

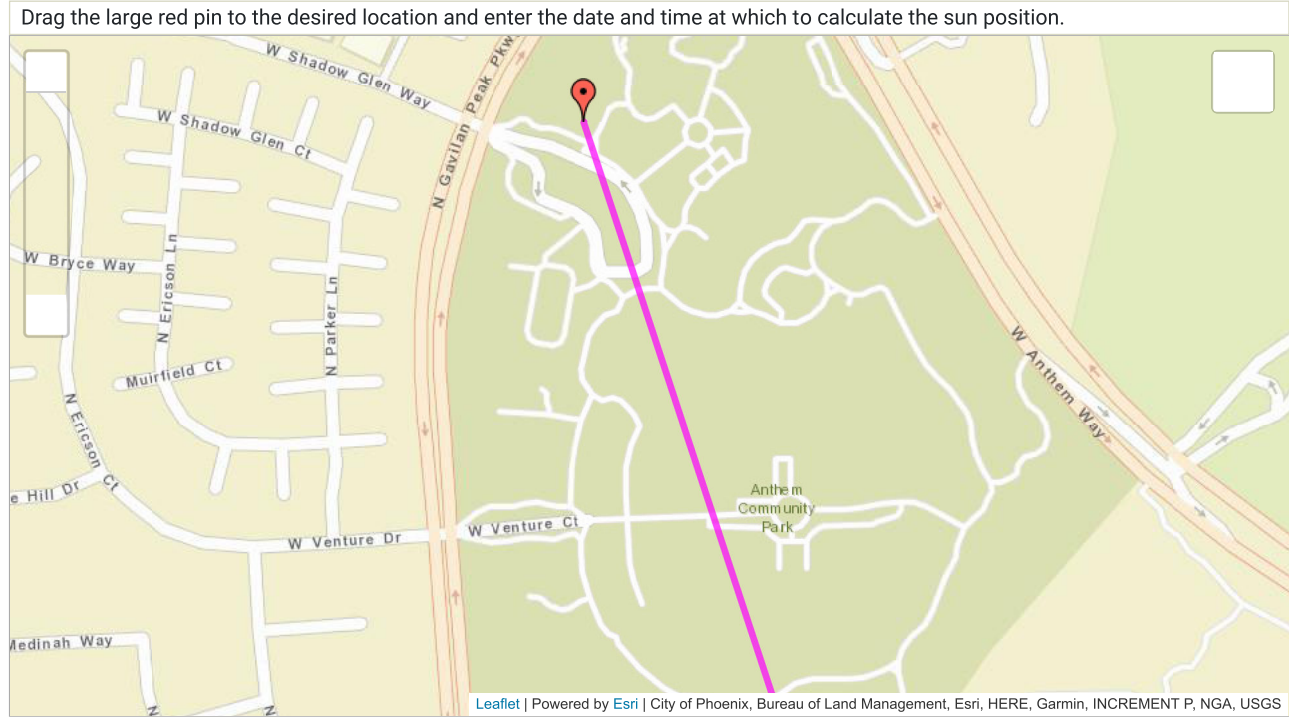
33.863321 Degrees = 33 Deg, 51 Min, 47.9556 Sec  
-112.136710 Degrees = -112 Deg, 8 Min, 12.156 Sec



# NOAA Solar Calculator

Find Sunrise, Sunset, Solar Noon and Solar Position for Any Place on Earth

Show:  World Cities  U.S. Cities  GML Observatories  GML Data Sites  SurfRad & Solrad



**Location:**

Latitude:  Longitude:  Time Zone:

UTC Offset:

**Date:**

Day:  Month:  Year:

Local Time:  :  :   PM

This is the declination and azimuth of the sun at the Anthem Veterans Memorial on November 11 at 11:11:11 AM.  
**QUESTION:**  
What other day has the same declination and azimuth?

**Result**

Equation of Time (minutes): <input type="text" value="15.99"/>	Solar Declination (in°): <input type="text" value="-17.56"/>	Solar Noon (hh:mm:ss): <input type="text" value="12:12:34"/>
Apparent Sunrise (hh:mm): <input type="text" value="06:57"/>	Apparent Sunset (hh:mm): <input type="text" value="17:28"/>	Az/EI (in°) at Local Time: <input type="text" value="161.7"/> <input type="text" value="36.56"/>

## Sunrise/Sunset Tables

Tables with times of sunrise, sunset and solar noon for each day of the year for the location and year specified in the form above can be created by clicking on the button below.

Create Sunrise/Sunset Tables for the Year

Tables will open up in a new tab/window

## [Interested in Doing Your Own Calculations?](#)

Details about the calculations and spreadsheets that can be used to calculate solar data are available on the [solar calculation details](#) page.

## Having Trouble?

- Check your Time Zone -- Is the time zone set correctly for this location? Our calculator attempts to determine the correct time zone for the given location and date, but because time zones and the start and end dates of Daylight Saving Time sometimes change, this value may not be accurate for historical or future dates.
- Click the Show Sunrise, Show Sunset and Show Azimuth checkboxes to display color-coded lines on the map indicating the direction of sunrise, sunset and solar position based on the Local Time and Date entered.
- This solar calculator is provided for research and entertainment purposes only. Due to variable atmospheric conditions and uncertainty inherent in the algorithms used, the actual observed values of sunrise, sunset and solar position may differ from the results presented here.

## Questions?

Feel free to write to us with any questions or comments at [Webmaster](#).

## Solar Calculation Resources:

- [NOAA Solar Calculator](#)
- [Solar Calculator Links](#)
- [Calculation Details](#)
- [Old Sunrise Calculator](#)
- [Solar Calculator Glossary](#)
- [Time Zone Table](#)
- [Old Solar Pos Calculator](#)



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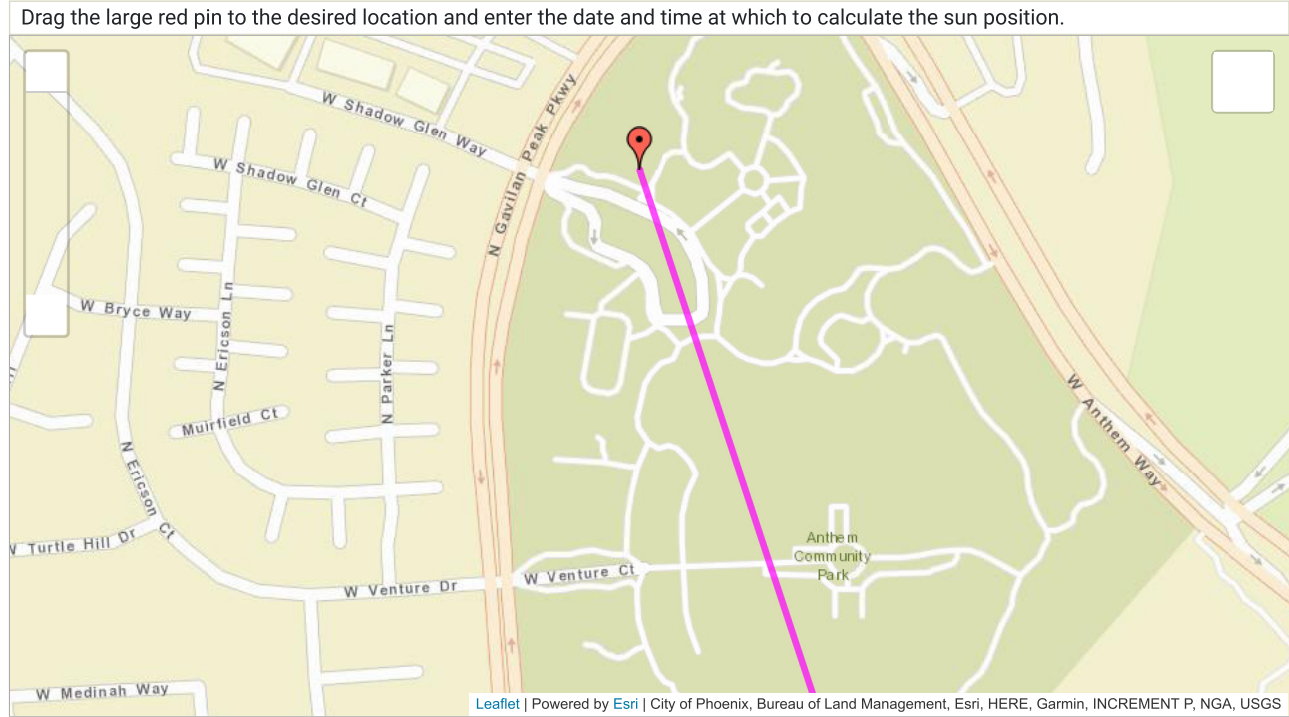
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Show:  World Cities  U.S. Cities  GML  GML Data Sites  SurfRad & Solrad  
Observatories



**Location:**

Latitude:  Longitude:  Time Zone:

UTC Offset:

**Date:**

Day:  Month:  Year:

Local Time:  :  :   PM

**ANSWER:**  
January 30 at 11:40:34 AM has the same  
declination and azimuth.  
(Close enough for government work!)  
Go there and see it.

**Result**

Equation of Time <input type="text" value="-13.33"/> (minutes):	Solar Declination <input type="text" value="-17.51"/> (in°):	Solar Noon <input type="text" value="12:41:53"/> (hh:mm:ss):
Apparent Sunrise <input type="text" value="07:27"/> (hh:mm):	Apparent Sunset <input type="text" value="17:58"/> (hh:mm):	Az/EI <input type="text" value="161.7"/> <input type="text" value="36.61"/> (in °) at Local Time:

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