



[NOAA ESRL](#)

Sunrise/Sunset Calculator



[Earth System
Research Lab](#)

Please note that this web page is the old version of the NOAA Solar Calculator. Back when this calculator was first created, we decided to use a non-standard definition of longitude and time zone, to make coordinate entry less awkward. So on this page, both longitude and time zone are defined as positive to the west, instead of the international standard of positive to the east of the Prime Meridian.

We maintain this page as a courtesy to those people who, for whatever reason, prefer the old calculator. For the rest of you, we encourage you to instead [click here to try the updated version of NOAA's Solar Calculator](#)

| City: | | Deg: | Min: | Sec: | Time Zone | |
|---|-----------------------------------|------|------|------|-------------------------------|--------------------------------------|
| Boulder, CO | Lat: North=+ South=- | 40 | 7 | 30 | Offset to UTC (MST=+7): | Daylight Saving Time: |
| Click here for help finding your lat/long coordinates | Long: West=+ East=- | 105 | 14 | 13 | 7 | No |
| Note: To manually enter latitude/longitude, select Enter Lat/Long -> from the City pulldown menu, and enter the values in the text boxes to the right. | | | | | | |

| Month: | Day: | Year (e.g. 2000): |
|----------|------|-------------------|
| December | 22 | 2010 |

Calculate Sunrise/Sunset

| Equation of Time (minutes): | Solar Declination (degrees): | Apparent Sunrise: | Solar Noon: | Apparent Sunset: | Time Zone |
|---|--|-----------------------------------|-----------------------------|----------------------------------|-----------|
| 1.55 | -23.44 | 7:20AM | 11:59:24 | 4:39PM | Local |
| | | 14:20 | 18:59:24 | 23:39 | UTC |

Directions:

1. Select a location from the City pulldown menu, OR select "Enter Lat/Long ->" from the pulldown menu, and manually enter the latitude, longitude and time zone information in the appropriate text boxes. The following sign conventions are used: