

Analemmatic Sundial

Latitude: 64.0° N/S

Earliest Sunrise: 1:30 a.m. Latest Sunset: 10:30 p.m.
 Semi-Major Axis (E-W): 1000 mm Semi-Minor Axis (N-S): 898.8 mm
 Sunrise/Sunset Markers: X = ± 126.2 mm

Local Time		X	Y	Z	W	Local Time		X	Y	Z	W
12:00		0.0	898.8	898.8	0.0						
11:55	12:05	21.8	898.6	898.8	21.8	8:25	3:35	806.4	531.5	965.8	886.2
11:50	12:10	43.6	897.9	899.0	43.6	8:20	3:40	819.2	515.5	967.9	904.4
11:45	12:15	65.4	896.9	899.3	65.4	8:15	3:45	831.5	499.3	969.9	922.4
11:40	12:20	87.2	895.4	899.6	87.2	8:10	3:50	843.4	482.9	971.9	940.4
11:35	12:25	108.9	893.5	900.1	109.0	8:05	3:55	854.9	466.3	973.8	958.1
11:30	12:30	130.5	891.1	900.6	130.8	8:00	4:00	866.0	449.4	975.7	975.7
11:25	12:35	152.1	888.3	901.3	152.5	7:55	4:05	876.7	432.3	977.5	993.1
11:20	12:40	173.6	885.1	902.0	174.2	7:50	4:10	887.0	415.0	979.3	1010.4
11:15	12:45	195.1	881.5	902.9	195.9	7:45	4:15	896.9	397.5	981.0	1027.4
11:10	12:50	216.4	877.5	903.8	217.5	7:40	4:20	906.3	379.8	982.7	1044.4
11:05	12:55	237.7	873.0	904.8	239.1	7:35	4:25	915.3	362.0	984.3	1061.1
11:00	1:00	258.8	868.2	905.9	260.6	7:30	4:30	923.9	344.0	985.8	1077.7
10:55	1:05	279.8	862.9	907.1	282.1	7:25	4:35	932.0	325.8	987.3	1094.1
10:50	1:10	300.7	857.2	908.4	303.6	7:20	4:40	939.7	307.4	988.7	1110.3
10:45	1:15	321.4	851.1	909.8	325.0	7:15	4:45	946.9	288.9	990.0	1126.3
10:40	1:20	342.0	844.6	911.2	346.3	7:10	4:50	953.7	270.3	991.3	1142.2
10:35	1:25	362.4	837.7	912.7	367.6	7:05	4:55	960.0	251.5	992.4	1157.9
10:30	1:30	382.7	830.4	914.3	388.8	7:00	5:00	965.9	232.6	993.5	1173.4
10:25	1:35	402.7	822.7	916.0	409.9	6:55	5:05	971.3	213.6	994.6	1188.7
10:20	1:40	422.6	814.6	917.7	430.9	6:50	5:10	976.3	194.5	995.5	1203.8
10:15	1:45	442.3	806.1	919.5	451.9	6:45	5:15	980.8	175.3	996.3	1218.7
10:10	1:50	461.7	797.2	921.3	472.8	6:40	5:20	984.8	156.1	997.1	1233.5
10:05	1:55	481.0	788.0	923.2	493.6	6:35	5:25	988.4	136.7	997.8	1248.0
10:00	2:00	500.0	778.4	925.1	514.3	6:30	5:30	991.4	117.3	998.4	1262.4
9:55	2:05	518.8	768.4	927.1	534.9	6:25	5:35	994.1	97.8	998.9	1276.6
9:50	2:10	537.3	758.0	929.1	555.4	6:20	5:40	996.2	78.3	999.3	1290.6
9:45	2:15	555.6	747.3	931.2	575.8	6:15	5:45	997.9	58.8	999.6	1304.4
9:40	2:20	573.6	736.2	933.3	596.2	6:10	5:50	999.0	39.2	999.8	1317.9
9:35	2:25	591.3	724.8	935.4	616.4	6:05	5:55	999.8	19.6	1000.0	1331.4
9:30	2:30	608.8	713.1	937.6	636.5	6:00	6:00	1000.0	0.0	1000.0	1344.6
9:25	2:35	625.9	701.0	939.7	656.4	5:55	6:05	999.8	-19.6	1000.0	1357.6
9:20	2:40	642.8	688.5	941.9	676.3	5:50	6:10	999.0	-39.2	999.8	1370.4
9:15	2:45	659.3	675.7	944.1	696.1	5:45	6:15	997.9	-58.8	999.6	1383.0
9:10	2:50	675.6	662.7	946.3	715.7	5:40	6:20	996.2	-78.3	999.3	1395.4
9:05	2:55	691.5	649.3	948.5	735.2	5:35	6:25	994.1	-97.8	998.9	1407.6
9:00	3:00	707.1	635.5	950.7	754.5	5:30	6:30	991.4	-117.3	998.4	1419.7
8:55	3:05	722.4	621.5	952.9	773.7	5:25	6:35	988.4	-136.7	997.8	1431.5
8:50	3:10	737.3	607.2	955.1	792.8	5:20	6:40	984.8	-156.1	997.1	1443.1
8:45	3:15	751.8	592.6	957.3	811.8	5:15	6:45	980.8	-175.3	996.3	1454.6
8:40	3:20	766.0	577.7	959.5	830.6	5:10	6:50	976.3	-194.5	995.5	1465.8
8:35	3:25	779.9	562.6	961.6	849.3	5:05	6:55	971.3	-213.6	994.6	1476.8
8:30	3:30	793.4	547.2	963.7	867.8	5:00	7:00	965.9	-232.6	993.5	1487.7

Analemmatic Sundial

Latitude: 64.0° N/S

Earliest Sunrise: 1:30 a.m. Latest Sunset: 10:30 p.m.
 Semi-Major Axis (E-W): 1000 mm Semi-Minor Axis (N-S): 898.8 mm
 Sunrise/Sunset Markers: X = ± 126.2 mm

Local Time		X	Y	Z	W	Local Time		X	Y	Z	W
4:55	7:05	960.0	-251.5	992.4	1498.3	2:55	9:05	691.5	-649.3	948.5	1695.5
4:50	7:10	953.7	-270.3	991.3	1508.7	2:50	9:10	675.6	-662.7	946.3	1701.3
4:45	7:15	946.9	-288.9	990.0	1519.0	2:45	9:15	659.3	-675.7	944.1	1707.0
4:40	7:20	939.7	-307.4	988.7	1529.0	2:40	9:20	642.8	-688.5	941.9	1712.5
4:35	7:25	932.0	-325.8	987.3	1538.9	2:35	9:25	625.9	-701.0	939.7	1717.8
4:30	7:30	923.9	-344.0	985.8	1548.5	2:30	9:30	608.8	-713.1	937.6	1723.0
4:25	7:35	915.3	-362.0	984.3	1558.0	2:25	9:35	591.3	-724.8	935.4	1727.9
4:20	7:40	906.3	-379.8	982.7	1567.3	2:20	9:40	573.6	-736.2	933.3	1732.7
4:15	7:45	896.9	-397.5	981.0	1576.3	2:15	9:45	555.6	-747.3	931.2	1737.3
4:10	7:50	887.0	-415.0	979.3	1585.2	2:10	9:50	537.3	-758.0	929.1	1741.8
4:05	7:55	876.7	-432.3	977.5	1593.9	2:05	9:55	518.8	-768.4	927.1	1746.0
4:00	8:00	866.0	-449.4	975.7	1602.4	2:00	10:00	500.0	-778.4	925.1	1750.1
3:55	8:05	854.9	-466.3	973.8	1610.7	1:55	10:05	481.0	-788.0	923.2	1754.0
3:50	8:10	843.4	-482.9	971.9	1618.8	1:50	10:10	461.7	-797.2	921.3	1757.8
3:45	8:15	831.5	-499.3	969.9	1626.7	1:45	10:15	442.3	-806.1	919.5	1761.3
3:40	8:20	819.2	-515.5	967.9	1634.4	1:40	10:20	422.6	-814.6	917.7	1764.7
3:35	8:25	806.4	-531.5	965.8	1641.9	1:35	10:25	402.7	-822.7	916.0	1768.0
3:30	8:30	793.4	-547.2	963.7	1649.3	1:30	10:30	382.7	-830.4	914.3	1771.0
3:25	8:35	779.9	-562.6	961.6	1656.4						
3:20	8:40	766.0	-577.7	959.5	1663.4						
3:15	8:45	751.8	-592.6	957.3	1670.2						
3:10	8:50	737.3	-607.2	955.1	1676.8						
3:05	8:55	722.4	-621.5	952.9	1683.2						
3:00	9:00	707.1	-635.5	950.7	1689.4						

Analemmatic Sundial

Latitude: 64.0° N/S

Date Scale

Semi-Major Axis (E-W): 1000 mm Semi-Minor Axis (N-S): 898.8 mm

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	-186.0	-182.5	-181.4	-176.6	-175.2	-169.2	-167.5	-160.3	-158.4	-150.3	-148.2
February	-134.5	-124.7	-122.1	-111.7	-109.1	-98.2	-95.4	-84.2	-81.3	-69.7	-66.8
March	-57.9	-46.1	-43.1	-31.0	-28.0	-15.9	-12.9	-0.8	2.2	14.3	17.3
April	35.3	47.1	50.0	61.6	64.5	75.9	78.6	89.7	92.5	103.1	105.7
May	118.4	128.2	130.5	139.6	141.8	150.1	152.1	159.6	161.5	168.1	169.6
June	177.8	182.1	183.1	186.3	187.0	189.0	189.2	190.0	190.1	188.7	189.3
July	187.0	184.0	183.1	179.1	177.9	172.7	171.3	165.0	163.4	156.3	154.4
August	142.3	133.4	131.2	121.7	119.3	109.4	106.8	96.4	93.7	82.9	80.1
September	63.4	52.0	49.1	37.4	34.5	22.7	19.8	8.0	5.0	-7.0	-9.9
October	-24.8	-36.7	-39.7	-51.5	-54.4	-66.1	-69.0	-80.4	-83.2	-94.4	-97.1
November	-113.1	-123.4	-125.9	-135.5	-137.9	-146.8	-149.0	-157.1	-159.0	-166.3	-168.0
December	-175.5	-180.6	-181.7	-185.4	-186.2	-188.5	-189.0	-190.0	-190.1	-189.6	-189.3

Northern Hemisphere

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	186.0	182.5	181.4	176.6	175.2	169.2	167.5	160.3	158.4	150.3	148.2
February	134.5	124.7	122.1	111.7	109.1	98.2	95.4	84.2	81.3	69.7	66.8
March	57.9	46.1	43.1	31.0	28.0	15.9	12.9	0.8	-2.2	-14.3	-17.3
April	-35.3	-47.1	-50.0	-61.6	-64.5	-75.9	-78.6	-89.7	-92.5	-103.1	-105.7
May	-118.4	-128.2	-130.5	-139.6	-141.8	-150.1	-152.1	-159.6	-161.5	-168.1	-169.6
June	-177.8	-182.1	-183.1	-186.3	-187.0	-189.0	-189.2	-190.0	-190.1	-188.7	-189.3
July	-187.0	-184.0	-183.1	-179.1	-177.9	-172.7	-171.3	-165.0	-163.4	-156.3	-154.4
August	-142.3	-133.4	-131.2	-121.7	-119.3	-109.4	-106.8	-96.4	-93.7	-82.9	-80.1
September	-63.4	-52.0	-49.1	-37.4	-34.5	-22.7	-19.8	-8.0	-5.0	7.0	9.9
October	24.8	36.7	39.7	51.5	54.4	66.1	69.0	80.4	83.2	94.4	97.1
November	113.1	123.4	125.9	135.5	137.9	146.8	149.0	157.1	159.0	166.3	168.0
December	175.5	180.6	181.7	185.4	186.2	188.5	189.0	190.0	190.1	189.6	189.3

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: 64.0° N/S

Earliest Sunrise: 1:30 a.m. Latest Sunset: 10:30 p.m.
 Semi-Major Axis (E-W): 1500 mm Semi-Minor Axis (N-S): 1348.2 mm
 Sunrise/Sunset Markers: X = ± 189.2 mm

Local Time		X	Y	Z	W	Local Time		X	Y	Z	W
12:00		0.0	1348.2	1348.2	0.0						
11:55	12:05	32.7	1347.9	1348.3	32.7	8:25	3:35	1209.7	797.2	1448.7	1329.2
11:50	12:10	65.4	1346.9	1348.5	65.4	8:20	3:40	1228.7	773.3	1451.8	1356.6
11:45	12:15	98.1	1345.3	1348.9	98.1	8:15	3:45	1247.2	749.0	1454.8	1383.7
11:40	12:20	130.7	1343.1	1349.4	130.8	8:10	3:50	1265.1	724.4	1457.8	1410.5
11:35	12:25	163.3	1340.2	1350.1	163.5	8:05	3:55	1282.4	699.4	1460.7	1437.1
11:30	12:30	195.8	1336.7	1350.9	196.1	8:00	4:00	1299.0	674.1	1463.5	1463.5
11:25	12:35	228.2	1332.5	1351.9	228.7	7:55	4:05	1315.1	648.5	1466.3	1489.7
11:20	12:40	260.5	1327.7	1353.0	261.3	7:50	4:10	1330.5	622.5	1468.9	1515.5
11:15	12:45	292.6	1322.3	1354.3	293.8	7:45	4:15	1345.3	596.3	1471.5	1541.2
11:10	12:50	324.7	1316.2	1355.7	326.2	7:40	4:20	1359.5	569.8	1474.0	1566.5
11:05	12:55	356.5	1309.6	1357.2	358.6	7:35	4:25	1373.0	543.0	1476.4	1591.7
11:00	1:00	388.2	1302.3	1358.9	390.9	7:30	4:30	1385.8	515.9	1478.7	1616.5
10:55	1:05	419.7	1294.3	1360.7	423.2	7:25	4:35	1398.0	488.6	1480.9	1641.1
10:50	1:10	451.1	1285.8	1362.6	455.4	7:20	4:40	1409.5	461.1	1483.0	1665.4
10:45	1:15	482.2	1276.6	1364.7	487.4	7:15	4:45	1420.4	433.4	1485.0	1689.5
10:40	1:20	513.0	1266.9	1366.8	519.4	7:10	4:50	1430.6	405.4	1486.9	1713.3
10:35	1:25	543.7	1256.5	1369.1	551.3	7:05	4:55	1440.1	377.3	1488.7	1736.8
10:30	1:30	574.0	1245.6	1371.5	583.1	7:00	5:00	1448.9	348.9	1490.3	1760.1
10:25	1:35	604.1	1234.0	1374.0	614.8	6:55	5:05	1457.0	320.4	1491.8	1783.0
10:20	1:40	633.9	1221.9	1376.5	646.4	6:50	5:10	1464.4	291.8	1493.2	1805.7
10:15	1:45	663.4	1209.2	1379.2	677.8	6:45	5:15	1471.2	263.0	1494.5	1828.1
10:10	1:50	692.6	1195.9	1382.0	709.2	6:40	5:20	1477.2	234.1	1495.6	1850.2
10:05	1:55	721.5	1182.0	1384.8	740.4	6:35	5:25	1482.5	205.1	1496.7	1872.1
10:00	2:00	750.0	1167.6	1387.7	771.4	6:30	5:30	1487.2	176.0	1497.5	1893.6
9:55	2:05	778.2	1152.6	1390.7	802.4	6:25	5:35	1491.1	146.8	1498.3	1914.9
9:50	2:10	805.9	1137.1	1393.7	833.1	6:20	5:40	1494.3	117.5	1498.9	1935.8
9:45	2:15	833.4	1121.0	1396.8	863.8	6:15	5:45	1496.8	88.2	1499.4	1956.5
9:40	2:20	860.4	1104.4	1400.0	894.2	6:10	5:50	1498.6	58.8	1499.7	1976.9
9:35	2:25	887.0	1087.2	1403.1	924.6	6:05	5:55	1499.6	29.4	1499.9	1997.0
9:30	2:30	913.1	1069.6	1406.4	954.7	6:00	6:00	1500.0	0.0	1500.0	2016.8
9:25	2:35	938.9	1051.4	1409.6	984.7	5:55	6:05	1499.6	-29.4	1499.9	2036.3
9:20	2:40	964.2	1032.8	1412.9	1014.5	5:50	6:10	1498.6	-58.8	1499.7	2055.6
9:15	2:45	989.0	1013.6	1416.2	1044.1	5:45	6:15	1496.8	-88.2	1499.4	2074.5
9:10	2:50	1013.4	994.0	1419.5	1073.5	5:40	6:20	1494.3	-117.5	1498.9	2093.1
9:05	2:55	1037.3	973.9	1422.8	1102.7	5:35	6:25	1491.1	-146.8	1498.3	2111.5
9:00	3:00	1060.7	953.3	1426.1	1131.8	5:30	6:30	1487.2	-176.0	1497.5	2129.5
8:55	3:05	1083.5	932.3	1429.4	1160.6	5:25	6:35	1482.5	-205.1	1496.7	2147.2
8:50	3:10	1105.9	910.8	1432.7	1189.3	5:20	6:40	1477.2	-234.1	1495.6	2164.7
8:45	3:15	1127.8	888.9	1436.0	1217.7	5:15	6:45	1471.2	-263.0	1494.5	2181.8
8:40	3:20	1149.1	866.6	1439.2	1245.9	5:10	6:50	1464.4	-291.8	1493.2	2198.7
8:35	3:25	1169.8	843.9	1442.4	1273.9	5:05	6:55	1457.0	-320.4	1491.8	2215.2
8:30	3:30	1190.0	820.7	1445.6	1301.7	5:00	7:00	1448.9	-348.9	1490.3	2231.5

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 Semi-Major Axis (E-W): 1500 mm Semi-Minor Axis (N-S): 1348.2 mm
 Sunrise/Sunset Markers: X = ± 189.2 mm

Local Time	X	Y	Z	W	Local Time	X	Y	Z	W		
4:55	7:05	1440.1	-377.3	1488.7	2247.4	2:55	9:05	1037.3	-973.9	1422.8	2543.2
4:50	7:10	1430.6	-405.4	1486.9	2263.1	2:50	9:10	1013.4	-994.0	1419.5	2552.0
4:45	7:15	1420.4	-433.4	1485.0	2278.5	2:45	9:15	989.0	-1013.6	1416.2	2560.5
4:40	7:20	1409.5	-461.1	1483.0	2293.5	2:40	9:20	964.2	-1032.8	1412.9	2568.8
4:35	7:25	1398.0	-488.6	1480.9	2308.3	2:35	9:25	938.9	-1051.4	1409.6	2576.8
4:30	7:30	1385.8	-515.9	1478.7	2322.8	2:30	9:30	913.1	-1069.6	1406.4	2584.5
4:25	7:35	1373.0	-543.0	1476.4	2337.0	2:25	9:35	887.0	-1087.2	1403.1	2591.9
4:20	7:40	1359.5	-569.8	1474.0	2350.9	2:20	9:40	860.4	-1104.4	1400.0	2599.1
4:15	7:45	1345.3	-596.3	1471.5	2364.5	2:15	9:45	833.4	-1121.0	1396.8	2606.0
4:10	7:50	1330.5	-622.5	1468.9	2377.8	2:10	9:50	805.9	-1137.1	1393.7	2612.7
4:05	7:55	1315.1	-648.5	1466.3	2390.8	2:05	9:55	778.2	-1152.6	1390.7	2619.0
4:00	8:00	1299.0	-674.1	1463.5	2403.6	2:00	10:00	750.0	-1167.6	1387.7	2625.2
3:55	8:05	1282.4	-699.4	1460.7	2416.0	1:55	10:05	721.5	-1182.0	1384.8	2631.0
3:50	8:10	1265.1	-724.4	1457.8	2428.2	1:50	10:10	692.6	-1195.9	1382.0	2636.6
3:45	8:15	1247.2	-749.0	1454.8	2440.0	1:45	10:15	663.4	-1209.2	1379.2	2642.0
3:40	8:20	1228.7	-773.3	1451.8	2451.6	1:40	10:20	633.9	-1221.9	1376.5	2647.1
3:35	8:25	1209.7	-797.2	1448.7	2462.9	1:35	10:25	604.1	-1234.0	1374.0	2651.9
3:30	8:30	1190.0	-820.7	1445.6	2473.9	1:30	10:30	574.0	-1245.6	1371.5	2656.5
3:25	8:35	1169.8	-843.9	1442.4	2484.7						
3:20	8:40	1149.1	-866.6	1439.2	2495.1						
3:15	8:45	1127.8	-888.9	1436.0	2505.3						
3:10	8:50	1105.9	-910.8	1432.7	2515.2						
3:05	8:55	1083.5	-932.3	1429.4	2524.8						
3:00	9:00	1060.7	-953.3	1426.1	2534.2						

Analemmatic Sundial

Latitude: 64.0° N/S

Date Scale

Semi-Major Axis (E-W): 1500 mm Semi-Minor Axis (N-S): 1348.2 mm

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	-279.0	-273.7	-272.1	-264.9	-262.7	-253.7	-251.2	-240.5	-237.6	-225.5	-222.3
February	-201.8	-187.1	-183.2	-167.6	-163.7	-147.3	-143.1	-126.3	-122.0	-104.6	-100.2
March	-86.9	-69.1	-64.6	-46.6	-42.1	-23.9	-19.4	-1.1	3.3	21.5	26.0
April	52.9	70.6	75.0	92.4	96.7	113.8	118.0	134.6	138.7	154.7	158.6
May	177.7	192.3	195.8	209.3	212.6	225.1	228.1	239.5	242.2	252.1	254.4
June	266.7	273.2	274.7	279.4	280.5	283.5	283.9	285.0	285.1	283.1	284.0
July	280.5	276.0	274.7	268.6	266.9	259.0	256.9	247.6	245.1	234.4	231.6
August	213.4	200.2	196.8	182.6	179.0	164.1	160.2	144.6	140.6	124.4	120.2
September	95.1	77.9	73.6	56.1	51.8	34.1	29.7	11.9	7.5	-10.4	-14.9
October	-37.2	-55.1	-59.5	-77.2	-81.6	-99.1	-103.4	-120.6	-124.8	-141.6	-145.7
November	-169.7	-185.1	-188.8	-203.3	-206.8	-220.3	-223.5	-235.7	-238.6	-249.4	-252.0
December	-263.3	-270.9	-272.5	-278.0	-279.3	-282.8	-283.5	-285.0	-285.1	-284.4	-284.0

Northern Hemisphere

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	279.0	273.7	272.1	264.9	262.7	253.7	251.2	240.5	237.6	225.5	222.3
February	201.8	187.1	183.2	167.6	163.7	147.3	143.1	126.3	122.0	104.6	100.2
March	86.9	69.1	64.6	46.6	42.1	23.9	19.4	1.1	-3.3	-21.5	-26.0
April	-52.9	-70.6	-75.0	-92.4	-96.7	-113.8	-118.0	-134.6	-138.7	-154.7	-158.6
May	-177.7	-192.3	-195.8	-209.3	-212.6	-225.1	-228.1	-239.5	-242.2	-252.1	-254.4
June	-266.7	-273.2	-274.7	-279.4	-280.5	-283.5	-283.9	-285.0	-285.1	-283.1	-284.0
July	-280.5	-276.0	-274.7	-268.6	-266.9	-259.0	-256.9	-247.6	-245.1	-234.4	-231.6
August	-213.4	-200.2	-196.8	-182.6	-179.0	-164.1	-160.2	-144.6	-140.6	-124.4	-120.2
September	-95.1	-77.9	-73.6	-56.1	-51.8	-34.1	-29.7	-11.9	-7.5	10.4	14.9
October	37.2	55.1	59.5	77.2	81.6	99.1	103.4	120.6	124.8	141.6	145.7
November	169.7	185.1	188.8	203.3	206.8	220.3	223.5	235.7	238.6	249.4	252.0
December	263.3	270.9	272.5	278.0	279.3	282.8	283.5	285.0	285.1	284.4	284.0

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: 64.0° N/S

Earliest Sunrise: 1:30 a.m. Latest Sunset: 10:30 p.m.
 Semi-Major Axis (E-W): 2000 mm Semi-Minor Axis (N-S): 1797.6 mm
 Sunrise/Sunset Markers: X = ± 252.3 mm

Local Time		X	Y	Z	W	Local Time		X	Y	Z	W
12:00		0.0	1797.6	1797.6	0.0						
11:55	12:05	43.6	1797.2	1797.7	43.6	8:25	3:35	1612.9	1062.9	1931.6	1772.3
11:50	12:10	87.2	1795.9	1798.0	87.3	8:20	3:40	1638.3	1031.1	1935.7	1808.8
11:45	12:15	130.8	1793.7	1798.5	130.9	8:15	3:45	1662.9	998.7	1939.8	1844.9
11:40	12:20	174.3	1790.7	1799.2	174.4	8:10	3:50	1686.8	965.8	1943.7	1880.7
11:35	12:25	217.7	1786.9	1800.1	218.0	8:05	3:55	1709.8	932.5	1947.6	1916.2
11:30	12:30	261.1	1782.2	1801.2	261.5	8:00	4:00	1732.1	898.8	1951.4	1951.4
11:25	12:35	304.2	1776.7	1802.5	305.0	7:55	4:05	1753.5	864.6	1955.0	1986.2
11:20	12:40	347.3	1770.3	1804.0	348.4	7:50	4:10	1774.0	830.0	1958.6	2020.7
11:15	12:45	390.2	1763.0	1805.7	391.7	7:45	4:15	1793.7	795.1	1962.0	2054.9
11:10	12:50	432.9	1755.0	1807.6	435.0	7:40	4:20	1812.6	759.7	1965.4	2088.7
11:05	12:55	475.4	1746.1	1809.6	478.2	7:35	4:25	1830.6	724.0	1968.6	2122.2
11:00	1:00	517.6	1736.3	1811.9	521.2	7:30	4:30	1847.8	687.9	1971.7	2155.4
10:55	1:05	559.7	1725.8	1814.3	564.2	7:25	4:35	1864.0	651.5	1974.6	2188.2
10:50	1:10	601.4	1714.4	1816.8	607.1	7:20	4:40	1879.4	614.8	1977.4	2220.6
10:45	1:15	642.9	1702.2	1819.5	649.9	7:15	4:45	1893.9	577.8	1980.0	2252.7
10:40	1:20	684.0	1689.2	1822.4	692.6	7:10	4:50	1907.4	540.5	1982.5	2284.4
10:35	1:25	724.9	1675.4	1825.5	735.1	7:05	4:55	1920.1	503.0	1984.9	2315.7
10:30	1:30	765.4	1660.8	1828.6	777.5	7:00	5:00	1931.9	465.3	1987.1	2346.7
10:25	1:35	805.5	1645.4	1831.9	819.8	6:55	5:05	1942.7	427.3	1989.1	2377.4
10:20	1:40	845.2	1629.2	1835.4	861.9	6:50	5:10	1952.6	389.1	1991.0	2407.6
10:15	1:45	884.6	1612.2	1838.9	903.8	6:45	5:15	1961.6	350.7	1992.7	2437.5
10:10	1:50	923.5	1594.5	1842.6	945.6	6:40	5:20	1969.6	312.1	1994.2	2467.0
10:05	1:55	962.0	1576.0	1846.4	987.2	6:35	5:25	1976.7	273.5	1995.5	2496.1
10:00	2:00	1000.0	1556.8	1850.3	1028.6	6:30	5:30	1982.9	234.6	1996.7	2524.8
9:55	2:05	1037.5	1536.8	1854.2	1069.8	6:25	5:35	1988.1	195.7	1997.7	2553.2
9:50	2:10	1074.6	1516.1	1858.3	1110.9	6:20	5:40	1992.4	156.7	1998.5	2581.1
9:45	2:15	1111.1	1494.6	1862.4	1151.7	6:15	5:45	1995.7	117.6	1999.2	2608.7
9:40	2:20	1147.2	1472.5	1866.6	1192.3	6:10	5:50	1998.1	78.4	1999.6	2635.9
9:35	2:25	1182.6	1449.7	1870.9	1232.7	6:05	5:55	1999.5	39.2	1999.9	2662.7
9:30	2:30	1217.5	1426.1	1875.1	1272.9	6:00	6:00	2000.0	0.0	2000.0	2689.1
9:25	2:35	1251.8	1401.9	1879.5	1312.9	5:55	6:05	1999.5	-39.2	1999.9	2715.1
9:20	2:40	1285.6	1377.0	1883.9	1352.6	5:50	6:10	1998.1	-78.4	1999.6	2740.8
9:15	2:45	1318.7	1351.5	1888.3	1392.1	5:45	6:15	1995.7	-117.6	1999.2	2766.0
9:10	2:50	1351.2	1325.3	1892.7	1431.3	5:40	6:20	1992.4	-156.7	1998.5	2790.8
9:05	2:55	1383.0	1298.5	1897.1	1470.3	5:35	6:25	1988.1	-195.7	1997.7	2815.3
9:00	3:00	1414.2	1271.1	1901.5	1509.0	5:30	6:30	1982.9	-234.6	1996.7	2839.3
8:55	3:05	1444.7	1243.1	1905.9	1547.5	5:25	6:35	1976.7	-273.5	1995.5	2863.0
8:50	3:10	1474.6	1214.4	1910.3	1585.7	5:20	6:40	1969.6	-312.1	1994.2	2886.2
8:45	3:15	1503.7	1185.2	1914.6	1623.6	5:15	6:45	1961.6	-350.7	1992.7	2909.1
8:40	3:20	1532.1	1155.5	1919.0	1661.2	5:10	6:50	1952.6	-389.1	1991.0	2931.6
8:35	3:25	1559.8	1125.2	1923.2	1698.5	5:05	6:55	1942.7	-427.3	1989.1	2953.6
8:30	3:30	1586.7	1094.3	1927.5	1735.6	5:00	7:00	1931.9	-465.3	1987.1	2975.3

Analemmatic Sundial

Latitude: 64.0° N/S

Earliest Sunrise: 1:30 a.m. Latest Sunset: 10:30 p.m.
 Semi-Major Axis (E-W): 2000 mm Semi-Minor Axis (N-S): 1797.6 mm
 Sunrise/Sunset Markers: X = ± 252.3 mm

Local Time		X	Y	Z	W	Local Time		X	Y	Z	W
4:55	7:05	1920.1	-503.0	1984.9	2996.6	2:55	9:05	1383.0	-1298.5	1897.1	3391.0
4:50	7:10	1907.4	-540.5	1982.5	3017.5	2:50	9:10	1351.2	-1325.3	1892.7	3402.7
4:45	7:15	1893.9	-577.8	1980.0	3038.0	2:45	9:15	1318.7	-1351.5	1888.3	3414.0
4:40	7:20	1879.4	-614.8	1977.4	3058.1	2:40	9:20	1285.6	-1377.0	1883.9	3425.0
4:35	7:25	1864.0	-651.5	1974.6	3077.8	2:35	9:25	1251.8	-1401.9	1879.5	3435.7
4:30	7:30	1847.8	-687.9	1971.7	3097.1	2:30	9:30	1217.5	-1426.1	1875.1	3446.0
4:25	7:35	1830.6	-724.0	1968.6	3116.0	2:25	9:35	1182.6	-1449.7	1870.9	3455.9
4:20	7:40	1812.6	-759.7	1965.4	3134.5	2:20	9:40	1147.2	-1472.5	1866.6	3465.5
4:15	7:45	1793.7	-795.1	1962.0	3152.7	2:15	9:45	1111.1	-1494.6	1862.4	3474.7
4:10	7:50	1774.0	-830.0	1958.6	3170.4	2:10	9:50	1074.6	-1516.1	1858.3	3483.5
4:05	7:55	1753.5	-864.6	1955.0	3187.8	2:05	9:55	1037.5	-1536.8	1854.2	3492.1
4:00	8:00	1732.1	-898.8	1951.4	3204.8	2:00	10:00	1000.0	-1556.8	1850.3	3500.2
3:55	8:05	1709.8	-932.5	1947.6	3221.4	1:55	10:05	962.0	-1576.0	1846.4	3508.1
3:50	8:10	1686.8	-965.8	1943.7	3237.6	1:50	10:10	923.5	-1594.5	1842.6	3515.5
3:45	8:15	1662.9	-998.7	1939.8	3253.4	1:45	10:15	884.6	-1612.2	1838.9	3522.7
3:40	8:20	1638.3	-1031.1	1935.7	3268.8	1:40	10:20	845.2	-1629.2	1835.4	3529.5
3:35	8:25	1612.9	-1062.9	1931.6	3283.9	1:35	10:25	805.5	-1645.4	1831.9	3535.9
3:30	8:30	1586.7	-1094.3	1927.5	3298.6	1:30	10:30	765.4	-1660.8	1828.6	3542.0
3:25	8:35	1559.8	-1125.2	1923.2	3312.9						
3:20	8:40	1532.1	-1155.5	1919.0	3326.8						
3:15	8:45	1503.7	-1185.2	1914.6	3340.4						
3:10	8:50	1474.6	-1214.4	1910.3	3353.6						
3:05	8:55	1444.7	-1243.1	1905.9	3366.4						
3:00	9:00	1414.2	-1271.1	1901.5	3378.9						

Analematic Sundial

Latitude: 64.0° N/S

Date Scale

Semi-Major Axis (E-W): 2000 mm Semi-Minor Axis (N-S): 1797.6 mm

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	-372.0	-365.0	-362.8	-353.2	-350.3	-338.3	-335.0	-320.7	-316.9	-300.7	-296.4
February	-269.1	-249.4	-244.3	-223.5	-218.3	-196.5	-190.8	-168.4	-162.7	-139.5	-133.5
March	-115.9	-92.1	-86.1	-62.1	-56.1	-31.8	-25.9	-1.5	4.4	28.6	34.6
April	70.5	94.2	100.0	123.2	129.0	151.8	157.3	179.5	184.9	206.3	211.5
May	236.9	256.4	261.0	279.1	283.5	300.2	304.1	319.3	322.9	336.2	339.2
June	355.7	364.2	366.2	372.5	374.0	377.9	378.5	379.9	380.1	377.4	378.7
July	374.0	368.0	366.2	358.1	355.8	345.4	342.5	330.1	326.8	312.5	308.7
August	284.5	266.9	262.4	243.5	238.7	218.8	213.6	192.8	187.5	165.8	160.3
September	126.8	103.9	98.2	74.9	69.0	45.5	39.7	15.9	9.9	-13.9	-19.9
October	-49.6	-73.5	-79.3	-103.0	-108.7	-132.1	-137.9	-160.8	-166.5	-188.8	-194.2
November	-226.3	-246.8	-251.7	-271.1	-275.8	-293.7	-298.0	-314.3	-318.1	-332.5	-336.0
December	-351.0	-361.2	-363.3	-370.7	-372.3	-377.0	-377.9	-379.9	-380.1	-379.2	-378.7

Northern Hemisphere

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	372.0	365.0	362.8	353.2	350.3	338.3	335.0	320.7	316.9	300.7	296.4
February	269.1	249.4	244.3	223.5	218.3	196.5	190.8	168.4	162.7	139.5	133.5
March	115.9	92.1	86.1	62.1	56.1	31.8	25.9	1.5	-4.4	-28.6	-34.6
April	-70.5	-94.2	-100.0	-123.2	-129.0	-151.8	-157.3	-179.5	-184.9	-206.3	-211.5
May	-236.9	-256.4	-261.0	-279.1	-283.5	-300.2	-304.1	-319.3	-322.9	-336.2	-339.2
June	-355.7	-364.2	-366.2	-372.5	-374.0	-377.9	-378.5	-379.9	-380.1	-377.4	-378.7
July	-374.0	-368.0	-366.2	-358.1	-355.8	-345.4	-342.5	-330.1	-326.8	-312.5	-308.7
August	-284.5	-266.9	-262.4	-243.5	-238.7	-218.8	-213.6	-192.8	-187.5	-165.8	-160.3
September	-126.8	-103.9	-98.2	-74.9	-69.0	-45.5	-39.7	-15.9	-9.9	13.9	19.9
October	49.6	73.5	79.3	103.0	108.7	132.1	137.9	160.8	166.5	188.8	194.2
November	226.3	246.8	251.7	271.1	275.8	293.7	298.0	314.3	318.1	332.5	336.0
December	351.0	361.2	363.3	370.7	372.3	377.0	377.9	379.9	380.1	379.2	378.7

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: 64.0° N/S

Earliest Sunrise: 1:30 a.m. Latest Sunset: 10:30 p.m.
 Semi-Major Axis (E-W): 2500 mm Semi-Minor Axis (N-S): 2247.0 mm
 Sunrise/Sunset Markers: X = ± 315.4 mm

Local Time		X	Y	Z	W	Local Time		X	Y	Z	W
12:00		0.0	2247.0	2247.0	0.0						
11:55	12:05	54.5	2246.5	2247.1	54.5	8:25	3:35	2016.1	1328.7	2414.6	2215.4
11:50	12:10	109.0	2244.8	2247.5	109.1	8:20	3:40	2047.9	1288.8	2419.7	2261.0
11:45	12:15	163.5	2242.2	2248.1	163.6	8:15	3:45	2078.7	1248.4	2424.7	2306.1
11:40	12:20	217.9	2238.4	2249.0	218.1	8:10	3:50	2108.5	1207.3	2429.7	2350.9
11:35	12:25	272.2	2233.6	2250.2	272.5	8:05	3:55	2137.3	1165.7	2434.5	2395.2
11:30	12:30	326.3	2227.8	2251.5	326.9	8:00	4:00	2165.1	1123.5	2439.2	2439.2
11:25	12:35	380.3	2220.8	2253.2	381.2	7:55	4:05	2191.8	1080.8	2443.8	2482.8
11:20	12:40	434.1	2212.8	2255.0	435.5	7:50	4:10	2217.5	1037.5	2448.2	2525.9
11:15	12:45	487.7	2203.8	2257.1	489.6	7:45	4:15	2242.2	993.8	2452.6	2568.6
11:10	12:50	541.1	2193.7	2259.5	543.7	7:40	4:20	2265.8	949.6	2456.7	2610.9
11:05	12:55	594.2	2182.6	2262.0	597.7	7:35	4:25	2288.3	905.0	2460.7	2652.8
11:00	1:00	647.0	2170.4	2264.8	651.6	7:30	4:30	2309.7	859.9	2464.6	2694.2
10:55	1:05	699.6	2157.2	2267.8	705.3	7:25	4:35	2330.0	814.4	2468.2	2735.2
10:50	1:10	751.8	2143.0	2271.0	758.9	7:20	4:40	2349.2	768.5	2471.7	2775.7
10:45	1:15	803.6	2127.7	2274.4	812.4	7:15	4:45	2367.3	722.3	2475.1	2815.8
10:40	1:20	855.1	2111.5	2278.0	865.7	7:10	4:50	2384.3	675.7	2478.2	2855.5
10:35	1:25	906.1	2094.2	2281.8	918.9	7:05	4:55	2400.1	628.8	2481.1	2894.7
10:30	1:30	956.7	2075.9	2285.8	971.9	7:00	5:00	2414.8	581.6	2483.9	2933.4
10:25	1:35	1006.9	2056.7	2289.9	1024.7	6:55	5:05	2428.4	534.1	2486.4	2971.7
10:20	1:40	1056.5	2036.5	2294.2	1077.3	6:50	5:10	2440.7	486.3	2488.7	3009.5
10:15	1:45	1105.7	2015.3	2298.7	1129.7	6:45	5:15	2452.0	438.4	2490.8	3046.8
10:10	1:50	1154.4	1993.1	2303.3	1182.0	6:40	5:20	2462.0	390.2	2492.7	3083.7
10:05	1:55	1202.5	1970.0	2308.0	1234.0	6:35	5:25	2470.9	341.8	2494.4	3120.1
10:00	2:00	1250.0	1945.9	2312.8	1285.7	6:30	5:30	2478.6	293.3	2495.9	3156.0
9:55	2:05	1296.9	1921.0	2317.8	1337.3	6:25	5:35	2485.1	244.6	2497.2	3191.5
9:50	2:10	1343.2	1895.1	2322.9	1388.6	6:20	5:40	2490.5	195.8	2498.2	3226.4
9:45	2:15	1388.9	1868.3	2328.0	1439.6	6:15	5:45	2494.6	147.0	2499.0	3260.9
9:40	2:20	1433.9	1840.6	2333.3	1490.4	6:10	5:50	2497.6	98.0	2499.5	3294.9
9:35	2:25	1478.3	1812.1	2338.6	1540.9	6:05	5:55	2499.4	49.0	2499.9	3328.4
9:30	2:30	1521.9	1782.7	2343.9	1591.2	6:00	6:00	2500.0	0.0	2500.0	3361.4
9:25	2:35	1564.8	1752.4	2349.4	1641.1	5:55	6:05	2499.4	-49.0	2499.9	3393.9
9:20	2:40	1607.0	1721.3	2354.8	1690.8	5:50	6:10	2497.6	-98.0	2499.5	3425.9
9:15	2:45	1648.4	1689.4	2360.3	1740.1	5:45	6:15	2494.6	-147.0	2499.0	3457.5
9:10	2:50	1689.0	1656.7	2365.8	1789.2	5:40	6:20	2490.5	-195.8	2498.2	3488.5
9:05	2:55	1728.8	1623.1	2371.3	1837.9	5:35	6:25	2485.1	-244.6	2497.2	3519.1
9:00	3:00	1767.8	1588.9	2376.9	1886.3	5:30	6:30	2478.6	-293.3	2495.9	3549.2
8:55	3:05	1805.9	1553.8	2382.4	1934.4	5:25	6:35	2470.9	-341.8	2494.4	3578.7
8:50	3:10	1843.2	1518.0	2387.8	1982.1	5:20	6:40	2462.0	-390.2	2492.7	3607.8
8:45	3:15	1879.6	1481.5	2393.3	2029.5	5:15	6:45	2452.0	-438.4	2490.8	3636.4
8:40	3:20	1915.1	1444.3	2398.7	2076.5	5:10	6:50	2440.7	-486.3	2488.7	3664.5
8:35	3:25	1949.7	1406.4	2404.0	2123.2	5:05	6:55	2428.4	-534.1	2486.4	3692.0
8:30	3:30	1983.4	1367.9	2409.3	2169.5	5:00	7:00	2414.8	-581.6	2483.9	3719.1

Analemmatic Sundial

Latitude: 64.0° N/S

Earliest Sunrise: 1:30 a.m. Latest Sunset: 10:30 p.m.
 Semi-Major Axis (E-W): 2500 mm Semi-Minor Axis (N-S): 2247.0 mm
 Sunrise/Sunset Markers: X = ± 315.4 mm

Local Time		X	Y	Z	W	Local Time		X	Y	Z	W
4:55	7:05	2400.1	-628.8	2481.1	3745.7	2:55	9:05	1728.8	-1623.1	2371.3	4238.7
4:50	7:10	2384.3	-675.7	2478.2	3771.8	2:50	9:10	1689.0	-1656.7	2365.8	4253.4
4:45	7:15	2367.3	-722.3	2475.1	3797.5	2:45	9:15	1648.4	-1689.4	2360.3	4267.6
4:40	7:20	2349.2	-768.5	2471.7	3822.6	2:40	9:20	1607.0	-1721.3	2354.8	4281.3
4:35	7:25	2330.0	-814.4	2468.2	3847.2	2:35	9:25	1564.8	-1752.4	2349.4	4294.6
4:30	7:30	2309.7	-859.9	2464.6	3871.3	2:30	9:30	1521.9	-1782.7	2343.9	4307.5
4:25	7:35	2288.3	-905.0	2460.7	3895.0	2:25	9:35	1478.3	-1812.1	2338.6	4319.9
4:20	7:40	2265.8	-949.6	2456.7	3918.2	2:20	9:40	1433.9	-1840.6	2333.3	4331.8
4:15	7:45	2242.2	-993.8	2452.6	3940.8	2:15	9:45	1388.9	-1868.3	2328.0	4343.3
4:10	7:50	2217.5	-1037.5	2448.2	3963.0	2:10	9:50	1343.2	-1895.1	2322.9	4354.4
4:05	7:55	2191.8	-1080.8	2443.8	3984.7	2:05	9:55	1296.9	-1921.0	2317.8	4365.1
4:00	8:00	2165.1	-1123.5	2439.2	4005.9	2:00	10:00	1250.0	-1945.9	2312.8	4375.3
3:55	8:05	2137.3	-1165.7	2434.5	4026.7	1:55	10:05	1202.5	-1970.0	2308.0	4385.1
3:50	8:10	2108.5	-1207.3	2429.7	4046.9	1:50	10:10	1154.4	-1993.1	2303.3	4394.4
3:45	8:15	2078.7	-1248.4	2424.7	4066.7	1:45	10:15	1105.7	-2015.3	2298.7	4403.3
3:40	8:20	2047.9	-1288.8	2419.7	4086.0	1:40	10:20	1056.5	-2036.5	2294.2	4411.8
3:35	8:25	2016.1	-1328.7	2414.6	4104.9	1:35	10:25	1006.9	-2056.7	2289.9	4419.9
3:30	8:30	1983.4	-1367.9	2409.3	4123.2	1:30	10:30	956.7	-2075.9	2285.8	4427.5
3:25	8:35	1949.7	-1406.4	2404.0	4141.1						
3:20	8:40	1915.1	-1444.3	2398.7	4158.5						
3:15	8:45	1879.6	-1481.5	2393.3	4175.5						
3:10	8:50	1843.2	-1518.0	2387.8	4192.0						
3:05	8:55	1805.9	-1553.8	2382.4	4208.0						
3:00	9:00	1767.8	-1588.9	2376.9	4223.6						

Analemmatic Sundial

Latitude: 64.0° N/S

Date Scale

Semi-Major Axis (E-W): 2500 mm Semi-Minor Axis (N-S): 2247.0 mm

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	-465.0	-456.2	-453.5	-441.4	-437.9	-422.9	-418.7	-400.8	-396.1	-375.9	-370.5
February	-336.3	-311.8	-305.4	-279.3	-272.8	-245.6	-238.6	-210.4	-203.3	-174.4	-166.9
March	-144.9	-115.2	-107.6	-77.6	-70.1	-39.8	-32.3	-1.9	5.5	35.8	43.3
April	88.2	117.7	125.1	154.0	161.2	189.7	196.6	224.4	231.1	257.9	264.3
May	296.1	320.5	326.3	348.9	354.4	375.2	380.1	399.1	403.7	420.2	424.0
June	444.6	455.3	457.8	465.6	467.5	472.4	473.1	474.9	475.2	471.8	473.3
July	467.5	460.0	457.8	447.7	444.8	431.7	428.2	412.6	408.4	390.7	385.9
August	355.7	333.6	328.0	304.3	298.4	273.4	267.0	241.0	234.3	207.3	200.3
September	158.5	129.9	122.7	93.6	86.3	56.9	49.6	19.9	12.4	-17.4	-24.9
October	-62.0	-91.8	-99.2	-128.7	-135.9	-165.2	-172.4	-200.9	-208.1	-235.9	-242.8
November	-282.8	-308.5	-314.7	-338.8	-344.7	-367.1	-372.4	-392.8	-397.6	-415.6	-420.0
December	-438.8	-451.5	-454.2	-463.4	-465.4	-471.3	-472.4	-474.9	-475.2	-474.0	-473.3

Northern Hemisphere

Month	Date										
	1	5	6	10	11	15	16	20	21	25	26
January	465.0	456.2	453.5	441.4	437.9	422.9	418.7	400.8	396.1	375.9	370.5
February	336.3	311.8	305.4	279.3	272.8	245.6	238.6	210.4	203.3	174.4	166.9
March	144.9	115.2	107.6	77.6	70.1	39.8	32.3	1.9	-5.5	-35.8	-43.3
April	-88.2	-117.7	-125.1	-154.0	-161.2	-189.7	-196.6	-224.4	-231.1	-257.9	-264.3
May	-296.1	-320.5	-326.3	-348.9	-354.4	-375.2	-380.1	-399.1	-403.7	-420.2	-424.0
June	-444.6	-455.3	-457.8	-465.6	-467.5	-472.4	-473.1	-474.9	-475.2	-471.8	-473.3
July	-467.5	-460.0	-457.8	-447.7	-444.8	-431.7	-428.2	-412.6	-408.4	-390.7	-385.9
August	-355.7	-333.6	-328.0	-304.3	-298.4	-273.4	-267.0	-241.0	-234.3	-207.3	-200.3
September	-158.5	-129.9	-122.7	-93.6	-86.3	-56.9	-49.6	-19.9	-12.4	17.4	24.9
October	62.0	91.8	99.2	128.7	135.9	165.2	172.4	200.9	208.1	235.9	242.8
November	282.8	308.5	314.7	338.8	344.7	367.1	372.4	392.8	397.6	415.6	420.0
December	438.8	451.5	454.2	463.4	465.4	471.3	472.4	474.9	475.2	474.0	473.3

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 |