

Analemmatic Sundial

Latitude: 61.5° N/S

Earliest Sunrise: 2:14 a.m. Latest Sunset: 9:46 p.m.
 Semi-Major Axis (E-W): 1000 mm Semi-Minor Axis (N-S): 878.8 mm
 Sunrise/Sunset Markers: X = ± 167.4 mm

| Local Time | | X | Y | Z | W | Local Time | | X | Y | Z | W |
|------------|-------|-------|-------|-------|-------|------------|------|--------|--------|--------|--------|
| 12:00 | | 0.0 | 878.8 | 878.8 | 0.0 | | | | | | |
| 11:55 | 12:05 | 21.8 | 878.6 | 878.9 | 21.8 | 8:25 | 3:35 | 806.4 | 519.7 | 959.4 | 882.8 |
| 11:50 | 12:10 | 43.6 | 878.0 | 879.1 | 43.6 | 8:20 | 3:40 | 819.2 | 504.1 | 961.8 | 900.8 |
| 11:45 | 12:15 | 65.4 | 876.9 | 879.4 | 65.4 | 8:15 | 3:45 | 831.5 | 488.2 | 964.2 | 918.6 |
| 11:40 | 12:20 | 87.2 | 875.5 | 879.8 | 87.2 | 8:10 | 3:50 | 843.4 | 472.2 | 966.6 | 936.3 |
| 11:35 | 12:25 | 108.9 | 873.6 | 880.4 | 109.0 | 8:05 | 3:55 | 854.9 | 455.9 | 968.9 | 953.8 |
| 11:30 | 12:30 | 130.5 | 871.3 | 881.0 | 130.7 | 8:00 | 4:00 | 866.0 | 439.4 | 971.1 | 971.1 |
| 11:25 | 12:35 | 152.1 | 868.6 | 881.8 | 152.5 | 7:55 | 4:05 | 876.7 | 422.7 | 973.3 | 988.3 |
| 11:20 | 12:40 | 173.6 | 865.5 | 882.7 | 174.2 | 7:50 | 4:10 | 887.0 | 405.8 | 975.4 | 1005.3 |
| 11:15 | 12:45 | 195.1 | 861.9 | 883.7 | 195.8 | 7:45 | 4:15 | 896.9 | 388.7 | 977.5 | 1022.1 |
| 11:10 | 12:50 | 216.4 | 858.0 | 884.9 | 217.4 | 7:40 | 4:20 | 906.3 | 371.4 | 979.5 | 1038.7 |
| 11:05 | 12:55 | 237.7 | 853.6 | 886.1 | 239.0 | 7:35 | 4:25 | 915.3 | 353.9 | 981.4 | 1055.1 |
| 11:00 | 1:00 | 258.8 | 848.9 | 887.5 | 260.5 | 7:30 | 4:30 | 923.9 | 336.3 | 983.2 | 1071.4 |
| 10:55 | 1:05 | 279.8 | 843.7 | 888.9 | 282.0 | 7:25 | 4:35 | 932.0 | 318.5 | 984.9 | 1087.5 |
| 10:50 | 1:10 | 300.7 | 838.1 | 890.5 | 303.4 | 7:20 | 4:40 | 939.7 | 300.6 | 986.6 | 1103.4 |
| 10:45 | 1:15 | 321.4 | 832.2 | 892.1 | 324.8 | 7:15 | 4:45 | 946.9 | 282.5 | 988.2 | 1119.1 |
| 10:40 | 1:20 | 342.0 | 825.8 | 893.8 | 346.1 | 7:10 | 4:50 | 953.7 | 264.3 | 989.7 | 1134.6 |
| 10:35 | 1:25 | 362.4 | 819.1 | 895.7 | 367.3 | 7:05 | 4:55 | 960.0 | 245.9 | 991.0 | 1149.9 |
| 10:30 | 1:30 | 382.7 | 811.9 | 897.6 | 388.5 | 7:00 | 5:00 | 965.9 | 227.5 | 992.3 | 1165.0 |
| 10:25 | 1:35 | 402.7 | 804.4 | 899.6 | 409.6 | 6:55 | 5:05 | 971.3 | 208.9 | 993.5 | 1180.0 |
| 10:20 | 1:40 | 422.6 | 796.5 | 901.7 | 430.6 | 6:50 | 5:10 | 976.3 | 190.2 | 994.7 | 1194.7 |
| 10:15 | 1:45 | 442.3 | 788.2 | 903.8 | 451.5 | 6:45 | 5:15 | 980.8 | 171.4 | 995.7 | 1209.3 |
| 10:10 | 1:50 | 461.7 | 779.5 | 906.0 | 472.3 | 6:40 | 5:20 | 984.8 | 152.6 | 996.6 | 1223.6 |
| 10:05 | 1:55 | 481.0 | 770.5 | 908.3 | 493.0 | 6:35 | 5:25 | 988.4 | 133.7 | 997.4 | 1237.8 |
| 10:00 | 2:00 | 500.0 | 761.1 | 910.6 | 513.7 | 6:30 | 5:30 | 991.4 | 114.7 | 998.1 | 1251.7 |
| 9:55 | 2:05 | 518.8 | 751.3 | 913.0 | 534.2 | 6:25 | 5:35 | 994.1 | 95.7 | 998.6 | 1265.5 |
| 9:50 | 2:10 | 537.3 | 741.2 | 915.5 | 554.6 | 6:20 | 5:40 | 996.2 | 76.6 | 999.1 | 1279.0 |
| 9:45 | 2:15 | 555.6 | 730.7 | 917.9 | 575.0 | 6:15 | 5:45 | 997.9 | 57.5 | 999.5 | 1292.4 |
| 9:40 | 2:20 | 573.6 | 719.9 | 920.4 | 595.2 | 6:10 | 5:50 | 999.0 | 38.3 | 999.8 | 1305.6 |
| 9:35 | 2:25 | 591.3 | 708.7 | 923.0 | 615.3 | 6:05 | 5:55 | 999.8 | 19.2 | 999.9 | 1318.5 |
| 9:30 | 2:30 | 608.8 | 697.2 | 925.6 | 635.3 | 6:00 | 6:00 | 1000.0 | 0.0 | 1000.0 | 1331.3 |
| 9:25 | 2:35 | 625.9 | 685.4 | 928.2 | 655.1 | 5:55 | 6:05 | 999.8 | -19.2 | 999.9 | 1343.8 |
| 9:20 | 2:40 | 642.8 | 673.2 | 930.8 | 674.9 | 5:50 | 6:10 | 999.0 | -38.3 | 999.8 | 1356.2 |
| 9:15 | 2:45 | 659.3 | 660.7 | 933.4 | 694.5 | 5:45 | 6:15 | 997.9 | -57.5 | 999.5 | 1368.3 |
| 9:10 | 2:50 | 675.6 | 647.9 | 936.1 | 714.0 | 5:40 | 6:20 | 996.2 | -76.6 | 999.1 | 1380.3 |
| 9:05 | 2:55 | 691.5 | 634.8 | 938.7 | 733.3 | 5:35 | 6:25 | 994.1 | -95.7 | 998.6 | 1392.0 |
| 9:00 | 3:00 | 707.1 | 621.4 | 941.4 | 752.5 | 5:30 | 6:30 | 991.4 | -114.7 | 998.1 | 1403.6 |
| 8:55 | 3:05 | 722.4 | 607.7 | 944.0 | 771.6 | 5:25 | 6:35 | 988.4 | -133.7 | 997.4 | 1414.9 |
| 8:50 | 3:10 | 737.3 | 593.7 | 946.6 | 790.5 | 5:20 | 6:40 | 984.8 | -152.6 | 996.6 | 1426.1 |
| 8:45 | 3:15 | 751.8 | 579.4 | 949.2 | 809.3 | 5:15 | 6:45 | 980.8 | -171.4 | 995.7 | 1437.0 |
| 8:40 | 3:20 | 766.0 | 564.9 | 951.8 | 827.9 | 5:10 | 6:50 | 976.3 | -190.2 | 994.7 | 1447.7 |
| 8:35 | 3:25 | 779.9 | 550.1 | 954.4 | 846.3 | 5:05 | 6:55 | 971.3 | -208.9 | 993.5 | 1458.3 |
| 8:30 | 3:30 | 793.4 | 535.0 | 956.9 | 864.7 | 5:00 | 7:00 | 965.9 | -227.5 | 992.3 | 1468.6 |

Analemmatic Sundial

Latitude: 61.5° N/S

Earliest Sunrise: 2:14 a.m. Latest Sunset: 9:46 p.m.
 Semi-Major Axis (E-W): 1000 mm Semi-Minor Axis (N-S): 878.8 mm
 Sunrise/Sunset Markers: X = ± 167.4 mm

| Local Time | | X | Y | Z | W | Local Time | | X | Y | Z | W |
|------------|------|-------|--------|-------|--------|------------|-------|-------|--------|-------|--------|
| 4:55 | 7:05 | 960.0 | -245.9 | 991.0 | 1478.8 | 2:55 | 9:05 | 691.5 | -634.8 | 938.7 | 1664.1 |
| 4:50 | 7:10 | 953.7 | -264.3 | 989.7 | 1488.7 | 2:50 | 9:10 | 675.6 | -647.9 | 936.1 | 1669.5 |
| 4:45 | 7:15 | 946.9 | -282.5 | 988.2 | 1498.4 | 2:45 | 9:15 | 659.3 | -660.7 | 933.4 | 1674.8 |
| 4:40 | 7:20 | 939.7 | -300.6 | 986.6 | 1508.0 | 2:40 | 9:20 | 642.8 | -673.2 | 930.8 | 1679.9 |
| 4:35 | 7:25 | 932.0 | -318.5 | 984.9 | 1517.3 | 2:35 | 9:25 | 625.9 | -685.4 | 928.2 | 1684.8 |
| 4:30 | 7:30 | 923.9 | -336.3 | 983.2 | 1526.5 | 2:30 | 9:30 | 608.8 | -697.2 | 925.6 | 1689.5 |
| 4:25 | 7:35 | 915.3 | -353.9 | 981.4 | 1535.4 | 2:25 | 9:35 | 591.3 | -708.7 | 923.0 | 1694.1 |
| 4:20 | 7:40 | 906.3 | -371.4 | 979.5 | 1544.2 | 2:20 | 9:40 | 573.6 | -719.9 | 920.4 | 1698.5 |
| 4:15 | 7:45 | 896.9 | -388.7 | 977.5 | 1552.7 | 2:15 | 9:45 | 555.6 | -730.7 | 917.9 | 1702.7 |
| 4:10 | 7:50 | 887.0 | -405.8 | 975.4 | 1561.1 | 2:10 | 9:50 | 537.3 | -741.2 | 915.5 | 1706.8 |
| 4:05 | 7:55 | 876.7 | -422.7 | 973.3 | 1569.3 | 2:05 | 9:55 | 518.8 | -751.3 | 913.0 | 1710.7 |
| 4:00 | 8:00 | 866.0 | -439.4 | 971.1 | 1577.3 | 2:00 | 10:00 | 500.0 | -761.1 | 910.6 | 1714.4 |
| 3:55 | 8:05 | 854.9 | -455.9 | 968.9 | 1585.0 | | | | | | |
| 3:50 | 8:10 | 843.4 | -472.2 | 966.6 | 1592.6 | | | | | | |
| 3:45 | 8:15 | 831.5 | -488.2 | 964.2 | 1600.1 | | | | | | |
| 3:40 | 8:20 | 819.2 | -504.1 | 961.8 | 1607.3 | | | | | | |
| 3:35 | 8:25 | 806.4 | -519.7 | 959.4 | 1614.3 | | | | | | |
| 3:30 | 8:30 | 793.4 | -535.0 | 956.9 | 1621.2 | | | | | | |
| 3:25 | 8:35 | 779.9 | -550.1 | 954.4 | 1627.9 | | | | | | |
| 3:20 | 8:40 | 766.0 | -564.9 | 951.8 | 1634.4 | | | | | | |
| 3:15 | 8:45 | 751.8 | -579.4 | 949.2 | 1640.7 | | | | | | |
| 3:10 | 8:50 | 737.3 | -593.7 | 946.6 | 1646.8 | | | | | | |
| 3:05 | 8:55 | 722.4 | -607.7 | 944.0 | 1652.8 | | | | | | |
| 3:00 | 9:00 | 707.1 | -621.4 | 941.4 | 1658.5 | | | | | | |

Analemmatic Sundial

Latitude: 61.5° N/S

Date Scale

Semi-Major Axis (E-W): 1000 mm Semi-Minor Axis (N-S): 878.8 mm

| Month | Date | | | | | | | | | | |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | 1 | 5 | 6 | 10 | 11 | 15 | 16 | 20 | 21 | 25 | 26 |
| January | -202.4 | -198.6 | -197.5 | -192.2 | -190.7 | -184.1 | -182.3 | -174.5 | -172.4 | -163.6 | -161.3 |
| February | -146.4 | -135.7 | -133.0 | -121.6 | -118.8 | -106.9 | -103.9 | -91.6 | -88.5 | -75.9 | -72.7 |
| March | -63.1 | -50.2 | -46.9 | -33.8 | -30.5 | -17.3 | -14.1 | -0.8 | 2.4 | 15.6 | 18.8 |
| April | 38.4 | 51.2 | 54.4 | 67.1 | 70.2 | 82.6 | 85.6 | 97.7 | 100.6 | 112.3 | 115.1 |
| May | 128.9 | 139.5 | 142.1 | 151.9 | 154.3 | 163.4 | 165.5 | 173.8 | 175.7 | 183.0 | 184.6 |
| June | 193.6 | 198.2 | 199.3 | 202.7 | 203.5 | 205.7 | 206.0 | 206.8 | 206.9 | 205.4 | 206.1 |
| July | 203.5 | 200.3 | 199.3 | 194.9 | 193.7 | 188.0 | 186.4 | 179.6 | 177.8 | 170.1 | 168.0 |
| August | 154.9 | 145.2 | 142.8 | 132.5 | 129.9 | 119.1 | 116.2 | 104.9 | 102.0 | 90.2 | 87.2 |
| September | 69.0 | 56.6 | 53.4 | 40.7 | 37.6 | 24.8 | 21.6 | 8.7 | 5.4 | -7.6 | -10.8 |
| October | -27.0 | -40.0 | -43.2 | -56.1 | -59.2 | -71.9 | -75.1 | -87.5 | -90.6 | -102.7 | -105.7 |
| November | -123.1 | -134.3 | -137.0 | -147.5 | -150.1 | -159.8 | -162.2 | -171.0 | -173.1 | -181.0 | -182.9 |
| December | -191.0 | -196.6 | -197.7 | -201.8 | -202.6 | -205.2 | -205.7 | -206.8 | -206.9 | -206.4 | -206.1 |

Northern Hemisphere

| Month | Date | | | | | | | | | | |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | 1 | 5 | 6 | 10 | 11 | 15 | 16 | 20 | 21 | 25 | 26 |
| January | 202.4 | 198.6 | 197.5 | 192.2 | 190.7 | 184.1 | 182.3 | 174.5 | 172.4 | 163.6 | 161.3 |
| February | 146.4 | 135.7 | 133.0 | 121.6 | 118.8 | 106.9 | 103.9 | 91.6 | 88.5 | 75.9 | 72.7 |
| March | 63.1 | 50.2 | 46.9 | 33.8 | 30.5 | 17.3 | 14.1 | 0.8 | -2.4 | -15.6 | -18.8 |
| April | -38.4 | -51.2 | -54.4 | -67.1 | -70.2 | -82.6 | -85.6 | -97.7 | -100.6 | -112.3 | -115.1 |
| May | -128.9 | -139.5 | -142.1 | -151.9 | -154.3 | -163.4 | -165.5 | -173.8 | -175.7 | -183.0 | -184.6 |
| June | -193.6 | -198.2 | -199.3 | -202.7 | -203.5 | -205.7 | -206.0 | -206.8 | -206.9 | -205.4 | -206.1 |
| July | -203.5 | -200.3 | -199.3 | -194.9 | -193.7 | -188.0 | -186.4 | -179.6 | -177.8 | -170.1 | -168.0 |
| August | -154.9 | -145.2 | -142.8 | -132.5 | -129.9 | -119.1 | -116.2 | -104.9 | -102.0 | -90.2 | -87.2 |
| September | -69.0 | -56.6 | -53.4 | -40.7 | -37.6 | -24.8 | -21.6 | -8.7 | -5.4 | 7.6 | 10.8 |
| October | 27.0 | 40.0 | 43.2 | 56.1 | 59.2 | 71.9 | 75.1 | 87.5 | 90.6 | 102.7 | 105.7 |
| November | 123.1 | 134.3 | 137.0 | 147.5 | 150.1 | 159.8 | 162.2 | 171.0 | 173.1 | 181.0 | 182.9 |
| December | 191.0 | 196.6 | 197.7 | 201.8 | 202.6 | 205.2 | 205.7 | 206.8 | 206.9 | 206.4 | 206.1 |

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: 61.5° N/S

Earliest Sunrise: 2:14 a.m. Latest Sunset: 9:46 p.m.
 Semi-Major Axis (E-W): 1500 mm Semi-Minor Axis (N-S): 1318.2 mm
 Sunrise/Sunset Markers: X = ± 251.2 mm

| Local Time | | X | Y | Z | W | Local Time | | X | Y | Z | W |
|------------|-------|--------|--------|--------|--------|------------|------|--------|--------|--------|--------|
| 12:00 | | 0.0 | 1318.2 | 1318.2 | 0.0 | | | | | | |
| 11:55 | 12:05 | 32.7 | 1317.9 | 1318.3 | 32.7 | 8:25 | 3:35 | 1209.7 | 779.5 | 1439.1 | 1324.2 |
| 11:50 | 12:10 | 65.4 | 1317.0 | 1318.6 | 65.4 | 8:20 | 3:40 | 1228.7 | 756.1 | 1442.7 | 1351.2 |
| 11:45 | 12:15 | 98.1 | 1315.4 | 1319.1 | 98.1 | 8:15 | 3:45 | 1247.2 | 732.4 | 1446.3 | 1378.0 |
| 11:40 | 12:20 | 130.7 | 1313.2 | 1319.7 | 130.8 | 8:10 | 3:50 | 1265.1 | 708.3 | 1449.9 | 1404.4 |
| 11:35 | 12:25 | 163.3 | 1310.4 | 1320.5 | 163.5 | 8:05 | 3:55 | 1282.4 | 683.9 | 1453.3 | 1430.7 |
| 11:30 | 12:30 | 195.8 | 1306.9 | 1321.5 | 196.1 | 8:00 | 4:00 | 1299.0 | 659.1 | 1456.7 | 1456.7 |
| 11:25 | 12:35 | 228.2 | 1302.9 | 1322.7 | 228.7 | 7:55 | 4:05 | 1315.1 | 634.1 | 1460.0 | 1482.4 |
| 11:20 | 12:40 | 260.5 | 1298.2 | 1324.1 | 261.2 | 7:50 | 4:10 | 1330.5 | 608.7 | 1463.1 | 1507.9 |
| 11:15 | 12:45 | 292.6 | 1292.9 | 1325.6 | 293.7 | 7:45 | 4:15 | 1345.3 | 583.0 | 1466.2 | 1533.1 |
| 11:10 | 12:50 | 324.7 | 1287.0 | 1327.3 | 326.2 | 7:40 | 4:20 | 1359.5 | 557.1 | 1469.2 | 1558.0 |
| 11:05 | 12:55 | 356.5 | 1280.4 | 1329.2 | 358.5 | 7:35 | 4:25 | 1373.0 | 530.9 | 1472.0 | 1582.7 |
| 11:00 | 1:00 | 388.2 | 1273.3 | 1331.2 | 390.8 | 7:30 | 4:30 | 1385.8 | 504.5 | 1474.8 | 1607.1 |
| 10:55 | 1:05 | 419.7 | 1265.6 | 1333.4 | 423.0 | 7:25 | 4:35 | 1398.0 | 477.8 | 1477.4 | 1631.2 |
| 10:50 | 1:10 | 451.1 | 1257.2 | 1335.7 | 455.2 | 7:20 | 4:40 | 1409.5 | 450.9 | 1479.9 | 1655.0 |
| 10:45 | 1:15 | 482.2 | 1248.3 | 1338.2 | 487.2 | 7:15 | 4:45 | 1420.4 | 423.7 | 1482.3 | 1678.6 |
| 10:40 | 1:20 | 513.0 | 1238.7 | 1340.8 | 519.2 | 7:10 | 4:50 | 1430.6 | 396.4 | 1484.5 | 1701.9 |
| 10:35 | 1:25 | 543.7 | 1228.6 | 1343.5 | 551.0 | 7:05 | 4:55 | 1440.1 | 368.9 | 1486.6 | 1724.8 |
| 10:30 | 1:30 | 574.0 | 1217.9 | 1346.4 | 582.7 | 7:00 | 5:00 | 1448.9 | 341.2 | 1488.5 | 1747.5 |
| 10:25 | 1:35 | 604.1 | 1206.6 | 1349.4 | 614.3 | 6:55 | 5:05 | 1457.0 | 313.3 | 1490.3 | 1769.9 |
| 10:20 | 1:40 | 633.9 | 1194.7 | 1352.5 | 645.8 | 6:50 | 5:10 | 1464.4 | 285.3 | 1492.0 | 1792.1 |
| 10:15 | 1:45 | 663.4 | 1182.3 | 1355.7 | 677.2 | 6:45 | 5:15 | 1471.2 | 257.2 | 1493.5 | 1813.9 |
| 10:10 | 1:50 | 692.6 | 1169.3 | 1359.0 | 708.5 | 6:40 | 5:20 | 1477.2 | 228.9 | 1494.8 | 1835.4 |
| 10:05 | 1:55 | 721.5 | 1155.7 | 1362.4 | 739.6 | 6:35 | 5:25 | 1482.5 | 200.5 | 1496.0 | 1856.7 |
| 10:00 | 2:00 | 750.0 | 1141.6 | 1365.9 | 770.5 | 6:30 | 5:30 | 1487.2 | 172.1 | 1497.1 | 1877.6 |
| 9:55 | 2:05 | 778.2 | 1127.0 | 1369.5 | 801.3 | 6:25 | 5:35 | 1491.1 | 143.5 | 1498.0 | 1898.2 |
| 9:50 | 2:10 | 805.9 | 1111.8 | 1373.2 | 832.0 | 6:20 | 5:40 | 1494.3 | 114.9 | 1498.7 | 1918.6 |
| 9:45 | 2:15 | 833.4 | 1096.1 | 1376.9 | 862.5 | 6:15 | 5:45 | 1496.8 | 86.2 | 1499.3 | 1938.6 |
| 9:40 | 2:20 | 860.4 | 1079.8 | 1380.7 | 892.8 | 6:10 | 5:50 | 1498.6 | 57.5 | 1499.7 | 1958.4 |
| 9:35 | 2:25 | 887.0 | 1063.1 | 1384.5 | 922.9 | 6:05 | 5:55 | 1499.6 | 28.8 | 1499.9 | 1977.8 |
| 9:30 | 2:30 | 913.1 | 1045.8 | 1388.4 | 952.9 | 6:00 | 6:00 | 1500.0 | 0.0 | 1500.0 | 1996.9 |
| 9:25 | 2:35 | 938.9 | 1028.1 | 1392.3 | 982.7 | 5:55 | 6:05 | 1499.6 | -28.8 | 1499.9 | 2015.8 |
| 9:20 | 2:40 | 964.2 | 1009.8 | 1396.2 | 1012.3 | 5:50 | 6:10 | 1498.6 | -57.5 | 1499.7 | 2034.3 |
| 9:15 | 2:45 | 989.0 | 991.1 | 1400.2 | 1041.7 | 5:45 | 6:15 | 1496.8 | -86.2 | 1499.3 | 2052.5 |
| 9:10 | 2:50 | 1013.4 | 971.9 | 1404.1 | 1070.9 | 5:40 | 6:20 | 1494.3 | -114.9 | 1498.7 | 2070.4 |
| 9:05 | 2:55 | 1037.3 | 952.2 | 1408.1 | 1099.9 | 5:35 | 6:25 | 1491.1 | -143.5 | 1498.0 | 2088.1 |
| 9:00 | 3:00 | 1060.7 | 932.1 | 1412.0 | 1128.7 | 5:30 | 6:30 | 1487.2 | -172.1 | 1497.1 | 2105.4 |
| 8:55 | 3:05 | 1083.5 | 911.6 | 1416.0 | 1157.3 | 5:25 | 6:35 | 1482.5 | -200.5 | 1496.0 | 2122.4 |
| 8:50 | 3:10 | 1105.9 | 890.6 | 1419.9 | 1185.7 | 5:20 | 6:40 | 1477.2 | -228.9 | 1494.8 | 2139.1 |
| 8:45 | 3:15 | 1127.8 | 869.2 | 1423.8 | 1213.9 | 5:15 | 6:45 | 1471.2 | -257.2 | 1493.5 | 2155.5 |
| 8:40 | 3:20 | 1149.1 | 847.3 | 1427.7 | 1241.8 | 5:10 | 6:50 | 1464.4 | -285.3 | 1492.0 | 2171.6 |
| 8:35 | 3:25 | 1169.8 | 825.1 | 1431.5 | 1269.5 | 5:05 | 6:55 | 1457.0 | -313.3 | 1490.3 | 2187.4 |
| 8:30 | 3:30 | 1190.0 | 802.5 | 1435.3 | 1297.0 | 5:00 | 7:00 | 1448.9 | -341.2 | 1488.5 | 2202.9 |

Analemmatic Sundial

Latitude: 61.5° N/S

Earliest Sunrise: 2:14 a.m. Latest Sunset: 9:46 p.m.
 Semi-Major Axis (E-W): 1500 mm Semi-Minor Axis (N-S): 1318.2 mm
 Sunrise/Sunset Markers: X = ± 251.2 mm

| Local Time | | X | Y | Z | W | Local Time | | X | Y | Z | W |
|------------|------|--------|--------|--------|--------|------------|-------|--------|---------|--------|--------|
| 4:55 | 7:05 | 1440.1 | -368.9 | 1486.6 | 2218.1 | 2:55 | 9:05 | 1037.3 | -952.2 | 1408.1 | 2496.2 |
| 4:50 | 7:10 | 1430.6 | -396.4 | 1484.5 | 2233.0 | 2:50 | 9:10 | 1013.4 | -971.9 | 1404.1 | 2504.3 |
| 4:45 | 7:15 | 1420.4 | -423.7 | 1482.3 | 2247.7 | 2:45 | 9:15 | 989.0 | -991.1 | 1400.2 | 2512.2 |
| 4:40 | 7:20 | 1409.5 | -450.9 | 1479.9 | 2262.0 | 2:40 | 9:20 | 964.2 | -1009.8 | 1396.2 | 2519.8 |
| 4:35 | 7:25 | 1398.0 | -477.8 | 1477.4 | 2276.0 | 2:35 | 9:25 | 938.9 | -1028.1 | 1392.3 | 2527.2 |
| 4:30 | 7:30 | 1385.8 | -504.5 | 1474.8 | 2289.7 | 2:30 | 9:30 | 913.1 | -1045.8 | 1388.4 | 2534.3 |
| 4:25 | 7:35 | 1373.0 | -530.9 | 1472.0 | 2303.1 | 2:25 | 9:35 | 887.0 | -1063.1 | 1384.5 | 2541.1 |
| 4:20 | 7:40 | 1359.5 | -557.1 | 1469.2 | 2316.2 | 2:20 | 9:40 | 860.4 | -1079.8 | 1380.7 | 2547.7 |
| 4:15 | 7:45 | 1345.3 | -583.0 | 1466.2 | 2329.1 | 2:15 | 9:45 | 833.4 | -1096.1 | 1376.9 | 2554.1 |
| 4:10 | 7:50 | 1330.5 | -608.7 | 1463.1 | 2341.6 | 2:10 | 9:50 | 805.9 | -1111.8 | 1373.2 | 2560.2 |
| 4:05 | 7:55 | 1315.1 | -634.1 | 1460.0 | 2353.9 | 2:05 | 9:55 | 778.2 | -1127.0 | 1369.5 | 2566.0 |
| 4:00 | 8:00 | 1299.0 | -659.1 | 1456.7 | 2365.9 | 2:00 | 10:00 | 750.0 | -1141.6 | 1365.9 | 2571.6 |
| 3:55 | 8:05 | 1282.4 | -683.9 | 1453.3 | 2377.6 | | | | | | |
| 3:50 | 8:10 | 1265.1 | -708.3 | 1449.9 | 2389.0 | | | | | | |
| 3:45 | 8:15 | 1247.2 | -732.4 | 1446.3 | 2400.1 | | | | | | |
| 3:40 | 8:20 | 1228.7 | -756.1 | 1442.7 | 2410.9 | | | | | | |
| 3:35 | 8:25 | 1209.7 | -779.5 | 1439.1 | 2421.5 | | | | | | |
| 3:30 | 8:30 | 1190.0 | -802.5 | 1435.3 | 2431.8 | | | | | | |
| 3:25 | 8:35 | 1169.8 | -825.1 | 1431.5 | 2441.8 | | | | | | |
| 3:20 | 8:40 | 1149.1 | -847.3 | 1427.7 | 2451.5 | | | | | | |
| 3:15 | 8:45 | 1127.8 | -869.2 | 1423.8 | 2461.0 | | | | | | |
| 3:10 | 8:50 | 1105.9 | -890.6 | 1419.9 | 2470.2 | | | | | | |
| 3:05 | 8:55 | 1083.5 | -911.6 | 1416.0 | 2479.1 | | | | | | |
| 3:00 | 9:00 | 1060.7 | -932.1 | 1412.0 | 2487.8 | | | | | | |

Analemmatic Sundial

Latitude: 61.5° N/S

Date Scale

Semi-Major Axis (E-W): 1500 mm Semi-Minor Axis (N-S): 1318.2 mm

| Month | Date | | | | | | | | | | |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | 1 | 5 | 6 | 10 | 11 | 15 | 16 | 20 | 21 | 25 | 26 |
| January | -303.7 | -297.9 | -296.2 | -288.3 | -286.0 | -276.2 | -273.5 | -261.8 | -258.7 | -245.5 | -242.0 |
| February | -219.6 | -203.6 | -199.4 | -182.4 | -178.2 | -160.4 | -155.8 | -137.4 | -132.8 | -113.9 | -109.0 |
| March | -94.6 | -75.2 | -70.3 | -50.7 | -45.8 | -26.0 | -21.1 | -1.2 | 3.6 | 23.4 | 28.2 |
| April | 57.6 | 76.9 | 81.7 | 100.6 | 105.3 | 123.9 | 128.4 | 146.5 | 151.0 | 168.4 | 172.6 |
| May | 193.4 | 209.3 | 213.1 | 227.9 | 231.5 | 245.1 | 248.3 | 260.6 | 263.6 | 274.5 | 276.9 |
| June | 290.3 | 297.3 | 299.0 | 304.1 | 305.3 | 308.5 | 309.0 | 310.2 | 310.3 | 308.1 | 309.1 |
| July | 305.3 | 300.4 | 299.0 | 292.4 | 290.5 | 281.9 | 279.6 | 269.5 | 266.7 | 255.1 | 252.1 |
| August | 232.3 | 217.9 | 214.2 | 198.8 | 194.9 | 178.6 | 174.3 | 157.4 | 153.0 | 135.4 | 130.8 |
| September | 103.5 | 84.8 | 80.2 | 61.1 | 56.3 | 37.1 | 32.4 | 13.0 | 8.1 | -11.4 | -16.2 |
| October | -40.5 | -60.0 | -64.8 | -84.1 | -88.8 | -107.9 | -112.6 | -131.2 | -135.9 | -154.1 | -158.5 |
| November | -184.7 | -201.5 | -205.5 | -221.3 | -225.1 | -239.8 | -243.2 | -256.6 | -259.7 | -271.5 | -274.3 |
| December | -286.6 | -294.9 | -296.6 | -302.6 | -304.0 | -307.8 | -308.5 | -310.2 | -310.3 | -309.6 | -309.1 |

Northern Hemisphere

| Month | Date | | | | | | | | | | |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | 1 | 5 | 6 | 10 | 11 | 15 | 16 | 20 | 21 | 25 | 26 |
| January | 303.7 | 297.9 | 296.2 | 288.3 | 286.0 | 276.2 | 273.5 | 261.8 | 258.7 | 245.5 | 242.0 |
| February | 219.6 | 203.6 | 199.4 | 182.4 | 178.2 | 160.4 | 155.8 | 137.4 | 132.8 | 113.9 | 109.0 |
| March | 94.6 | 75.2 | 70.3 | 50.7 | 45.8 | 26.0 | 21.1 | 1.2 | -3.6 | -23.4 | -28.2 |
| April | -57.6 | -76.9 | -81.7 | -100.6 | -105.3 | -123.9 | -128.4 | -146.5 | -151.0 | -168.4 | -172.6 |
| May | -193.4 | -209.3 | -213.1 | -227.9 | -231.5 | -245.1 | -248.3 | -260.6 | -263.6 | -274.5 | -276.9 |
| June | -290.3 | -297.3 | -299.0 | -304.1 | -305.3 | -308.5 | -309.0 | -310.2 | -310.3 | -308.1 | -309.1 |
| July | -305.3 | -300.4 | -299.0 | -292.4 | -290.5 | -281.9 | -279.6 | -269.5 | -266.7 | -255.1 | -252.1 |
| August | -232.3 | -217.9 | -214.2 | -198.8 | -194.9 | -178.6 | -174.3 | -157.4 | -153.0 | -135.4 | -130.8 |
| September | -103.5 | -84.8 | -80.2 | -61.1 | -56.3 | -37.1 | -32.4 | -13.0 | -8.1 | 11.4 | 16.2 |
| October | 40.5 | 60.0 | 64.8 | 84.1 | 88.8 | 107.9 | 112.6 | 131.2 | 135.9 | 154.1 | 158.5 |
| November | 184.7 | 201.5 | 205.5 | 221.3 | 225.1 | 239.8 | 243.2 | 256.6 | 259.7 | 271.5 | 274.3 |
| December | 286.6 | 294.9 | 296.6 | 302.6 | 304.0 | 307.8 | 308.5 | 310.2 | 310.3 | 309.6 | 309.1 |

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: 61.5° N/S

Earliest Sunrise: 2:14 a.m. Latest Sunset: 9:46 p.m.
 Semi-Major Axis (E-W): 2000 mm Semi-Minor Axis (N-S): 1757.6 mm
 Sunrise/Sunset Markers: X = ± 334.9 mm

| Local Time | | X | Y | Z | W | Local Time | | X | Y | Z | W |
|------------|-------|--------|--------|--------|--------|------------|------|--------|--------|--------|--------|
| 12:00 | | 0.0 | 1757.6 | 1757.6 | 0.0 | | | | | | |
| 11:55 | 12:05 | 43.6 | 1757.2 | 1757.8 | 43.6 | 8:25 | 3:35 | 1612.9 | 1039.3 | 1918.7 | 1765.6 |
| 11:50 | 12:10 | 87.2 | 1756.0 | 1758.1 | 87.3 | 8:20 | 3:40 | 1638.3 | 1008.1 | 1923.6 | 1801.6 |
| 11:45 | 12:15 | 130.8 | 1753.9 | 1758.7 | 130.9 | 8:15 | 3:45 | 1662.9 | 976.5 | 1928.4 | 1837.3 |
| 11:40 | 12:20 | 174.3 | 1750.9 | 1759.6 | 174.4 | 8:10 | 3:50 | 1686.8 | 944.4 | 1933.2 | 1872.6 |
| 11:35 | 12:25 | 217.7 | 1747.2 | 1760.7 | 218.0 | 8:05 | 3:55 | 1709.8 | 911.8 | 1937.8 | 1907.6 |
| 11:30 | 12:30 | 261.1 | 1742.6 | 1762.0 | 261.5 | 8:00 | 4:00 | 1732.1 | 878.8 | 1942.2 | 1942.2 |
| 11:25 | 12:35 | 304.2 | 1737.2 | 1763.6 | 304.9 | 7:55 | 4:05 | 1753.5 | 845.4 | 1946.6 | 1976.6 |
| 11:20 | 12:40 | 347.3 | 1730.9 | 1765.4 | 348.3 | 7:50 | 4:10 | 1774.0 | 811.6 | 1950.9 | 2010.5 |
| 11:15 | 12:45 | 390.2 | 1723.9 | 1767.5 | 391.6 | 7:45 | 4:15 | 1793.7 | 777.4 | 1955.0 | 2044.1 |
| 11:10 | 12:50 | 432.9 | 1716.0 | 1769.7 | 434.9 | 7:40 | 4:20 | 1812.6 | 742.8 | 1958.9 | 2077.4 |
| 11:05 | 12:55 | 475.4 | 1707.3 | 1772.2 | 478.0 | 7:35 | 4:25 | 1830.6 | 707.9 | 1962.7 | 2110.3 |
| 11:00 | 1:00 | 517.6 | 1697.7 | 1774.9 | 521.1 | 7:30 | 4:30 | 1847.8 | 672.6 | 1966.4 | 2142.8 |
| 10:55 | 1:05 | 559.7 | 1687.4 | 1777.8 | 564.0 | 7:25 | 4:35 | 1864.0 | 637.0 | 1969.9 | 2174.9 |
| 10:50 | 1:10 | 601.4 | 1676.3 | 1780.9 | 606.9 | 7:20 | 4:40 | 1879.4 | 601.1 | 1973.2 | 2206.7 |
| 10:45 | 1:15 | 642.9 | 1664.4 | 1784.2 | 649.6 | 7:15 | 4:45 | 1893.9 | 565.0 | 1976.3 | 2238.1 |
| 10:40 | 1:20 | 684.0 | 1651.6 | 1787.7 | 692.2 | 7:10 | 4:50 | 1907.4 | 528.5 | 1979.3 | 2269.1 |
| 10:35 | 1:25 | 724.9 | 1638.1 | 1791.3 | 734.7 | 7:05 | 4:55 | 1920.1 | 491.8 | 1982.1 | 2299.8 |
| 10:30 | 1:30 | 765.4 | 1623.8 | 1795.2 | 777.0 | 7:00 | 5:00 | 1931.9 | 454.9 | 1984.7 | 2330.1 |
| 10:25 | 1:35 | 805.5 | 1608.8 | 1799.2 | 819.1 | 6:55 | 5:05 | 1942.7 | 417.8 | 1987.1 | 2359.9 |
| 10:20 | 1:40 | 845.2 | 1593.0 | 1803.3 | 861.1 | 6:50 | 5:10 | 1952.6 | 380.4 | 1989.3 | 2389.4 |
| 10:15 | 1:45 | 884.6 | 1576.4 | 1807.6 | 903.0 | 6:45 | 5:15 | 1961.6 | 342.9 | 1991.3 | 2418.5 |
| 10:10 | 1:50 | 923.5 | 1559.0 | 1812.0 | 944.6 | 6:40 | 5:20 | 1969.6 | 305.2 | 1993.1 | 2447.2 |
| 10:05 | 1:55 | 962.0 | 1541.0 | 1816.6 | 986.1 | 6:35 | 5:25 | 1976.7 | 267.4 | 1994.7 | 2475.5 |
| 10:00 | 2:00 | 1000.0 | 1522.2 | 1821.3 | 1027.4 | 6:30 | 5:30 | 1982.9 | 229.4 | 1996.1 | 2503.5 |
| 9:55 | 2:05 | 1037.5 | 1502.6 | 1826.0 | 1068.4 | 6:25 | 5:35 | 1988.1 | 191.3 | 1997.3 | 2531.0 |
| 9:50 | 2:10 | 1074.6 | 1482.4 | 1830.9 | 1109.3 | 6:20 | 5:40 | 1992.4 | 153.2 | 1998.3 | 2558.1 |
| 9:45 | 2:15 | 1111.1 | 1461.4 | 1835.9 | 1149.9 | 6:15 | 5:45 | 1995.7 | 115.0 | 1999.0 | 2584.8 |
| 9:40 | 2:20 | 1147.2 | 1439.8 | 1840.9 | 1190.4 | 6:10 | 5:50 | 1998.1 | 76.7 | 1999.6 | 2611.1 |
| 9:35 | 2:25 | 1182.6 | 1417.4 | 1846.0 | 1230.6 | 6:05 | 5:55 | 1999.5 | 38.3 | 1999.9 | 2637.1 |
| 9:30 | 2:30 | 1217.5 | 1394.4 | 1851.2 | 1270.5 | 6:00 | 6:00 | 2000.0 | 0.0 | 2000.0 | 2662.6 |
| 9:25 | 2:35 | 1251.8 | 1370.8 | 1856.4 | 1310.3 | 5:55 | 6:05 | 1999.5 | -38.3 | 1999.9 | 2687.7 |
| 9:20 | 2:40 | 1285.6 | 1346.4 | 1861.6 | 1349.7 | 5:50 | 6:10 | 1998.1 | -76.7 | 1999.6 | 2712.4 |
| 9:15 | 2:45 | 1318.7 | 1321.5 | 1866.9 | 1389.0 | 5:45 | 6:15 | 1995.7 | -115.0 | 1999.0 | 2736.7 |
| 9:10 | 2:50 | 1351.2 | 1295.9 | 1872.2 | 1427.9 | 5:40 | 6:20 | 1992.4 | -153.2 | 1998.3 | 2760.6 |
| 9:05 | 2:55 | 1383.0 | 1269.7 | 1877.4 | 1466.6 | 5:35 | 6:25 | 1988.1 | -191.3 | 1997.3 | 2784.1 |
| 9:00 | 3:00 | 1414.2 | 1242.8 | 1882.7 | 1505.0 | 5:30 | 6:30 | 1982.9 | -229.4 | 1996.1 | 2807.2 |
| 8:55 | 3:05 | 1444.7 | 1215.4 | 1888.0 | 1543.1 | 5:25 | 6:35 | 1976.7 | -267.4 | 1994.7 | 2829.9 |
| 8:50 | 3:10 | 1474.6 | 1187.4 | 1893.2 | 1581.0 | 5:20 | 6:40 | 1969.6 | -305.2 | 1993.1 | 2852.1 |
| 8:45 | 3:15 | 1503.7 | 1158.9 | 1898.4 | 1618.5 | 5:15 | 6:45 | 1961.6 | -342.9 | 1991.3 | 2874.0 |
| 8:40 | 3:20 | 1532.1 | 1129.8 | 1903.6 | 1655.7 | 5:10 | 6:50 | 1952.6 | -380.4 | 1989.3 | 2895.5 |
| 8:35 | 3:25 | 1559.8 | 1100.1 | 1908.7 | 1692.7 | 5:05 | 6:55 | 1942.7 | -417.8 | 1987.1 | 2916.6 |
| 8:30 | 3:30 | 1586.7 | 1070.0 | 1913.8 | 1729.3 | 5:00 | 7:00 | 1931.9 | -454.9 | 1984.7 | 2937.2 |

Analemmatic Sundial

Latitude: 61.5° N/S

Earliest Sunrise: 2:14 a.m. Latest Sunset: 9:46 p.m.
 Semi-Major Axis (E-W): 2000 mm Semi-Minor Axis (N-S): 1757.6 mm
 Sunrise/Sunset Markers: X = ± 334.9 mm

| Local Time | | X | Y | Z | W | Local Time | | X | Y | Z | W |
|------------|------|--------|---------|--------|--------|------------|-------|--------|---------|--------|--------|
| 4:55 | 7:05 | 1920.1 | -491.8 | 1982.1 | 2957.5 | 2:55 | 9:05 | 1383.0 | -1269.7 | 1877.4 | 3328.2 |
| 4:50 | 7:10 | 1907.4 | -528.5 | 1979.3 | 2977.4 | 2:50 | 9:10 | 1351.2 | -1295.9 | 1872.2 | 3339.1 |
| 4:45 | 7:15 | 1893.9 | -565.0 | 1976.3 | 2996.9 | 2:45 | 9:15 | 1318.7 | -1321.5 | 1866.9 | 3349.6 |
| 4:40 | 7:20 | 1879.4 | -601.1 | 1973.2 | 3015.9 | 2:40 | 9:20 | 1285.6 | -1346.4 | 1861.6 | 3359.7 |
| 4:35 | 7:25 | 1864.0 | -637.0 | 1969.9 | 3034.6 | 2:35 | 9:25 | 1251.8 | -1370.8 | 1856.4 | 3369.6 |
| 4:30 | 7:30 | 1847.8 | -672.6 | 1966.4 | 3052.9 | 2:30 | 9:30 | 1217.5 | -1394.4 | 1851.2 | 3379.0 |
| 4:25 | 7:35 | 1830.6 | -707.9 | 1962.7 | 3070.8 | 2:25 | 9:35 | 1182.6 | -1417.4 | 1846.0 | 3388.2 |
| 4:20 | 7:40 | 1812.6 | -742.8 | 1958.9 | 3088.3 | 2:20 | 9:40 | 1147.2 | -1439.8 | 1840.9 | 3397.0 |
| 4:15 | 7:45 | 1793.7 | -777.4 | 1955.0 | 3105.5 | 2:15 | 9:45 | 1111.1 | -1461.4 | 1835.9 | 3405.4 |
| 4:10 | 7:50 | 1774.0 | -811.6 | 1950.9 | 3122.2 | 2:10 | 9:50 | 1074.6 | -1482.4 | 1830.9 | 3413.6 |
| 4:05 | 7:55 | 1753.5 | -845.4 | 1946.6 | 3138.5 | 2:05 | 9:55 | 1037.5 | -1502.6 | 1826.0 | 3421.4 |
| 4:00 | 8:00 | 1732.1 | -878.8 | 1942.2 | 3154.5 | 2:00 | 10:00 | 1000.0 | -1522.2 | 1821.3 | 3428.9 |
| 3:55 | 8:05 | 1709.8 | -911.8 | 1937.8 | 3170.1 | | | | | | |
| 3:50 | 8:10 | 1686.8 | -944.4 | 1933.2 | 3185.3 | | | | | | |
| 3:45 | 8:15 | 1662.9 | -976.5 | 1928.4 | 3200.1 | | | | | | |
| 3:40 | 8:20 | 1638.3 | -1008.1 | 1923.6 | 3214.6 | | | | | | |
| 3:35 | 8:25 | 1612.9 | -1039.3 | 1918.7 | 3228.7 | | | | | | |
| 3:30 | 8:30 | 1586.7 | -1070.0 | 1913.8 | 3242.4 | | | | | | |
| 3:25 | 8:35 | 1559.8 | -1100.1 | 1908.7 | 3255.7 | | | | | | |
| 3:20 | 8:40 | 1532.1 | -1129.8 | 1903.6 | 3268.7 | | | | | | |
| 3:15 | 8:45 | 1503.7 | -1158.9 | 1898.4 | 3281.3 | | | | | | |
| 3:10 | 8:50 | 1474.6 | -1187.4 | 1893.2 | 3293.6 | | | | | | |
| 3:05 | 8:55 | 1444.7 | -1215.4 | 1888.0 | 3305.5 | | | | | | |
| 3:00 | 9:00 | 1414.2 | -1242.8 | 1882.7 | 3317.0 | | | | | | |

Analematic Sundial

Latitude: 61.5° N/S

Date Scale

Semi-Major Axis (E-W): 2000 mm Semi-Minor Axis (N-S): 1757.6 mm

| Month | Date | | | | | | | | | | |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | 1 | 5 | 6 | 10 | 11 | 15 | 16 | 20 | 21 | 25 | 26 |
| January | -404.9 | -397.2 | -394.9 | -384.4 | -381.3 | -368.2 | -364.6 | -349.0 | -344.9 | -327.3 | -322.6 |
| February | -292.9 | -271.5 | -265.9 | -243.3 | -237.6 | -213.8 | -207.7 | -183.3 | -177.0 | -151.8 | -145.3 |
| March | -126.1 | -100.3 | -93.7 | -67.6 | -61.0 | -34.7 | -28.2 | -1.7 | 4.8 | 31.2 | 37.7 |
| April | 76.8 | 102.5 | 108.9 | 134.1 | 140.4 | 165.2 | 171.2 | 195.4 | 201.3 | 224.5 | 230.2 |
| May | 257.9 | 279.1 | 284.1 | 303.8 | 308.6 | 326.7 | 331.0 | 347.5 | 351.5 | 365.9 | 369.2 |
| June | 387.1 | 396.5 | 398.6 | 405.5 | 407.1 | 411.4 | 412.0 | 413.6 | 413.8 | 410.8 | 412.2 |
| July | 407.1 | 400.6 | 398.6 | 389.8 | 387.3 | 375.9 | 372.8 | 359.3 | 355.7 | 340.2 | 336.1 |
| August | 309.7 | 290.5 | 285.6 | 265.0 | 259.8 | 238.1 | 232.5 | 209.8 | 204.1 | 180.5 | 174.5 |
| September | 138.0 | 113.1 | 106.9 | 81.5 | 75.1 | 49.5 | 43.2 | 17.3 | 10.8 | -15.2 | -21.7 |
| October | -54.0 | -80.0 | -86.3 | -112.1 | -118.4 | -143.8 | -150.1 | -175.0 | -181.2 | -205.5 | -211.4 |
| November | -246.3 | -268.6 | -274.0 | -295.0 | -300.2 | -319.7 | -324.3 | -342.1 | -346.2 | -361.9 | -365.8 |
| December | -382.1 | -393.1 | -395.5 | -403.5 | -405.3 | -410.4 | -411.4 | -413.6 | -413.8 | -412.8 | -412.2 |

Northern Hemisphere

| Month | Date | | | | | | | | | | |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | 1 | 5 | 6 | 10 | 11 | 15 | 16 | 20 | 21 | 25 | 26 |
| January | 404.9 | 397.2 | 394.9 | 384.4 | 381.3 | 368.2 | 364.6 | 349.0 | 344.9 | 327.3 | 322.6 |
| February | 292.9 | 271.5 | 265.9 | 243.3 | 237.6 | 213.8 | 207.7 | 183.3 | 177.0 | 151.8 | 145.3 |
| March | 126.1 | 100.3 | 93.7 | 67.6 | 61.0 | 34.7 | 28.2 | 1.7 | -4.8 | -31.2 | -37.7 |
| April | -76.8 | -102.5 | -108.9 | -134.1 | -140.4 | -165.2 | -171.2 | -195.4 | -201.3 | -224.5 | -230.2 |
| May | -257.9 | -279.1 | -284.1 | -303.8 | -308.6 | -326.7 | -331.0 | -347.5 | -351.5 | -365.9 | -369.2 |
| June | -387.1 | -396.5 | -398.6 | -405.5 | -407.1 | -411.4 | -412.0 | -413.6 | -413.8 | -410.8 | -412.2 |
| July | -407.1 | -400.6 | -398.6 | -389.8 | -387.3 | -375.9 | -372.8 | -359.3 | -355.7 | -340.2 | -336.1 |
| August | -309.7 | -290.5 | -285.6 | -265.0 | -259.8 | -238.1 | -232.5 | -209.8 | -204.1 | -180.5 | -174.5 |
| September | -138.0 | -113.1 | -106.9 | -81.5 | -75.1 | -49.5 | -43.2 | -17.3 | -10.8 | 15.2 | 21.7 |
| October | 54.0 | 80.0 | 86.3 | 112.1 | 118.4 | 143.8 | 150.1 | 175.0 | 181.2 | 205.5 | 211.4 |
| November | 246.3 | 268.6 | 274.0 | 295.0 | 300.2 | 319.7 | 324.3 | 342.1 | 346.2 | 361.9 | 365.8 |
| December | 382.1 | 393.1 | 395.5 | 403.5 | 405.3 | 410.4 | 411.4 | 413.6 | 413.8 | 412.8 | 412.2 |

Southern Hemisphere

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

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

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

Analemmatic Sundial

Latitude: 61.5° N/S

Earliest Sunrise: 2:14 a.m. Latest Sunset: 9:46 p.m.
 Semi-Major Axis (E-W): 2500 mm Semi-Minor Axis (N-S): 2197.0 mm
 Sunrise/Sunset Markers: X = ± 418.6 mm

| Local Time | | X | Y | Z | W | Local Time | | X | Y | Z | W |
|------------|-------|--------|--------|--------|--------|------------|------|--------|--------|--------|--------|
| 12:00 | | 0.0 | 2197.0 | 2197.0 | 0.0 | | | | | | |
| 11:55 | 12:05 | 54.5 | 2196.5 | 2197.2 | 54.5 | 8:25 | 3:35 | 2016.1 | 1299.1 | 2398.4 | 2207.0 |
| 11:50 | 12:10 | 109.0 | 2195.0 | 2197.7 | 109.1 | 8:20 | 3:40 | 2047.9 | 1260.2 | 2404.5 | 2252.0 |
| 11:45 | 12:15 | 163.5 | 2192.3 | 2198.4 | 163.6 | 8:15 | 3:45 | 2078.7 | 1220.6 | 2410.6 | 2296.6 |
| 11:40 | 12:20 | 217.9 | 2188.7 | 2199.5 | 218.0 | 8:10 | 3:50 | 2108.5 | 1180.5 | 2416.4 | 2340.7 |
| 11:35 | 12:25 | 272.2 | 2184.0 | 2200.9 | 272.5 | 8:05 | 3:55 | 2137.3 | 1139.8 | 2422.2 | 2384.5 |
| 11:30 | 12:30 | 326.3 | 2178.2 | 2202.6 | 326.9 | 8:00 | 4:00 | 2165.1 | 1098.5 | 2427.8 | 2427.8 |
| 11:25 | 12:35 | 380.3 | 2171.5 | 2204.5 | 381.2 | 7:55 | 4:05 | 2191.8 | 1056.8 | 2433.3 | 2470.7 |
| 11:20 | 12:40 | 434.1 | 2163.7 | 2206.8 | 435.4 | 7:50 | 4:10 | 2217.5 | 1014.5 | 2438.6 | 2513.1 |
| 11:15 | 12:45 | 487.7 | 2154.8 | 2209.3 | 489.5 | 7:45 | 4:15 | 2242.2 | 971.7 | 2443.7 | 2555.1 |
| 11:10 | 12:50 | 541.1 | 2145.0 | 2212.2 | 543.6 | 7:40 | 4:20 | 2265.8 | 928.5 | 2448.6 | 2596.7 |
| 11:05 | 12:55 | 594.2 | 2134.1 | 2215.3 | 597.5 | 7:35 | 4:25 | 2288.3 | 884.9 | 2453.4 | 2637.8 |
| 11:00 | 1:00 | 647.0 | 2122.2 | 2218.6 | 651.4 | 7:30 | 4:30 | 2309.7 | 840.8 | 2458.0 | 2678.5 |
| 10:55 | 1:05 | 699.6 | 2109.3 | 2222.3 | 705.1 | 7:25 | 4:35 | 2330.0 | 796.3 | 2462.3 | 2718.7 |
| 10:50 | 1:10 | 751.8 | 2095.4 | 2226.1 | 758.6 | 7:20 | 4:40 | 2349.2 | 751.4 | 2466.5 | 2758.4 |
| 10:45 | 1:15 | 803.6 | 2080.4 | 2230.3 | 812.0 | 7:15 | 4:45 | 2367.3 | 706.2 | 2470.4 | 2797.6 |
| 10:40 | 1:20 | 855.1 | 2064.5 | 2234.6 | 865.3 | 7:10 | 4:50 | 2384.3 | 660.7 | 2474.1 | 2836.4 |
| 10:35 | 1:25 | 906.1 | 2047.7 | 2239.2 | 918.3 | 7:05 | 4:55 | 2400.1 | 614.8 | 2477.6 | 2874.7 |
| 10:30 | 1:30 | 956.7 | 2029.8 | 2244.0 | 971.2 | 7:00 | 5:00 | 2414.8 | 568.6 | 2480.9 | 2912.6 |
| 10:25 | 1:35 | 1006.9 | 2011.0 | 2249.0 | 1023.9 | 6:55 | 5:05 | 2428.4 | 522.2 | 2483.9 | 2949.9 |
| 10:20 | 1:40 | 1056.5 | 1991.2 | 2254.1 | 1076.4 | 6:50 | 5:10 | 2440.7 | 475.5 | 2486.6 | 2986.8 |
| 10:15 | 1:45 | 1105.7 | 1970.5 | 2259.5 | 1128.7 | 6:45 | 5:15 | 2452.0 | 428.6 | 2489.1 | 3023.2 |
| 10:10 | 1:50 | 1154.4 | 1948.8 | 2265.0 | 1180.8 | 6:40 | 5:20 | 2462.0 | 381.5 | 2491.4 | 3059.0 |
| 10:05 | 1:55 | 1202.5 | 1926.2 | 2270.7 | 1232.6 | 6:35 | 5:25 | 2470.9 | 334.2 | 2493.4 | 3094.4 |
| 10:00 | 2:00 | 1250.0 | 1902.7 | 2276.6 | 1284.2 | 6:30 | 5:30 | 2478.6 | 286.8 | 2495.1 | 3129.3 |
| 9:55 | 2:05 | 1296.9 | 1878.3 | 2282.5 | 1335.5 | 6:25 | 5:35 | 2485.1 | 239.2 | 2496.6 | 3163.7 |
| 9:50 | 2:10 | 1343.2 | 1853.0 | 2288.6 | 1386.6 | 6:20 | 5:40 | 2490.5 | 191.5 | 2497.8 | 3197.6 |
| 9:45 | 2:15 | 1388.9 | 1826.8 | 2294.8 | 1437.4 | 6:15 | 5:45 | 2494.6 | 143.7 | 2498.8 | 3231.0 |
| 9:40 | 2:20 | 1433.9 | 1799.7 | 2301.1 | 1488.0 | 6:10 | 5:50 | 2497.6 | 95.8 | 2499.5 | 3263.9 |
| 9:35 | 2:25 | 1478.3 | 1771.8 | 2307.5 | 1538.2 | 6:05 | 5:55 | 2499.4 | 47.9 | 2499.9 | 3296.3 |
| 9:30 | 2:30 | 1521.9 | 1743.0 | 2313.9 | 1588.2 | 6:00 | 6:00 | 2500.0 | 0.0 | 2500.0 | 3328.2 |
| 9:25 | 2:35 | 1564.8 | 1713.4 | 2320.5 | 1637.8 | 5:55 | 6:05 | 2499.4 | -47.9 | 2499.9 | 3359.6 |
| 9:20 | 2:40 | 1607.0 | 1683.0 | 2327.0 | 1687.2 | 5:50 | 6:10 | 2497.6 | -95.8 | 2499.5 | 3390.5 |
| 9:15 | 2:45 | 1648.4 | 1651.8 | 2333.6 | 1736.2 | 5:45 | 6:15 | 2494.6 | -143.7 | 2498.8 | 3420.9 |
| 9:10 | 2:50 | 1689.0 | 1619.8 | 2340.2 | 1784.9 | 5:40 | 6:20 | 2490.5 | -191.5 | 2497.8 | 3450.7 |
| 9:05 | 2:55 | 1728.8 | 1587.1 | 2346.8 | 1833.2 | 5:35 | 6:25 | 2485.1 | -239.2 | 2496.6 | 3480.1 |
| 9:00 | 3:00 | 1767.8 | 1553.5 | 2353.4 | 1881.2 | 5:30 | 6:30 | 2478.6 | -286.8 | 2495.1 | 3509.0 |
| 8:55 | 3:05 | 1805.9 | 1519.3 | 2360.0 | 1928.9 | 5:25 | 6:35 | 2470.9 | -334.2 | 2493.4 | 3537.3 |
| 8:50 | 3:10 | 1843.2 | 1484.3 | 2366.5 | 1976.2 | 5:20 | 6:40 | 2462.0 | -381.5 | 2491.4 | 3565.2 |
| 8:45 | 3:15 | 1879.6 | 1448.6 | 2373.1 | 2023.1 | 5:15 | 6:45 | 2452.0 | -428.6 | 2489.1 | 3592.5 |
| 8:40 | 3:20 | 1915.1 | 1412.2 | 2379.5 | 2069.7 | 5:10 | 6:50 | 2440.7 | -475.5 | 2486.6 | 3619.4 |
| 8:35 | 3:25 | 1949.7 | 1375.2 | 2385.9 | 2115.9 | 5:05 | 6:55 | 2428.4 | -522.2 | 2483.9 | 3645.7 |
| 8:30 | 3:30 | 1983.4 | 1337.5 | 2392.2 | 2161.6 | 5:00 | 7:00 | 2414.8 | -568.6 | 2480.9 | 3671.6 |

Analemmatic Sundial

Latitude: 61.5° N/S

Earliest Sunrise: 2:14 a.m. Latest Sunset: 9:46 p.m.
 Semi-Major Axis (E-W): 2500 mm Semi-Minor Axis (N-S): 2197.0 mm
 Sunrise/Sunset Markers: X = ± 418.6 mm

| Local Time | | X | Y | Z | W | Local Time | | X | Y | Z | W |
|------------|------|--------|---------|--------|--------|------------|-------|--------|---------|--------|--------|
| 4:55 | 7:05 | 2400.1 | -614.8 | 2477.6 | 3696.9 | 2:55 | 9:05 | 1728.8 | -1587.1 | 2346.8 | 4160.3 |
| 4:50 | 7:10 | 2384.3 | -660.7 | 2474.1 | 3721.7 | 2:50 | 9:10 | 1689.0 | -1619.8 | 2340.2 | 4173.9 |
| 4:45 | 7:15 | 2367.3 | -706.2 | 2470.4 | 3746.1 | 2:45 | 9:15 | 1648.4 | -1651.8 | 2333.6 | 4187.0 |
| 4:40 | 7:20 | 2349.2 | -751.4 | 2466.5 | 3769.9 | 2:40 | 9:20 | 1607.0 | -1683.0 | 2327.0 | 4199.7 |
| 4:35 | 7:25 | 2330.0 | -796.3 | 2462.3 | 3793.3 | 2:35 | 9:25 | 1564.8 | -1713.4 | 2320.5 | 4211.9 |
| 4:30 | 7:30 | 2309.7 | -840.8 | 2458.0 | 3816.2 | 2:30 | 9:30 | 1521.9 | -1743.0 | 2313.9 | 4223.8 |
| 4:25 | 7:35 | 2288.3 | -884.9 | 2453.4 | 3838.5 | 2:25 | 9:35 | 1478.3 | -1771.8 | 2307.5 | 4235.2 |
| 4:20 | 7:40 | 2265.8 | -928.5 | 2448.6 | 3860.4 | 2:20 | 9:40 | 1433.9 | -1799.7 | 2301.1 | 4246.2 |
| 4:15 | 7:45 | 2242.2 | -971.7 | 2443.7 | 3881.8 | 2:15 | 9:45 | 1388.9 | -1826.8 | 2294.8 | 4256.8 |
| 4:10 | 7:50 | 2217.5 | -1014.5 | 2438.6 | 3902.7 | 2:10 | 9:50 | 1343.2 | -1853.0 | 2288.6 | 4267.0 |
| 4:05 | 7:55 | 2191.8 | -1056.8 | 2433.3 | 3923.2 | 2:05 | 9:55 | 1296.9 | -1878.3 | 2282.5 | 4276.7 |
| 4:00 | 8:00 | 2165.1 | -1098.5 | 2427.8 | 3943.1 | 2:00 | 10:00 | 1250.0 | -1902.7 | 2276.6 | 4286.1 |
| 3:55 | 8:05 | 2137.3 | -1139.8 | 2422.2 | 3962.6 | | | | | | |
| 3:50 | 8:10 | 2108.5 | -1180.5 | 2416.4 | 3981.6 | | | | | | |
| 3:45 | 8:15 | 2078.7 | -1220.6 | 2410.6 | 4000.2 | | | | | | |
| 3:40 | 8:20 | 2047.9 | -1260.2 | 2404.5 | 4018.2 | | | | | | |
| 3:35 | 8:25 | 2016.1 | -1299.1 | 2398.4 | 4035.8 | | | | | | |
| 3:30 | 8:30 | 1983.4 | -1337.5 | 2392.2 | 4053.0 | | | | | | |
| 3:25 | 8:35 | 1949.7 | -1375.2 | 2385.9 | 4069.7 | | | | | | |
| 3:20 | 8:40 | 1915.1 | -1412.2 | 2379.5 | 4085.9 | | | | | | |
| 3:15 | 8:45 | 1879.6 | -1448.6 | 2373.1 | 4101.7 | | | | | | |
| 3:10 | 8:50 | 1843.2 | -1484.3 | 2366.5 | 4117.0 | | | | | | |
| 3:05 | 8:55 | 1805.9 | -1519.3 | 2360.0 | 4131.9 | | | | | | |
| 3:00 | 9:00 | 1767.8 | -1553.5 | 2353.4 | 4146.3 | | | | | | |

Analematic Sundial

Latitude: 61.5° N/S

Date Scale

Semi-Major Axis (E-W): 2500 mm Semi-Minor Axis (N-S): 2197.0 mm

| Month | Date | | | | | | | | | | |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | 1 | 5 | 6 | 10 | 11 | 15 | 16 | 20 | 21 | 25 | 26 |
| January | -506.1 | -496.6 | -493.6 | -480.5 | -476.6 | -460.3 | -455.8 | -436.3 | -431.1 | -409.1 | -403.3 |
| February | -366.1 | -339.4 | -332.4 | -304.1 | -297.0 | -267.3 | -259.7 | -229.1 | -221.3 | -189.8 | -181.7 |
| March | -157.7 | -125.4 | -117.2 | -84.5 | -76.3 | -43.3 | -35.2 | -2.1 | 6.0 | 38.9 | 47.1 |
| April | 96.0 | 128.1 | 136.1 | 167.7 | 175.5 | 206.5 | 214.0 | 244.2 | 251.6 | 280.7 | 287.7 |
| May | 322.3 | 348.8 | 355.2 | 379.8 | 385.8 | 408.4 | 413.8 | 434.4 | 439.4 | 457.4 | 461.5 |
| June | 483.9 | 495.6 | 498.3 | 506.8 | 508.8 | 514.2 | 515.0 | 517.0 | 517.2 | 513.5 | 515.2 |
| July | 508.8 | 500.7 | 498.3 | 487.3 | 484.1 | 469.9 | 466.1 | 449.1 | 444.6 | 425.2 | 420.1 |
| August | 387.1 | 363.1 | 357.0 | 331.3 | 324.8 | 297.6 | 290.6 | 262.3 | 255.1 | 225.6 | 218.1 |
| September | 172.5 | 141.4 | 133.6 | 101.8 | 93.9 | 61.9 | 54.0 | 21.7 | 13.5 | -18.9 | -27.1 |
| October | -67.5 | -100.0 | -107.9 | -140.1 | -147.9 | -179.8 | -187.7 | -218.7 | -226.5 | -256.8 | -264.2 |
| November | -307.8 | -335.8 | -342.5 | -368.8 | -375.2 | -399.6 | -405.4 | -427.6 | -432.8 | -452.4 | -457.2 |
| December | -477.6 | -491.4 | -494.4 | -504.4 | -506.6 | -513.0 | -514.2 | -517.0 | -517.2 | -516.0 | -515.2 |

Northern Hemisphere

| Month | Date | | | | | | | | | | |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | 1 | 5 | 6 | 10 | 11 | 15 | 16 | 20 | 21 | 25 | 26 |
| January | 506.1 | 496.6 | 493.6 | 480.5 | 476.6 | 460.3 | 455.8 | 436.3 | 431.1 | 409.1 | 403.3 |
| February | 366.1 | 339.4 | 332.4 | 304.1 | 297.0 | 267.3 | 259.7 | 229.1 | 221.3 | 189.8 | 181.7 |
| March | 157.7 | 125.4 | 117.2 | 84.5 | 76.3 | 43.3 | 35.2 | 2.1 | -6.0 | -38.9 | -47.1 |
| April | -96.0 | -128.1 | -136.1 | -167.7 | -175.5 | -206.5 | -214.0 | -244.2 | -251.6 | -280.7 | -287.7 |
| May | -322.3 | -348.8 | -355.2 | -379.8 | -385.8 | -408.4 | -413.8 | -434.4 | -439.4 | -457.4 | -461.5 |
| June | -483.9 | -495.6 | -498.3 | -506.8 | -508.8 | -514.2 | -515.0 | -517.0 | -517.2 | -513.5 | -515.2 |
| July | -508.8 | -500.7 | -498.3 | -487.3 | -484.1 | -469.9 | -466.1 | -449.1 | -444.6 | -425.2 | -420.1 |
| August | -387.1 | -363.1 | -357.0 | -331.3 | -324.8 | -297.6 | -290.6 | -262.3 | -255.1 | -225.6 | -218.1 |
| September | -172.5 | -141.4 | -133.6 | -101.8 | -93.9 | -61.9 | -54.0 | -21.7 | -13.5 | 18.9 | 27.1 |
| October | 67.5 | 100.0 | 107.9 | 140.1 | 147.9 | 179.8 | 187.7 | 218.7 | 226.5 | 256.8 | 264.2 |
| November | 307.8 | 335.8 | 342.5 | 368.8 | 375.2 | 399.6 | 405.4 | 427.6 | 432.8 | 452.4 | 457.2 |
| December | 477.6 | 491.4 | 494.4 | 504.4 | 506.6 | 513.0 | 514.2 | 517.0 | 517.2 | 516.0 | 515.2 |

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