

Analemmatic Sundial

Latitude: 63.5° N/S

Earliest Sunrise: 1:41 a.m. Latest Sunset: 10:19 p.m.
 Semi-Major Axis (E-W): 1000 mm Semi-Minor Axis (N-S): 894.9 mm
 Sunrise/Sunset Markers: X = ± 134.4 mm

Local Time		X	Y	Z	W	Local Time		X	Y	Z	W
12:00		0.0	894.9	894.9	0.0						
11:55	12:05	21.8	894.7	895.0	21.8	8:25	3:35	806.4	529.2	964.6	885.5
11:50	12:10	43.6	894.1	895.1	43.6	8:20	3:40	819.2	513.3	966.7	903.7
11:45	12:15	65.4	893.0	895.4	65.4	8:15	3:45	831.5	497.2	968.8	921.7
11:40	12:20	87.2	891.5	895.8	87.2	8:10	3:50	843.4	480.8	970.8	939.6
11:35	12:25	108.9	889.6	896.3	109.0	8:05	3:55	854.9	464.3	972.8	957.3
11:30	12:30	130.5	887.3	896.8	130.8	8:00	4:00	866.0	447.5	974.8	974.8
11:25	12:35	152.1	884.5	897.5	152.5	7:55	4:05	876.7	430.5	976.7	992.2
11:20	12:40	173.6	881.3	898.3	174.2	7:50	4:10	887.0	413.2	978.5	1009.4
11:15	12:45	195.1	877.7	899.2	195.8	7:45	4:15	896.9	395.8	980.3	1026.4
11:10	12:50	216.4	873.7	900.1	217.5	7:40	4:20	906.3	378.2	982.1	1043.3
11:05	12:55	237.7	869.3	901.2	239.1	7:35	4:25	915.3	360.4	983.7	1059.9
11:00	1:00	258.8	864.4	902.4	260.6	7:30	4:30	923.9	342.5	985.3	1076.5
10:55	1:05	279.8	859.2	903.6	282.1	7:25	4:35	932.0	324.4	986.8	1092.8
10:50	1:10	300.7	853.5	904.9	303.5	7:20	4:40	939.7	306.1	988.3	1108.9
10:45	1:15	321.4	847.4	906.4	324.9	7:15	4:45	946.9	287.7	989.7	1124.9
10:40	1:20	342.0	841.0	907.9	346.3	7:10	4:50	953.7	269.1	991.0	1140.7
10:35	1:25	362.4	834.1	909.4	367.5	7:05	4:55	960.0	250.4	992.2	1156.3
10:30	1:30	382.7	826.8	911.1	388.7	7:00	5:00	965.9	231.6	993.3	1171.7
10:25	1:35	402.7	819.1	912.8	409.8	6:55	5:05	971.3	212.7	994.4	1187.0
10:20	1:40	422.6	811.1	914.6	430.9	6:50	5:10	976.3	193.7	995.3	1202.0
10:15	1:45	442.3	802.6	916.4	451.8	6:45	5:15	980.8	174.6	996.2	1216.9
10:10	1:50	461.7	793.8	918.3	472.7	6:40	5:20	984.8	155.4	997.0	1231.6
10:05	1:55	481.0	784.6	920.3	493.5	6:35	5:25	988.4	136.1	997.7	1246.0
10:00	2:00	500.0	775.0	922.3	514.2	6:30	5:30	991.4	116.8	998.3	1260.3
9:55	2:05	518.8	765.1	924.4	534.8	6:25	5:35	994.1	97.4	998.8	1274.4
9:50	2:10	537.3	754.8	926.5	555.3	6:20	5:40	996.2	78.0	999.2	1288.3
9:45	2:15	555.6	744.1	928.6	575.7	6:15	5:45	997.9	58.5	999.6	1302.0
9:40	2:20	573.6	733.1	930.8	596.0	6:10	5:50	999.0	39.0	999.8	1315.5
9:35	2:25	591.3	721.7	933.0	616.2	6:05	5:55	999.8	19.5	1000.0	1328.9
9:30	2:30	608.8	710.0	935.2	636.2	6:00	6:00	1000.0	0.0	1000.0	1342.0
9:25	2:35	625.9	697.9	937.5	656.2	5:55	6:05	999.8	-19.5	1000.0	1354.9
9:20	2:40	642.8	685.6	939.8	676.0	5:50	6:10	999.0	-39.0	999.8	1367.6
9:15	2:45	659.3	672.8	942.1	695.7	5:45	6:15	997.9	-58.5	999.6	1380.2
9:10	2:50	675.6	659.8	944.3	715.3	5:40	6:20	996.2	-78.0	999.2	1392.5
9:05	2:55	691.5	646.5	946.6	734.8	5:35	6:25	994.1	-97.4	998.8	1404.6
9:00	3:00	707.1	632.8	948.9	754.1	5:30	6:30	991.4	-116.8	998.3	1416.5
8:55	3:05	722.4	618.9	951.2	773.3	5:25	6:35	988.4	-136.1	997.7	1428.3
8:50	3:10	737.3	604.6	953.5	792.4	5:20	6:40	984.8	-155.4	997.0	1439.8
8:45	3:15	751.8	590.1	955.7	811.3	5:15	6:45	980.8	-174.6	996.2	1451.1
8:40	3:20	766.0	575.3	958.0	830.1	5:10	6:50	976.3	-193.7	995.3	1462.3
8:35	3:25	779.9	560.2	960.2	848.7	5:05	6:55	971.3	-212.7	994.4	1473.2
8:30	3:30	793.4	544.8	962.4	867.2	5:00	7:00	965.9	-231.6	993.3	1484.0

Analemmatic Sundial

Latitude: 63.5° N/S

Earliest Sunrise: 1:41 a.m. Latest Sunset: 10:19 p.m.
 Semi-Major Axis (E-W): 1000 mm Semi-Minor Axis (N-S): 894.9 mm
 Sunrise/Sunset Markers: X = ± 134.4 mm

Local Time		X	Y	Z	W	Local Time		X	Y	Z	W
4:55	7:05	960.0	-250.4	992.2	1494.5	2:55	9:05	691.5	-646.5	946.6	1689.4
4:50	7:10	953.7	-269.1	991.0	1504.9	2:50	9:10	675.6	-659.8	944.3	1695.2
4:45	7:15	946.9	-287.7	989.7	1515.0	2:45	9:15	659.3	-672.8	942.1	1700.8
4:40	7:20	939.7	-306.1	988.3	1524.9	2:40	9:20	642.8	-685.6	939.8	1706.2
4:35	7:25	932.0	-324.4	986.8	1534.7	2:35	9:25	625.9	-697.9	937.5	1711.4
4:30	7:30	923.9	-342.5	985.3	1544.3	2:30	9:30	608.8	-710.0	935.2	1716.5
4:25	7:35	915.3	-360.4	983.7	1553.6	2:25	9:35	591.3	-721.7	933.0	1721.4
4:20	7:40	906.3	-378.2	982.1	1562.8	2:20	9:40	573.6	-733.1	930.8	1726.1
4:15	7:45	896.9	-395.8	980.3	1571.8	2:15	9:45	555.6	-744.1	928.6	1730.6
4:10	7:50	887.0	-413.2	978.5	1580.5	2:10	9:50	537.3	-754.8	926.5	1735.0
4:05	7:55	876.7	-430.5	976.7	1589.1	2:05	9:55	518.8	-765.1	924.4	1739.2
4:00	8:00	866.0	-447.5	974.8	1597.5	2:00	10:00	500.0	-775.0	922.3	1743.2
3:55	8:05	854.9	-464.3	972.8	1605.7	1:55	10:05	481.0	-784.6	920.3	1747.1
3:50	8:10	843.4	-480.8	970.8	1613.7	1:50	10:10	461.7	-793.8	918.3	1750.7
3:45	8:15	831.5	-497.2	968.8	1621.5	1:45	10:15	442.3	-802.6	916.4	1754.2
3:40	8:20	819.2	-513.3	966.7	1629.2	1:40	10:20	422.6	-811.1	914.6	1757.6
3:35	8:25	806.4	-529.2	964.6	1636.6	1:35	10:25	402.7	-819.1	912.8	1760.8
3:30	8:30	793.4	-544.8	962.4	1643.9	1:30	10:30	382.7	-826.8	911.1	1763.8
3:25	8:35	779.9	-560.2	960.2	1650.9						
3:20	8:40	766.0	-575.3	958.0	1657.8						
3:15	8:45	751.8	-590.1	955.7	1664.5						
3:10	8:50	737.3	-604.6	953.5	1671.0						
3:05	8:55	722.4	-618.9	951.2	1677.3						
3:00	9:00	707.1	-632.8	948.9	1683.5						

Analemmatic Sundial

Latitude: 63.5° N/S

Date Scale

Semi-Major Axis (E-W): 1000 mm Semi-Minor Axis (N-S): 894.9 mm

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	-189.3	-185.7	-184.6	-179.7	-178.3	-172.2	-170.5	-163.2	-161.3	-153.0	-150.9
February	-136.9	-126.9	-124.3	-113.7	-111.1	-100.0	-97.1	-85.7	-82.8	-71.0	-68.0
March	-59.0	-46.9	-43.8	-31.6	-28.5	-16.2	-13.2	-0.8	2.3	14.6	17.6
April	35.9	47.9	50.9	62.7	65.7	77.2	80.0	91.3	94.1	105.0	107.6
May	120.6	130.5	132.8	142.1	144.3	152.8	154.8	162.5	164.3	171.1	172.6
June	181.0	185.4	186.4	189.6	190.3	192.3	192.6	193.4	193.5	192.1	192.7
July	190.3	187.3	186.4	182.3	181.1	175.8	174.3	168.0	166.3	159.1	157.1
August	144.8	135.8	133.5	123.9	121.5	111.3	108.7	98.1	95.4	84.4	81.6
September	64.5	52.9	50.0	38.1	35.1	23.1	20.2	8.1	5.1	-7.1	-10.1
October	-25.3	-37.4	-40.4	-52.4	-55.3	-67.2	-70.2	-81.8	-84.7	-96.1	-98.8
November	-115.1	-125.6	-128.1	-138.0	-140.3	-149.5	-151.6	-159.9	-161.9	-169.2	-171.0
December	-178.6	-183.8	-184.9	-188.7	-189.5	-191.9	-192.3	-193.4	-193.5	-193.0	-192.7

Northern Hemisphere

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	189.3	185.7	184.6	179.7	178.3	172.2	170.5	163.2	161.3	153.0	150.9
February	136.9	126.9	124.3	113.7	111.1	100.0	97.1	85.7	82.8	71.0	68.0
March	59.0	46.9	43.8	31.6	28.5	16.2	13.2	0.8	-2.3	-14.6	-17.6
April	-35.9	-47.9	-50.9	-62.7	-65.7	-77.2	-80.0	-91.3	-94.1	-105.0	-107.6
May	-120.6	-130.5	-132.8	-142.1	-144.3	-152.8	-154.8	-162.5	-164.3	-171.1	-172.6
June	-181.0	-185.4	-186.4	-189.6	-190.3	-192.3	-192.6	-193.4	-193.5	-192.1	-192.7
July	-190.3	-187.3	-186.4	-182.3	-181.1	-175.8	-174.3	-168.0	-166.3	-159.1	-157.1
August	-144.8	-135.8	-133.5	-123.9	-121.5	-111.3	-108.7	-98.1	-95.4	-84.4	-81.6
September	-64.5	-52.9	-50.0	-38.1	-35.1	-23.1	-20.2	-8.1	-5.1	7.1	10.1
October	25.3	37.4	40.4	52.4	55.3	67.2	70.2	81.8	84.7	96.1	98.8
November	115.1	125.6	128.1	138.0	140.3	149.5	151.6	159.9	161.9	169.2	171.0
December	178.6	183.8	184.9	188.7	189.5	191.9	192.3	193.4	193.5	193.0	192.7

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: 63.5° N/S

Earliest Sunrise: 1:41 a.m. Latest Sunset: 10:19 p.m.
 Semi-Major Axis (E-W): 1500 mm Semi-Minor Axis (N-S): 1342.4 mm
 Sunrise/Sunset Markers: X = ± 201.5 mm

Local Time		X	Y	Z	W	Local Time		X	Y	Z	W
12:00		0.0	1342.4	1342.4	0.0						
11:55	12:05	32.7	1342.1	1342.5	32.7	8:25	3:35	1209.7	793.8	1446.8	1328.3
11:50	12:10	65.4	1341.1	1342.7	65.4	8:20	3:40	1228.7	770.0	1450.0	1355.5
11:45	12:15	98.1	1339.5	1343.1	98.1	8:15	3:45	1247.2	745.8	1453.2	1382.6
11:40	12:20	130.7	1337.3	1343.7	130.8	8:10	3:50	1265.1	721.3	1456.3	1409.3
11:35	12:25	163.3	1334.4	1344.4	163.5	8:05	3:55	1282.4	696.4	1459.3	1435.9
11:30	12:30	195.8	1330.9	1345.2	196.1	8:00	4:00	1299.0	671.2	1462.2	1462.2
11:25	12:35	228.2	1326.8	1346.3	228.7	7:55	4:05	1315.1	645.7	1465.0	1488.2
11:20	12:40	260.5	1322.0	1347.4	261.3	7:50	4:10	1330.5	619.9	1467.8	1514.1
11:15	12:45	292.6	1316.6	1348.7	293.8	7:45	4:15	1345.3	593.7	1470.5	1539.6
11:10	12:50	324.7	1310.6	1350.2	326.2	7:40	4:20	1359.5	567.3	1473.1	1564.9
11:05	12:55	356.5	1303.9	1351.8	358.6	7:35	4:25	1373.0	540.6	1475.6	1589.9
11:00	1:00	388.2	1296.7	1353.5	390.9	7:30	4:30	1385.8	513.7	1478.0	1614.7
10:55	1:05	419.7	1288.8	1355.4	423.2	7:25	4:35	1398.0	486.5	1480.3	1639.2
10:50	1:10	451.1	1280.3	1357.4	455.3	7:20	4:40	1409.5	459.1	1482.4	1663.4
10:45	1:15	482.2	1271.2	1359.5	487.4	7:15	4:45	1420.4	431.5	1484.5	1687.4
10:40	1:20	513.0	1261.4	1361.8	519.4	7:10	4:50	1430.6	403.7	1486.4	1711.1
10:35	1:25	543.7	1251.1	1364.1	551.3	7:05	4:55	1440.1	375.6	1488.3	1734.5
10:30	1:30	574.0	1240.2	1366.6	583.0	7:00	5:00	1448.9	347.4	1490.0	1757.6
10:25	1:35	604.1	1228.7	1369.2	614.7	6:55	5:05	1457.0	319.1	1491.5	1780.5
10:20	1:40	633.9	1216.6	1371.9	646.3	6:50	5:10	1464.4	290.5	1493.0	1803.1
10:15	1:45	663.4	1204.0	1374.7	677.7	6:45	5:15	1471.2	261.9	1494.3	1825.3
10:10	1:50	692.6	1190.7	1377.5	709.0	6:40	5:20	1477.2	233.1	1495.5	1847.3
10:05	1:55	721.5	1176.9	1380.5	740.2	6:35	5:25	1482.5	204.2	1496.5	1869.1
10:00	2:00	750.0	1162.6	1383.5	771.3	6:30	5:30	1487.2	175.2	1497.5	1890.5
9:55	2:05	778.2	1147.6	1386.6	802.2	6:25	5:35	1491.1	146.1	1498.2	1911.6
9:50	2:10	805.9	1132.2	1389.7	832.9	6:20	5:40	1494.3	117.0	1498.9	1932.5
9:45	2:15	833.4	1116.2	1392.9	863.5	6:15	5:45	1496.8	87.8	1499.4	1953.1
9:40	2:20	860.4	1099.6	1396.2	894.0	6:10	5:50	1498.6	58.6	1499.7	1973.3
9:35	2:25	887.0	1082.6	1399.5	924.2	6:05	5:55	1499.6	29.3	1499.9	1993.3
9:30	2:30	913.1	1065.0	1402.9	954.3	6:00	6:00	1500.0	0.0	1500.0	2013.0
9:25	2:35	938.9	1046.9	1406.3	984.3	5:55	6:05	1499.6	-29.3	1499.9	2032.4
9:20	2:40	964.2	1028.3	1409.7	1014.0	5:50	6:10	1498.6	-58.6	1499.7	2051.4
9:15	2:45	989.0	1009.3	1413.1	1043.6	5:45	6:15	1496.8	-87.8	1499.4	2070.2
9:10	2:50	1013.4	989.7	1416.5	1073.0	5:40	6:20	1494.3	-117.0	1498.9	2088.7
9:05	2:55	1037.3	969.7	1419.9	1102.2	5:35	6:25	1491.1	-146.1	1498.2	2106.9
9:00	3:00	1060.7	949.2	1423.4	1131.2	5:30	6:30	1487.2	-175.2	1497.5	2124.8
8:55	3:05	1083.5	928.3	1426.8	1160.0	5:25	6:35	1482.5	-204.2	1496.5	2142.4
8:50	3:10	1105.9	906.9	1430.2	1188.6	5:20	6:40	1477.2	-233.1	1495.5	2159.7
8:45	3:15	1127.8	885.1	1433.6	1216.9	5:15	6:45	1471.2	-261.9	1494.3	2176.7
8:40	3:20	1149.1	862.9	1437.0	1245.1	5:10	6:50	1464.4	-290.5	1493.0	2193.4
8:35	3:25	1169.8	840.2	1440.3	1273.1	5:05	6:55	1457.0	-319.1	1491.5	2209.8
8:30	3:30	1190.0	817.2	1443.6	1300.8	5:00	7:00	1448.9	-347.4	1490.0	2225.9

Analemmatic Sundial

Latitude: 63.5° N/S

Earliest Sunrise: 1:41 a.m. Latest Sunset: 10:19 p.m.
 Semi-Major Axis (E-W): 1500 mm Semi-Minor Axis (N-S): 1342.4 mm
 Sunrise/Sunset Markers: X = ± 201.5 mm

Local Time	X	Y	Z	W	Local Time	X	Y	Z	W		
4:55	7:05	1440.1	-375.6	1488.3	2241.8	2:55	9:05	1037.3	-969.7	1419.9	2534.1
4:50	7:10	1430.6	-403.7	1486.4	2257.3	2:50	9:10	1013.4	-989.7	1416.5	2542.8
4:45	7:15	1420.4	-431.5	1484.5	2272.5	2:45	9:15	989.0	-1009.3	1413.1	2551.2
4:40	7:20	1409.5	-459.1	1482.4	2287.4	2:40	9:20	964.2	-1028.3	1409.7	2559.3
4:35	7:25	1398.0	-486.5	1480.3	2302.1	2:35	9:25	938.9	-1046.9	1406.3	2567.2
4:30	7:30	1385.8	-513.7	1478.0	2316.4	2:30	9:30	913.1	-1065.0	1402.9	2574.8
4:25	7:35	1373.0	-540.6	1475.6	2330.4	2:25	9:35	887.0	-1082.6	1399.5	2582.1
4:20	7:40	1359.5	-567.3	1473.1	2344.2	2:20	9:40	860.4	-1099.6	1396.2	2589.2
4:15	7:45	1345.3	-593.7	1470.5	2357.6	2:15	9:45	833.4	-1116.2	1392.9	2596.0
4:10	7:50	1330.5	-619.9	1467.8	2370.8	2:10	9:50	805.9	-1132.2	1389.7	2602.5
4:05	7:55	1315.1	-645.7	1465.0	2383.7	2:05	9:55	778.2	-1147.6	1386.6	2608.8
4:00	8:00	1299.0	-671.2	1462.2	2396.3	2:00	10:00	750.0	-1162.6	1383.5	2614.8
3:55	8:05	1282.4	-696.4	1459.3	2408.6	1:55	10:05	721.5	-1176.9	1380.5	2620.6
3:50	8:10	1265.1	-721.3	1456.3	2420.6	1:50	10:10	692.6	-1190.7	1377.5	2626.1
3:45	8:15	1247.2	-745.8	1453.2	2432.3	1:45	10:15	663.4	-1204.0	1374.7	2631.4
3:40	8:20	1228.7	-770.0	1450.0	2443.7	1:40	10:20	633.9	-1216.6	1371.9	2636.4
3:35	8:25	1209.7	-793.8	1446.8	2454.9	1:35	10:25	604.1	-1228.7	1369.2	2641.1
3:30	8:30	1190.0	-817.2	1443.6	2465.8	1:30	10:30	574.0	-1240.2	1366.6	2645.6
3:25	8:35	1169.8	-840.2	1440.3	2476.4						
3:20	8:40	1149.1	-862.9	1437.0	2486.7						
3:15	8:45	1127.8	-885.1	1433.6	2496.7						
3:10	8:50	1105.9	-906.9	1430.2	2506.5						
3:05	8:55	1083.5	-928.3	1426.8	2516.0						
3:00	9:00	1060.7	-949.2	1423.4	2525.2						

Analemmatic Sundial

Latitude: 63.5° N/S

Date Scale

Semi-Major Axis (E-W): 1500 mm Semi-Minor Axis (N-S): 1342.4 mm

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	-284.0	-278.6	-277.0	-269.6	-267.4	-258.3	-255.7	-244.8	-241.9	-229.5	-226.3
February	-205.4	-190.4	-186.5	-170.6	-166.6	-150.0	-145.7	-128.5	-124.2	-106.5	-101.9
March	-88.5	-70.3	-65.7	-47.4	-42.8	-24.3	-19.7	-1.2	3.4	21.9	26.4
April	53.9	71.9	76.4	94.1	98.5	115.8	120.1	137.0	141.2	157.5	161.4
May	180.8	195.7	199.3	213.1	216.4	229.2	232.2	243.7	246.5	256.7	258.9
June	271.5	278.1	279.6	284.4	285.5	288.5	288.9	290.0	290.2	288.1	289.1
July	285.5	280.9	279.6	273.4	271.6	263.6	261.5	252.0	249.4	238.6	235.7
August	217.2	203.7	200.3	185.9	182.2	167.0	163.0	147.2	143.1	126.6	122.4
September	96.8	79.3	75.0	57.1	52.7	34.7	30.3	12.2	7.6	-10.6	-15.2
October	-37.9	-56.1	-60.6	-78.6	-83.0	-100.9	-105.3	-122.7	-127.1	-144.1	-148.3
November	-172.7	-188.4	-192.2	-206.9	-210.5	-224.2	-227.5	-239.9	-242.8	-253.8	-256.5
December	-268.0	-275.7	-277.4	-283.0	-284.2	-287.8	-288.5	-290.0	-290.2	-289.5	-289.1

Northern Hemisphere

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	284.0	278.6	277.0	269.6	267.4	258.3	255.7	244.8	241.9	229.5	226.3
February	205.4	190.4	186.5	170.6	166.6	150.0	145.7	128.5	124.2	106.5	101.9
March	88.5	70.3	65.7	47.4	42.8	24.3	19.7	1.2	-3.4	-21.9	-26.4
April	-53.9	-71.9	-76.4	-94.1	-98.5	-115.8	-120.1	-137.0	-141.2	-157.5	-161.4
May	-180.8	-195.7	-199.3	-213.1	-216.4	-229.2	-232.2	-243.7	-246.5	-256.7	-258.9
June	-271.5	-278.1	-279.6	-284.4	-285.5	-288.5	-288.9	-290.0	-290.2	-288.1	-289.1
July	-285.5	-280.9	-279.6	-273.4	-271.6	-263.6	-261.5	-252.0	-249.4	-238.6	-235.7
August	-217.2	-203.7	-200.3	-185.9	-182.2	-167.0	-163.0	-147.2	-143.1	-126.6	-122.4
September	-96.8	-79.3	-75.0	-57.1	-52.7	-34.7	-30.3	-12.2	-7.6	10.6	15.2
October	37.9	56.1	60.6	78.6	83.0	100.9	105.3	122.7	127.1	144.1	148.3
November	172.7	188.4	192.2	206.9	210.5	224.2	227.5	239.9	242.8	253.8	256.5
December	268.0	275.7	277.4	283.0	284.2	287.8	288.5	290.0	290.2	289.5	289.1

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: 63.5° N/S

Earliest Sunrise: 1:41 a.m. Latest Sunset: 10:19 p.m.
 Semi-Major Axis (E-W): 2000 mm Semi-Minor Axis (N-S): 1789.9 mm
 Sunrise/Sunset Markers: X = ± 268.7 mm

Local Time		X	Y	Z	W	Local Time		X	Y	Z	W
12:00		0.0	1789.9	1789.9	0.0						
11:55	12:05	43.6	1789.4	1790.0	43.6	8:25	3:35	1612.9	1058.4	1929.1	1771.0
11:50	12:10	87.2	1788.2	1790.3	87.3	8:20	3:40	1638.3	1026.6	1933.4	1807.4
11:45	12:15	130.8	1786.0	1790.8	130.9	8:15	3:45	1662.9	994.4	1937.6	1843.4
11:40	12:20	174.3	1783.1	1791.6	174.4	8:10	3:50	1686.8	961.7	1941.7	1879.1
11:35	12:25	217.7	1779.2	1792.5	218.0	8:05	3:55	1709.8	928.5	1945.7	1914.5
11:30	12:30	261.1	1774.6	1793.7	261.5	8:00	4:00	1732.1	894.9	1949.6	1949.6
11:25	12:35	304.2	1769.0	1795.0	305.0	7:55	4:05	1753.5	860.9	1953.4	1984.3
11:20	12:40	347.3	1762.7	1796.6	348.4	7:50	4:10	1774.0	826.5	1957.1	2018.7
11:15	12:45	390.2	1755.5	1798.3	391.7	7:45	4:15	1793.7	791.6	1960.7	2052.8
11:10	12:50	432.9	1747.4	1800.3	435.0	7:40	4:20	1812.6	756.4	1964.1	2086.5
11:05	12:55	475.4	1738.6	1802.4	478.1	7:35	4:25	1830.6	720.9	1967.4	2119.9
11:00	1:00	517.6	1728.9	1804.7	521.2	7:30	4:30	1847.8	685.0	1970.6	2152.9
10:55	1:05	559.7	1718.4	1807.2	564.2	7:25	4:35	1864.0	648.7	1973.7	2185.6
10:50	1:10	601.4	1707.0	1809.9	607.1	7:20	4:40	1879.4	612.2	1976.6	2217.9
10:45	1:15	642.9	1694.9	1812.7	649.9	7:15	4:45	1893.9	575.3	1979.3	2249.8
10:40	1:20	684.0	1681.9	1815.7	692.5	7:10	4:50	1907.4	538.2	1981.9	2281.4
10:35	1:25	724.9	1668.2	1818.9	735.0	7:05	4:55	1920.1	500.9	1984.3	2312.6
10:30	1:30	765.4	1653.6	1822.2	777.4	7:00	5:00	1931.9	463.3	1986.6	2343.5
10:25	1:35	805.5	1638.3	1825.6	819.6	6:55	5:05	1942.7	425.4	1988.7	2374.0
10:20	1:40	845.2	1622.2	1829.2	861.7	6:50	5:10	1952.6	387.4	1990.7	2404.1
10:15	1:45	884.6	1605.3	1832.9	903.6	6:45	5:15	1961.6	349.2	1992.4	2433.8
10:10	1:50	923.5	1587.6	1836.7	945.4	6:40	5:20	1969.6	310.8	1994.0	2463.1
10:05	1:55	962.0	1569.2	1840.6	987.0	6:35	5:25	1976.7	272.3	1995.4	2492.1
10:00	2:00	1000.0	1550.1	1844.6	1028.3	6:30	5:30	1982.9	233.6	1996.6	2520.7
9:55	2:05	1037.5	1530.2	1848.8	1069.6	6:25	5:35	1988.1	194.9	1997.6	2548.9
9:50	2:10	1074.6	1509.6	1853.0	1110.6	6:20	5:40	1992.4	156.0	1998.5	2576.7
9:45	2:15	1111.1	1488.2	1857.3	1151.4	6:15	5:45	1995.7	117.1	1999.1	2604.1
9:40	2:20	1147.2	1466.2	1861.6	1191.9	6:10	5:50	1998.1	78.1	1999.6	2631.1
9:35	2:25	1182.6	1443.4	1866.0	1232.3	6:05	5:55	1999.5	39.0	1999.9	2657.7
9:30	2:30	1217.5	1420.0	1870.5	1272.5	6:00	6:00	2000.0	0.0	2000.0	2684.0
9:25	2:35	1251.8	1395.9	1875.0	1312.4	5:55	6:05	1999.5	-39.0	1999.9	2709.8
9:20	2:40	1285.6	1371.1	1879.5	1352.1	5:50	6:10	1998.1	-78.1	1999.6	2735.3
9:15	2:45	1318.7	1345.7	1884.1	1391.5	5:45	6:15	1995.7	-117.1	1999.1	2760.3
9:10	2:50	1351.2	1319.6	1888.7	1430.7	5:40	6:20	1992.4	-156.0	1998.5	2785.0
9:05	2:55	1383.0	1292.9	1893.3	1469.6	5:35	6:25	1988.1	-194.9	1997.6	2809.2
9:00	3:00	1414.2	1265.6	1897.8	1508.3	5:30	6:30	1982.9	-233.6	1996.6	2833.1
8:55	3:05	1444.7	1237.7	1902.4	1546.6	5:25	6:35	1976.7	-272.3	1995.4	2856.6
8:50	3:10	1474.6	1209.2	1907.0	1584.8	5:20	6:40	1969.6	-310.8	1994.0	2879.6
8:45	3:15	1503.7	1180.1	1911.5	1622.6	5:15	6:45	1961.6	-349.2	1992.4	2902.3
8:40	3:20	1532.1	1150.5	1916.0	1660.1	5:10	6:50	1952.6	-387.4	1990.7	2924.6
8:35	3:25	1559.8	1120.3	1920.4	1697.4	5:05	6:55	1942.7	-425.4	1988.7	2946.4
8:30	3:30	1586.7	1089.6	1924.8	1734.4	5:00	7:00	1931.9	-463.3	1986.6	2967.9

Analemmatic Sundial

Latitude: 63.5° N/S

Earliest Sunrise: 1:41 a.m. Latest Sunset: 10:19 p.m.
 Semi-Major Axis (E-W): 2000 mm Semi-Minor Axis (N-S): 1789.9 mm
 Sunrise/Sunset Markers: X = ± 268.7 mm

Local Time		X	Y	Z	W	Local Time		X	Y	Z	W
4:55	7:05	1920.1	-500.9	1984.3	2989.0	2:55	9:05	1383.0	-1292.9	1893.3	3378.8
4:50	7:10	1907.4	-538.2	1981.9	3009.7	2:50	9:10	1351.2	-1319.6	1888.7	3390.4
4:45	7:15	1893.9	-575.3	1979.3	3030.0	2:45	9:15	1318.7	-1345.7	1884.1	3401.6
4:40	7:20	1879.4	-612.2	1976.6	3049.9	2:40	9:20	1285.6	-1371.1	1879.5	3412.4
4:35	7:25	1864.0	-648.7	1973.7	3069.4	2:35	9:25	1251.8	-1395.9	1875.0	3422.9
4:30	7:30	1847.8	-685.0	1970.6	3088.5	2:30	9:30	1217.5	-1420.0	1870.5	3433.0
4:25	7:35	1830.6	-720.9	1967.4	3107.2	2:25	9:35	1182.6	-1443.4	1866.0	3442.8
4:20	7:40	1812.6	-756.4	1964.1	3125.6	2:20	9:40	1147.2	-1466.2	1861.6	3452.2
4:15	7:45	1793.7	-791.6	1960.7	3143.5	2:15	9:45	1111.1	-1488.2	1857.3	3461.3
4:10	7:50	1774.0	-826.5	1957.1	3161.1	2:10	9:50	1074.6	-1509.6	1853.0	3470.0
4:05	7:55	1753.5	-860.9	1953.4	3178.2	2:05	9:55	1037.5	-1530.2	1848.8	3478.4
4:00	8:00	1732.1	-894.9	1949.6	3195.0	2:00	10:00	1000.0	-1550.1	1844.6	3486.4
3:55	8:05	1709.8	-928.5	1945.7	3211.4	1:55	10:05	962.0	-1569.2	1840.6	3494.1
3:50	8:10	1686.8	-961.7	1941.7	3227.4	1:50	10:10	923.5	-1587.6	1836.7	3501.5
3:45	8:15	1662.9	-994.4	1937.6	3243.1	1:45	10:15	884.6	-1605.3	1832.9	3508.5
3:40	8:20	1638.3	-1026.6	1933.4	3258.3	1:40	10:20	845.2	-1622.2	1829.2	3515.2
3:35	8:25	1612.9	-1058.4	1929.1	3273.2	1:35	10:25	805.5	-1638.3	1825.6	3521.5
3:30	8:30	1586.7	-1089.6	1924.8	3287.7	1:30	10:30	765.4	-1653.6	1822.2	3527.5
3:25	8:35	1559.8	-1120.3	1920.4	3301.8						
3:20	8:40	1532.1	-1150.5	1916.0	3315.6						
3:15	8:45	1503.7	-1180.1	1911.5	3329.0						
3:10	8:50	1474.6	-1209.2	1907.0	3342.0						
3:05	8:55	1444.7	-1237.7	1902.4	3354.6						
3:00	9:00	1414.2	-1265.6	1897.8	3366.9						

Analematic Sundial

Latitude: 63.5° N/S

Date Scale

Semi-Major Axis (E-W): 2000 mm Semi-Minor Axis (N-S): 1789.9 mm

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	-378.6	-371.5	-369.3	-359.5	-356.6	-344.3	-341.0	-326.4	-322.5	-306.1	-301.7
February	-273.9	-253.9	-248.7	-227.5	-222.2	-200.0	-194.2	-171.4	-165.6	-142.0	-135.9
March	-118.0	-93.8	-87.7	-63.2	-57.1	-32.4	-26.3	-1.6	4.5	29.1	35.2
April	71.8	95.8	101.8	125.4	131.3	154.5	160.1	182.7	188.2	210.0	215.2
May	241.1	261.0	265.7	284.1	288.6	305.5	309.5	325.0	328.7	342.2	345.2
June	362.0	370.7	372.7	379.2	380.6	384.7	385.2	386.7	386.9	384.1	385.4
July	380.6	374.6	372.7	364.5	362.2	351.5	348.6	336.0	332.6	318.1	314.3
August	289.6	271.6	267.1	247.8	243.0	222.7	217.4	196.2	190.8	168.8	163.1
September	129.1	105.8	99.9	76.2	70.2	46.3	40.4	16.2	10.1	-14.2	-20.3
October	-50.5	-74.8	-80.7	-104.8	-110.7	-134.5	-140.4	-163.6	-169.4	-192.1	-197.7
November	-230.3	-251.2	-256.2	-275.9	-280.7	-298.9	-303.3	-319.9	-323.7	-338.5	-342.0
December	-357.3	-367.6	-369.8	-377.3	-379.0	-383.8	-384.7	-386.7	-386.9	-386.0	-385.4

Northern Hemisphere

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	378.6	371.5	369.3	359.5	356.6	344.3	341.0	326.4	322.5	306.1	301.7
February	273.9	253.9	248.7	227.5	222.2	200.0	194.2	171.4	165.6	142.0	135.9
March	118.0	93.8	87.7	63.2	57.1	32.4	26.3	1.6	-4.5	-29.1	-35.2
April	-71.8	-95.8	-101.8	-125.4	-131.3	-154.5	-160.1	-182.7	-188.2	-210.0	-215.2
May	-241.1	-261.0	-265.7	-284.1	-288.6	-305.5	-309.5	-325.0	-328.7	-342.2	-345.2
June	-362.0	-370.7	-372.7	-379.2	-380.6	-384.7	-385.2	-386.7	-386.9	-384.1	-385.4
July	-380.6	-374.6	-372.7	-364.5	-362.2	-351.5	-348.6	-336.0	-332.6	-318.1	-314.3
August	-289.6	-271.6	-267.1	-247.8	-243.0	-222.7	-217.4	-196.2	-190.8	-168.8	-163.1
September	-129.1	-105.8	-99.9	-76.2	-70.2	-46.3	-40.4	-16.2	-10.1	14.2	20.3
October	50.5	74.8	80.7	104.8	110.7	134.5	140.4	163.6	169.4	192.1	197.7
November	230.3	251.2	256.2	275.9	280.7	298.9	303.3	319.9	323.7	338.5	342.0
December	357.3	367.6	369.8	377.3	379.0	383.8	384.7	386.7	386.9	386.0	385.4

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
- 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

Analemmatic Sundial

Latitude: 63.5° N/S

Earliest Sunrise: 1:41 a.m. Latest Sunset: 10:19 p.m.
 Semi-Major Axis (E-W): 2500 mm Semi-Minor Axis (N-S): 2237.3 mm
 Sunrise/Sunset Markers: X = ± 335.9 mm

Local Time		X	Y	Z	W	Local Time		X	Y	Z	W
12:00		0.0	2237.3	2237.3	0.0						
11:55	12:05	54.5	2236.8	2237.5	54.5	8:25	3:35	2016.1	1323.0	2411.4	2213.8
11:50	12:10	109.0	2235.2	2237.9	109.1	8:20	3:40	2047.9	1283.3	2416.7	2259.2
11:45	12:15	163.5	2232.5	2238.5	163.6	8:15	3:45	2078.7	1243.0	2422.0	2304.3
11:40	12:20	217.9	2228.8	2239.4	218.1	8:10	3:50	2108.5	1202.1	2427.1	2348.9
11:35	12:25	272.2	2224.0	2240.6	272.5	8:05	3:55	2137.3	1160.7	2432.1	2393.2
11:30	12:30	326.3	2218.2	2242.1	326.9	8:00	4:00	2165.1	1118.7	2437.0	2437.0
11:25	12:35	380.3	2211.3	2243.8	381.2	7:55	4:05	2191.8	1076.1	2441.7	2480.4
11:20	12:40	434.1	2203.3	2245.7	435.4	7:50	4:10	2217.5	1033.1	2446.4	2523.4
11:15	12:45	487.7	2194.3	2247.9	489.6	7:45	4:15	2242.2	989.5	2450.8	2566.0
11:10	12:50	541.1	2184.3	2250.3	543.7	7:40	4:20	2265.8	945.5	2455.1	2608.2
11:05	12:55	594.2	2173.2	2253.0	597.7	7:35	4:25	2288.3	901.1	2459.3	2649.9
11:00	1:00	647.0	2161.1	2255.9	651.5	7:30	4:30	2309.7	856.2	2463.3	2691.1
10:55	1:05	699.6	2148.0	2259.0	705.3	7:25	4:35	2330.0	810.9	2467.1	2732.0
10:50	1:10	751.8	2133.8	2262.3	758.9	7:20	4:40	2349.2	765.2	2470.7	2772.4
10:45	1:15	803.6	2118.6	2265.9	812.3	7:15	4:45	2367.3	719.2	2474.2	2812.3
10:40	1:20	855.1	2102.4	2269.6	865.6	7:10	4:50	2384.3	672.8	2477.4	2851.8
10:35	1:25	906.1	2085.2	2273.6	918.8	7:05	4:55	2400.1	626.1	2480.4	2890.8
10:30	1:30	956.7	2067.0	2277.7	971.7	7:00	5:00	2414.8	579.1	2483.3	2929.4
10:25	1:35	1006.9	2047.9	2282.0	1024.5	6:55	5:05	2428.4	531.8	2485.9	2967.5
10:20	1:40	1056.5	2027.7	2286.5	1077.1	6:50	5:10	2440.7	484.2	2488.3	3005.1
10:15	1:45	1105.7	2006.6	2291.1	1129.5	6:45	5:15	2452.0	436.5	2490.5	3042.2
10:10	1:50	1154.4	1984.5	2295.9	1181.7	6:40	5:20	2462.0	388.5	2492.5	3078.9
10:05	1:55	1202.5	1961.5	2300.8	1233.7	6:35	5:25	2470.9	340.4	2494.2	3115.1
10:00	2:00	1250.0	1937.6	2305.8	1285.4	6:30	5:30	2478.6	292.0	2495.8	3150.8
9:55	2:05	1296.9	1912.7	2311.0	1336.9	6:25	5:35	2485.1	243.6	2497.0	3186.1
9:50	2:10	1343.2	1886.9	2316.2	1388.2	6:20	5:40	2490.5	195.0	2498.1	3220.8
9:45	2:15	1388.9	1860.3	2321.6	1439.2	6:15	5:45	2494.6	146.3	2498.9	3255.1
9:40	2:20	1433.9	1832.7	2327.0	1489.9	6:10	5:50	2497.6	97.6	2499.5	3288.9
9:35	2:25	1478.3	1804.3	2332.5	1540.4	6:05	5:55	2499.4	48.8	2499.9	3322.2
9:30	2:30	1521.9	1775.0	2338.1	1590.6	6:00	6:00	2500.0	0.0	2500.0	3354.9
9:25	2:35	1564.8	1744.9	2343.8	1640.5	5:55	6:05	2499.4	-48.8	2499.9	3387.3
9:20	2:40	1607.0	1713.9	2349.4	1690.1	5:50	6:10	2497.6	-97.6	2499.5	3419.1
9:15	2:45	1648.4	1682.1	2355.1	1739.4	5:45	6:15	2494.6	-146.3	2498.9	3450.4
9:10	2:50	1689.0	1649.5	2360.8	1788.3	5:40	6:20	2490.5	-195.0	2498.1	3481.2
9:05	2:55	1728.8	1616.2	2366.6	1837.0	5:35	6:25	2485.1	-243.6	2497.0	3511.5
9:00	3:00	1767.8	1582.0	2372.3	1885.3	5:30	6:30	2478.6	-292.0	2495.8	3541.4
8:55	3:05	1805.9	1547.1	2378.0	1933.3	5:25	6:35	2470.9	-340.4	2494.2	3570.7
8:50	3:10	1843.2	1511.5	2383.7	1981.0	5:20	6:40	2462.0	-388.5	2492.5	3599.5
8:45	3:15	1879.6	1475.2	2389.4	2028.2	5:15	6:45	2452.0	-436.5	2490.5	3627.9
8:40	3:20	1915.1	1438.1	2395.0	2075.2	5:10	6:50	2440.7	-484.2	2488.3	3655.7
8:35	3:25	1949.7	1400.4	2400.5	2121.8	5:05	6:55	2428.4	-531.8	2485.9	3683.1
8:30	3:30	1983.4	1362.0	2406.0	2168.0	5:00	7:00	2414.8	-579.1	2483.3	3709.9

Analemmatic Sundial

Latitude: 63.5° N/S

Earliest Sunrise: 1:41 a.m. Latest Sunset: 10:19 p.m.
 Semi-Major Axis (E-W): 2500 mm Semi-Minor Axis (N-S): 2237.3 mm
 Sunrise/Sunset Markers: X = ± 335.9 mm

Local Time	X	Y	Z	W	Local Time	X	Y	Z	W		
4:55	7:05	2400.1	-626.1	2480.4	3736.3	2:55	9:05	1728.8	-1616.2	2366.6	4223.5
4:50	7:10	2384.3	-672.8	2477.4	3762.1	2:50	9:10	1689.0	-1649.5	2360.8	4238.0
4:45	7:15	2367.3	-719.2	2474.2	3787.5	2:45	9:15	1648.4	-1682.1	2355.1	4252.0
4:40	7:20	2349.2	-765.2	2470.7	3812.4	2:40	9:20	1607.0	-1713.9	2349.4	4265.5
4:35	7:25	2330.0	-810.9	2467.1	3836.8	2:35	9:25	1564.8	-1744.9	2343.8	4278.6
4:30	7:30	2309.7	-856.2	2463.3	3860.7	2:30	9:30	1521.9	-1775.0	2338.1	4291.3
4:25	7:35	2288.3	-901.1	2459.3	3884.1	2:25	9:35	1478.3	-1804.3	2332.5	4303.5
4:20	7:40	2265.8	-945.5	2455.1	3907.0	2:20	9:40	1433.9	-1832.7	2327.0	4315.3
4:15	7:45	2242.2	-989.5	2450.8	3929.4	2:15	9:45	1388.9	-1860.3	2321.6	4326.6
4:10	7:50	2217.5	-1033.1	2446.4	3951.3	2:10	9:50	1343.2	-1886.9	2316.2	4337.5
4:05	7:55	2191.8	-1076.1	2441.7	3972.8	2:05	9:55	1296.9	-1912.7	2311.0	4348.0
4:00	8:00	2165.1	-1118.7	2437.0	3993.8	2:00	10:00	1250.0	-1937.6	2305.8	4358.0
3:55	8:05	2137.3	-1160.7	2432.1	4014.3	1:55	10:05	1202.5	-1961.5	2300.8	4367.7
3:50	8:10	2108.5	-1202.1	2427.1	4034.3	1:50	10:10	1154.4	-1984.5	2295.9	4376.9
3:45	8:15	2078.7	-1243.0	2422.0	4053.8	1:45	10:15	1105.7	-2006.6	2291.1	4385.6
3:40	8:20	2047.9	-1283.3	2416.7	4072.9	1:40	10:20	1056.5	-2027.7	2286.5	4394.0
3:35	8:25	2016.1	-1323.0	2411.4	4091.5	1:35	10:25	1006.9	-2047.9	2282.0	4401.9
3:30	8:30	1983.4	-1362.0	2406.0	4109.6	1:30	10:30	956.7	-2067.0	2277.7	4409.4
3:25	8:35	1949.7	-1400.4	2400.5	4127.3						
3:20	8:40	1915.1	-1438.1	2395.0	4144.5						
3:15	8:45	1879.6	-1475.2	2389.4	4161.2						
3:10	8:50	1843.2	-1511.5	2383.7	4177.5						
3:05	8:55	1805.9	-1547.1	2378.0	4193.3						
3:00	9:00	1767.8	-1582.0	2372.3	4208.6						

Analematic Sundial

Latitude: 63.5° N/S

Date Scale

Semi-Major Axis (E-W): 2500 mm Semi-Minor Axis (N-S): 2237.3 mm

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	-473.3	-464.3	-461.6	-449.3	-445.7	-430.4	-426.2	-408.0	-403.1	-382.6	-377.1
February	-342.3	-317.3	-310.8	-284.3	-277.7	-250.0	-242.8	-214.2	-206.9	-177.5	-169.9
March	-147.5	-117.2	-109.6	-79.0	-71.4	-40.5	-32.9	-1.9	5.6	36.4	44.0
April	89.8	119.8	127.3	156.8	164.1	193.1	200.1	228.4	235.3	262.5	269.0
May	301.4	326.2	332.1	355.1	360.7	381.9	386.9	406.2	410.9	427.8	431.6
June	452.5	463.4	465.9	474.0	475.8	480.9	481.6	483.4	483.6	480.2	481.8
July	475.8	468.2	465.9	455.7	452.7	439.4	435.8	420.0	415.7	397.6	392.8
August	362.0	339.6	333.8	309.8	303.7	278.3	271.7	245.3	238.5	211.0	203.9
September	161.3	132.2	124.9	95.2	87.8	57.9	50.5	20.3	12.7	-17.7	-25.3
October	-63.1	-93.5	-100.9	-131.0	-138.3	-168.1	-175.5	-204.5	-211.8	-240.2	-247.1
November	-287.9	-314.0	-320.3	-344.9	-350.9	-373.7	-379.1	-399.8	-404.7	-423.1	-427.5
December	-446.6	-459.5	-462.3	-471.7	-473.7	-479.7	-480.9	-483.4	-483.6	-482.5	-481.8

Northern Hemisphere

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	473.3	464.3	461.6	449.3	445.7	430.4	426.2	408.0	403.1	382.6	377.1
February	342.3	317.3	310.8	284.3	277.7	250.0	242.8	214.2	206.9	177.5	169.9
March	147.5	117.2	109.6	79.0	71.4	40.5	32.9	1.9	-5.6	-36.4	-44.0
April	-89.8	-119.8	-127.3	-156.8	-164.1	-193.1	-200.1	-228.4	-235.3	-262.5	-269.0
May	-301.4	-326.2	-332.1	-355.1	-360.7	-381.9	-386.9	-406.2	-410.9	-427.8	-431.6
June	-452.5	-463.4	-465.9	-474.0	-475.8	-480.9	-481.6	-483.4	-483.6	-480.2	-481.8
July	-475.8	-468.2	-465.9	-455.7	-452.7	-439.4	-435.8	-420.0	-415.7	-397.6	-392.8
August	-362.0	-339.6	-333.8	-309.8	-303.7	-278.3	-271.7	-245.3	-238.5	-211.0	-203.9
September	-161.3	-132.2	-124.9	-95.2	-87.8	-57.9	-50.5	-20.3	-12.7	17.7	25.3
October	63.1	93.5	100.9	131.0	138.3	168.1	175.5	204.5	211.8	240.2	247.1
November	287.9	314.0	320.3	344.9	350.9	373.7	379.1	399.8	404.7	423.1	427.5
December	446.6	459.5	462.3	471.7	473.7	479.7	480.9	483.4	483.6	482.5	481.8

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
- 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