383.0	1225.2	1847.7	1461.0	5:35	6:25	1988.1	-184.6	1996.7	2736.7
9:00	3:00	1414.2	1199.3	1854.3	1498.9	5:30	6:30	1982.9	-221.4	1995.2	2758.4
8:55	3:05	1444.7	1172.9	1860.9	1536.6	5:25	6:35	1976.7	-258.0	1993.5	2779.6
8:50	3:10	1474.6	1145.9	1867.4	1573.9	5:20	6:40	1969.6	-294.5	1991.5	2800.3
8:45	3:15	1503.7	1118.3	1873.9	1610.9	5:15	6:45	1961.6	-330.9	1989.3	2820.7
8:40	3:20	1532.1	1090.2	1880.4	1647.5	5:10	6:50	1952.6	-367.1	1986.8	2840.7
8:35	3:25	1559.8	1061.6	1886.8	1683.9	5:05	6:55	1942.7	-403.1	1984.1	2860.2
8:30	3:30	1586.7	1032.5	1893.1	1719.9	5:00	7:00	1931.9	-439.0	1981.1	2879.3

Analemmatic Sundial

Latitude: 58.0° N/S

Earliest Sunrise: 2:54 a.m. Latest Sunset: 9:06 p.m.
 Semi-Major Axis (E-W): 2000 mm Semi-Minor Axis (N-S): 1696.1 mm
 Sunrise/Sunset Markers: X = ± 453.9 mm

Local Time		X	Y	Z	W	Local Time		X	Y	Z	W
4:55	7:05	1920.1	-474.6	1977.9	2898.1	2:55	9:05	1383.0	-1225.2	1847.7	3232.1
4:50	7:10	1907.4	-510.0	1974.4	2916.4	2:50	9:10	1351.2	-1250.5	1841.0	3241.6
4:45	7:15	1893.9	-545.2	1970.8	2934.3	2:45	9:15	1318.7	-1275.2	1834.4	3250.8
4:40	7:20	1879.4	-580.1	1966.9	2951.8						
4:35	7:25	1864.0	-614.7	1962.8	2968.9						
4:30	7:30	1847.8	-649.1	1958.4	2985.6						
4:25	7:35	1830.6	-683.1	1953.9	3002.0						
4:20	7:40	1812.6	-716.8	1949.2	3017.9						
4:15	7:45	1793.7	-750.2	1944.3	3033.4						
4:10	7:50	1774.0	-783.2	1939.2	3048.6						
4:05	7:55	1753.5	-815.8	1933.9	3063.4						
4:00	8:00	1732.1	-848.0	1928.5	3077.8						
3:55	8:05	1709.8	-879.9	1922.9	3091.8						
3:50	8:10	1686.8	-911.3	1917.2	3105.4						
3:45	8:15	1662.9	-942.3	1911.4	3118.7						
3:40	8:20	1638.3	-972.8	1905.4	3131.7						
3:35	8:25	1612.9	-1002.9	1899.3	3144.2						
3:30	8:30	1586.7	-1032.5	1893.1	3156.4						
3:25	8:35	1559.8	-1061.6	1886.8	3168.3						
3:20	8:40	1532.1	-1090.2	1880.4	3179.8						
3:15	8:45	1503.7	-1118.3	1873.9	3190.9						
3:10	8:50	1474.6	-1145.9	1867.4	3201.7						
3:05	8:55	1444.7	-1172.9	1860.9	3212.2						
3:00	9:00	1414.2	-1199.3	1854.3	3222.3						

Analematic Sundial

Latitude: 58.0° N/S

Date Scale

Semi-Major Axis (E-W): 2000 mm Semi-Minor Axis (N-S): 1696.1 mm

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	-449.7	-441.2	-438.6	-426.9	-423.5	-409.0	-404.9	-387.6	-383.0	-363.5	-358.3
February	-325.2	-301.5	-295.3	-270.1	-263.9	-237.5	-230.7	-203.5	-196.6	-168.6	-161.4
March	-140.1	-111.4	-104.1	-75.0	-67.8	-38.5	-31.3	-1.8	5.4	34.6	41.8
April	85.3	113.8	120.9	149.0	155.9	183.4	190.1	217.0	223.5	249.4	255.6
May	286.4	309.9	315.5	337.4	342.7	362.9	367.6	386.0	390.4	406.4	410.0
June	429.9	440.3	442.7	450.3	452.1	456.9	457.5	459.3	459.5	456.2	457.8
July	452.1	444.9	442.7	432.9	430.1	417.5	414.1	399.0	395.0	377.8	373.2
August	344.0	322.6	317.2	294.3	288.5	264.4	258.2	233.0	226.6	200.5	193.8
September	153.3	125.6	118.7	90.5	83.4	55.0	47.9	19.2	12.0	-16.8	-24.1
October	-60.0	-88.8	-95.9	-124.5	-131.4	-159.7	-166.7	-194.3	-201.2	-228.2	-234.8
November	-273.5	-298.3	-304.3	-327.7	-333.4	-355.0	-360.2	-379.9	-384.5	-402.0	-406.2
December	-424.3	-436.6	-439.2	-448.1	-450.1	-455.8	-456.9	-459.3	-459.5	-458.4	-457.8

Northern Hemisphere

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	449.7	441.2	438.6	426.9	423.5	409.0	404.9	387.6	383.0	363.5	358.3
February	325.2	301.5	295.3	270.1	263.9	237.5	230.7	203.5	196.6	168.6	161.4
March	140.1	111.4	104.1	75.0	67.8	38.5	31.3	1.8	-5.4	-34.6	-41.8
April	-85.3	-113.8	-120.9	-149.0	-155.9	-183.4	-190.1	-217.0	-223.5	-249.4	-255.6
May	-286.4	-309.9	-315.5	-337.4	-342.7	-362.9	-367.6	-386.0	-390.4	-406.4	-410.0
June	-429.9	-440.3	-442.7	-450.3	-452.1	-456.9	-457.5	-459.3	-459.5	-456.2	-457.8
July	-452.1	-444.9	-442.7	-432.9	-430.1	-417.5	-414.1	-399.0	-395.0	-377.8	-373.2
August	-344.0	-322.6	-317.2	-294.3	-288.5	-264.4	-258.2	-233.0	-226.6	-200.5	-193.8
September	-153.3	-125.6	-118.7	-90.5	-83.4	-55.0	-47.9	-19.2	-12.0	16.8	24.1
October	60.0	88.8	95.9	124.5	131.4	159.7	166.7	194.3	201.2	228.2	234.8
November	273.5	298.3	304.3	327.7	333.4	355.0	360.2	379.9	384.5	402.0	406.2
December	424.3	436.6	439.2	448.1	450.1	455.8	456.9	459.3	459.5	458.4	457.8

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: 58.0° N/S

Earliest Sunrise: 2:54 a.m. Latest Sunset: 9:06 p.m.
 Semi-Major Axis (E-W): 2500 mm Semi-Minor Axis (N-S): 2120.1 mm
 Sunrise/Sunset Markers: X = ± 567.4 mm

Local Time		X	Y	Z	W	Local Time		X	Y	Z	W
12:00		0.0	2120.1	2120.1	0.0						
11:55	12:05	54.5	2119.6	2120.3	54.5	8:25	3:35	2016.1	1253.6	2374.1	2194.4
11:50	12:10	109.0	2118.1	2120.9	109.1	8:20	3:40	2047.9	1216.1	2381.7	2238.6
11:45	12:15	163.5	2115.6	2121.9	163.6	8:15	3:45	2078.7	1177.9	2389.2	2282.3
11:40	12:20	217.9	2112.1	2123.3	218.0	8:10	3:50	2108.5	1139.1	2396.5	2325.5
11:35	12:25	272.2	2107.5	2125.0	272.5	8:05	3:55	2137.3	1099.9	2403.7	2368.3
11:30	12:30	326.3	2102.0	2127.2	326.8	8:00	4:00	2165.1	1060.1	2410.6	2410.6
11:25	12:35	380.3	2095.4	2129.7	381.1	7:55	4:05	2191.8	1019.8	2417.4	2452.5
11:20	12:40	434.1	2087.9	2132.6	435.3	7:50	4:10	2217.5	979.0	2424.0	2493.9
11:15	12:45	487.7	2079.4	2135.8	489.4	7:45	4:15	2242.2	937.7	2430.4	2534.9
11:10	12:50	541.1	2069.9	2139.4	543.4	7:40	4:20	2265.8	896.0	2436.5	2575.3
11:05	12:55	594.2	2059.4	2143.4	597.3	7:35	4:25	2288.3	853.9	2442.4	2615.3
11:00	1:00	647.0	2047.9	2147.7	651.1	7:30	4:30	2309.7	811.3	2448.1	2654.7
10:55	1:05	699.6	2035.4	2152.3	704.7	7:25	4:35	2330.0	768.4	2453.5	2693.7
10:50	1:10	751.8	2022.0	2157.2	758.1	7:20	4:40	2349.2	725.1	2458.6	2732.2
10:45	1:15	803.6	2007.6	2162.5	811.4	7:15	4:45	2367.3	681.5	2463.5	2770.2
10:40	1:20	855.1	1992.3	2168.0	864.6	7:10	4:50	2384.3	637.5	2468.1	2807.7
10:35	1:25	906.1	1976.0	2173.8	917.5	7:05	4:55	2400.1	593.3	2472.4	2844.6
10:30	1:30	956.7	1958.7	2179.9	970.2	7:00	5:00	2414.8	548.7	2476.4	2881.1
10:25	1:35	1006.9	1940.6	2186.2	1022.8	6:55	5:05	2428.4	503.9	2480.1	2917.0
10:20	1:40	1056.5	1921.5	2192.8	1075.1	6:50	5:10	2440.7	458.9	2483.5	2952.4
10:15	1:45	1105.7	1901.5	2199.6	1127.1	6:45	5:15	2452.0	413.6	2486.6	2987.4
10:10	1:50	1154.4	1880.6	2206.6	1179.0	6:40	5:20	2462.0	368.2	2489.4	3021.7
10:05	1:55	1202.5	1858.8	2213.8	1230.5	6:35	5:25	2470.9	322.5	2491.9	3055.6
10:00	2:00	1250.0	1836.1	2221.2	1281.9	6:30	5:30	2478.6	276.7	2494.0	3088.9
9:55	2:05	1296.9	1812.5	2228.7	1332.9	6:25	5:35	2485.1	230.8	2495.8	3121.8
9:50	2:10	1343.2	1788.1	2236.4	1383.7	6:20	5:40	2490.5	184.8	2497.3	3154.1
9:45	2:15	1388.9	1762.8	2244.2	1434.1	6:15	5:45	2494.6	138.7	2498.5	3185.8
9:40	2:20	1433.9	1736.7	2252.2	1484.3	6:10	5:50	2497.6	92.5	2499.3	3217.1
9:35	2:25	1478.3	1709.8	2260.2	1534.2	6:05	5:55	2499.4	46.3	2499.8	3247.8
9:30	2:30	1521.9	1682.0	2268.3	1583.7	6:00	6:00	2500.0	0.0	2500.0	3277.9
9:25	2:35	1564.8	1653.4	2276.5	1632.9	5:55	6:05	2499.4	-46.3	2499.8	3307.6
9:20	2:40	1607.0	1624.1	2284.7	1681.8	5:50	6:10	2497.6	-92.5	2499.3	3336.7
9:15	2:45	1648.4	1594.0	2293.0	1730.3	5:45	6:15	2494.6	-138.7	2498.5	3365.3
9:10	2:50	1689.0	1563.1	2301.3	1778.5	5:40	6:20	2490.5	-184.8	2497.3	3393.4
9:05	2:55	1728.8	1531.5	2309.6	1826.2	5:35	6:25	2485.1	-230.8	2495.8	3420.9
9:00	3:00	1767.8	1499.2	2317.9	1873.7	5:30	6:30	2478.6	-276.7	2494.0	3448.0
8:55	3:05	1805.9	1466.1	2326.1	1920.7	5:25	6:35	2470.9	-322.5	2491.9	3474.5
8:50	3:10	1843.2	1432.3	2334.3	1967.3	5:20	6:40	2462.0	-368.2	2489.4	3500.4
8:45	3:15	1879.6	1397.9	2342.4	2013.6	5:15	6:45	2452.0	-413.6	2486.6	3525.9
8:40	3:20	1915.1	1362.8	2350.5	2059.4	5:10	6:50	2440.7	-458.9	2483.5	3550.8
8:35	3:25	1949.7	1327.0	2358.5	2104.8	5:05	6:55	2428.4	-503.9	2480.1	3575.3
8:30	3:30	1983.4	1290.6	2366.3	2149.8	5:00	7:00	2414.8	-548.7	2476.4	3599.2

Analemmatic Sundial

Latitude: 58.0° N/S

Earliest Sunrise: 2:54 a.m. Latest Sunset: 9:06 p.m.
 Semi-Major Axis (E-W): 2500 mm Semi-Minor Axis (N-S): 2120.1 mm
 Sunrise/Sunset Markers: X = ± 567.4 mm

Local Time		X	Y	Z	W	Local Time		X	Y	Z	W
4:55	7:05	2400.1	-593.3	2472.4	3622.6	2:55	9:05	1728.8	-1531.5	2309.6	4040.2
4:50	7:10	2384.3	-637.5	2468.1	3645.5	2:50	9:10	1689.0	-1563.1	2301.3	4052.0
4:45	7:15	2367.3	-681.5	2463.5	3667.9	2:45	9:15	1648.4	-1594.0	2293.0	4063.5
4:40	7:20	2349.2	-725.1	2458.6	3689.8						
4:35	7:25	2330.0	-768.4	2453.5	3711.1						
4:30	7:30	2309.7	-811.3	2448.1	3732.0						
4:25	7:35	2288.3	-853.9	2442.4	3752.4						
4:20	7:40	2265.8	-896.0	2436.5	3772.4						
4:15	7:45	2242.2	-937.7	2430.4	3791.8						
4:10	7:50	2217.5	-979.0	2424.0	3810.7						
4:05	7:55	2191.8	-1019.8	2417.4	3829.2						
4:00	8:00	2165.1	-1060.1	2410.6	3847.2						
3:55	8:05	2137.3	-1099.9	2403.7	3864.7						
3:50	8:10	2108.5	-1139.1	2396.5	3881.8						
3:45	8:15	2078.7	-1177.9	2389.2	3898.4						
3:40	8:20	2047.9	-1216.1	2381.7	3914.6						
3:35	8:25	2016.1	-1253.6	2374.1	3930.3						
3:30	8:30	1983.4	-1290.6	2366.3	3945.5						
3:25	8:35	1949.7	-1327.0	2358.5	3960.3						
3:20	8:40	1915.1	-1362.8	2350.5	3974.7						
3:15	8:45	1879.6	-1397.9	2342.4	3988.6						
3:10	8:50	1843.2	-1432.3	2334.3	4002.2						
3:05	8:55	1805.9	-1466.1	2326.1	4015.2						
3:00	9:00	1767.8	-1499.2	2317.9	4027.9						

Analematic Sundial

Latitude: 58.0° N/S

Date Scale

Semi-Major Axis (E-W): 2500 mm Semi-Minor Axis (N-S): 2120.1 mm

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	-562.1	-551.5	-548.2	-533.6	-529.3	-511.2	-506.2	-484.5	-478.8	-454.4	-447.9
February	-406.5	-376.9	-369.1	-337.7	-329.8	-296.9	-288.4	-254.4	-245.8	-210.8	-201.8
March	-175.1	-139.2	-130.1	-93.8	-84.7	-48.1	-39.1	-2.3	6.7	43.3	52.3
April	106.6	142.3	151.2	186.2	194.9	229.3	237.7	271.2	279.4	311.7	319.5
May	358.0	387.4	394.4	421.8	428.4	453.6	459.5	482.4	488.0	508.0	512.5
June	537.4	550.4	553.4	562.9	565.1	571.1	571.9	574.1	574.4	570.3	572.2
July	565.1	556.1	553.4	541.2	537.7	521.9	517.6	498.8	493.7	472.3	466.5
August	429.9	403.3	396.5	367.9	360.7	330.6	322.7	291.3	283.3	250.6	242.2
September	191.6	157.0	148.4	113.1	104.3	68.7	59.9	24.0	15.0	-21.0	-30.1
October	-75.0	-111.0	-119.9	-155.6	-164.3	-199.6	-208.4	-242.9	-251.5	-285.2	-293.5
November	-341.9	-372.9	-380.4	-409.6	-416.7	-443.8	-450.2	-474.9	-480.6	-502.5	-507.7
December	-530.4	-545.8	-549.0	-560.2	-562.6	-569.7	-571.1	-574.1	-574.4	-573.0	-572.2

Northern Hemisphere

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	562.1	551.5	548.2	533.6	529.3	511.2	506.2	484.5	478.8	454.4	447.9
February	406.5	376.9	369.1	337.7	329.8	296.9	288.4	254.4	245.8	210.8	201.8
March	175.1	139.2	130.1	93.8	84.7	48.1	39.1	2.3	-6.7	-43.3	-52.3
April	-106.6	-142.3	-151.2	-186.2	-194.9	-229.3	-237.7	-271.2	-279.4	-311.7	-319.5
May	-358.0	-387.4	-394.4	-421.8	-428.4	-453.6	-459.5	-482.4	-488.0	-508.0	-512.5
June	-537.4	-550.4	-553.4	-562.9	-565.1	-571.1	-571.9	-574.1	-574.4	-570.3	-572.2
July	-565.1	-556.1	-553.4	-541.2	-537.7	-521.9	-517.6	-498.8	-493.7	-472.3	-466.5
August	-429.9	-403.3	-396.5	-367.9	-360.7	-330.6	-322.7	-291.3	-283.3	-250.6	-242.2
September	-191.6	-157.0	-148.4	-113.1	-104.3	-68.7	-59.9	-24.0	-15.0	21.0	30.1
October	75.0	111.0	119.9	155.6	164.3	199.6	208.4	242.9	251.5	285.2	293.5
November	341.9	372.9	380.4	409.6	416.7	443.8	450.2	474.9	480.6	502.5	507.7
December	530.4	545.8	549.0	560.2	562.6	569.7	571.1	574.1	574.4	573.0	572.2

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