

# Sun Path & Sun Penetration Calculations

## 1-Location

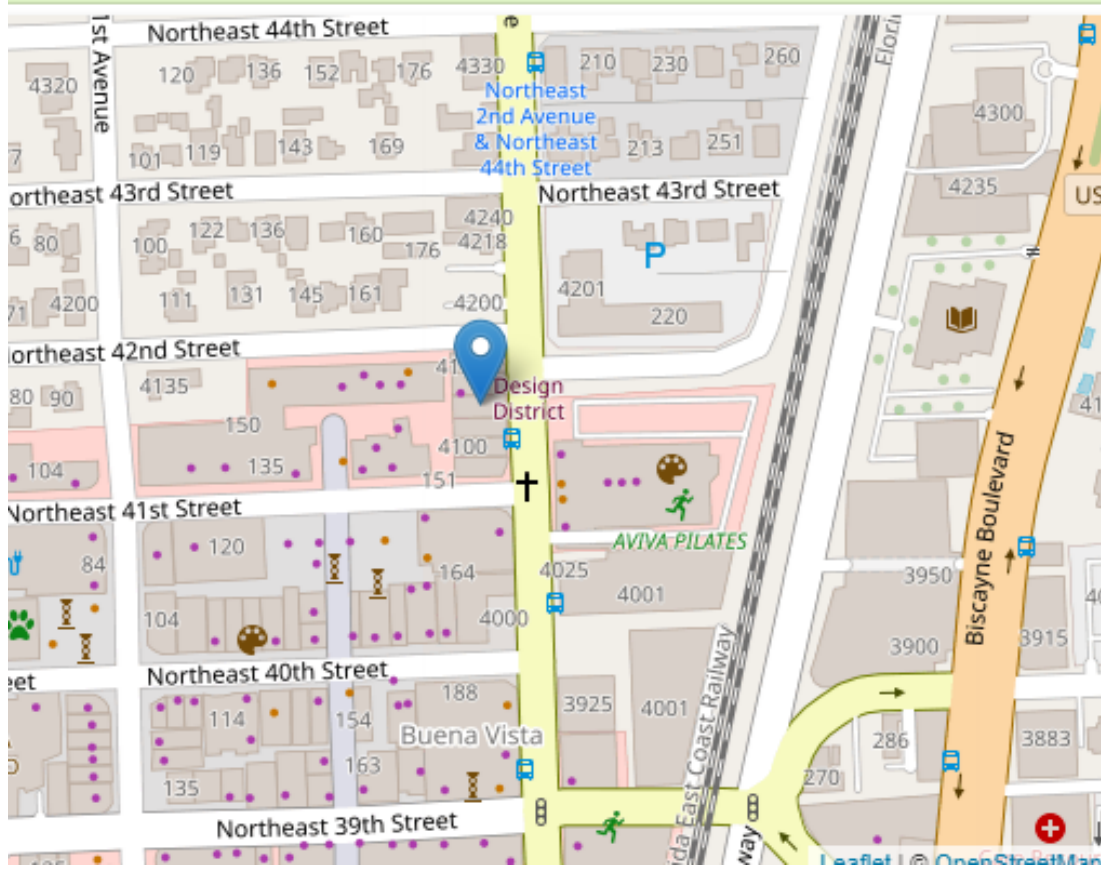
4100 NE 2nd Ave, Miami, FL 33137

## 2- Coordinates of a place

<https://www.latlong.net/>

LATITUD: 25.814620

LONGITUD: -80.191680



## 3- Time Zones Currently Being Used in United States

Offset	Time Zone Abbreviation & Name	Example City
UTC -10	HST Hawaii Standard Time	Honolulu
UTC -9	AKST Alaska Standard Time	Anchorage
UTC -8	PST Pacific Standard Time	Los Angeles
UTC -7	MST Mountain Standard Time	Salt Lake City
UTC -6	CST Central Standard Time	Chicago
UTC -5	EST Eastern Standard Time	New York

Florida/Miami/ Your Building



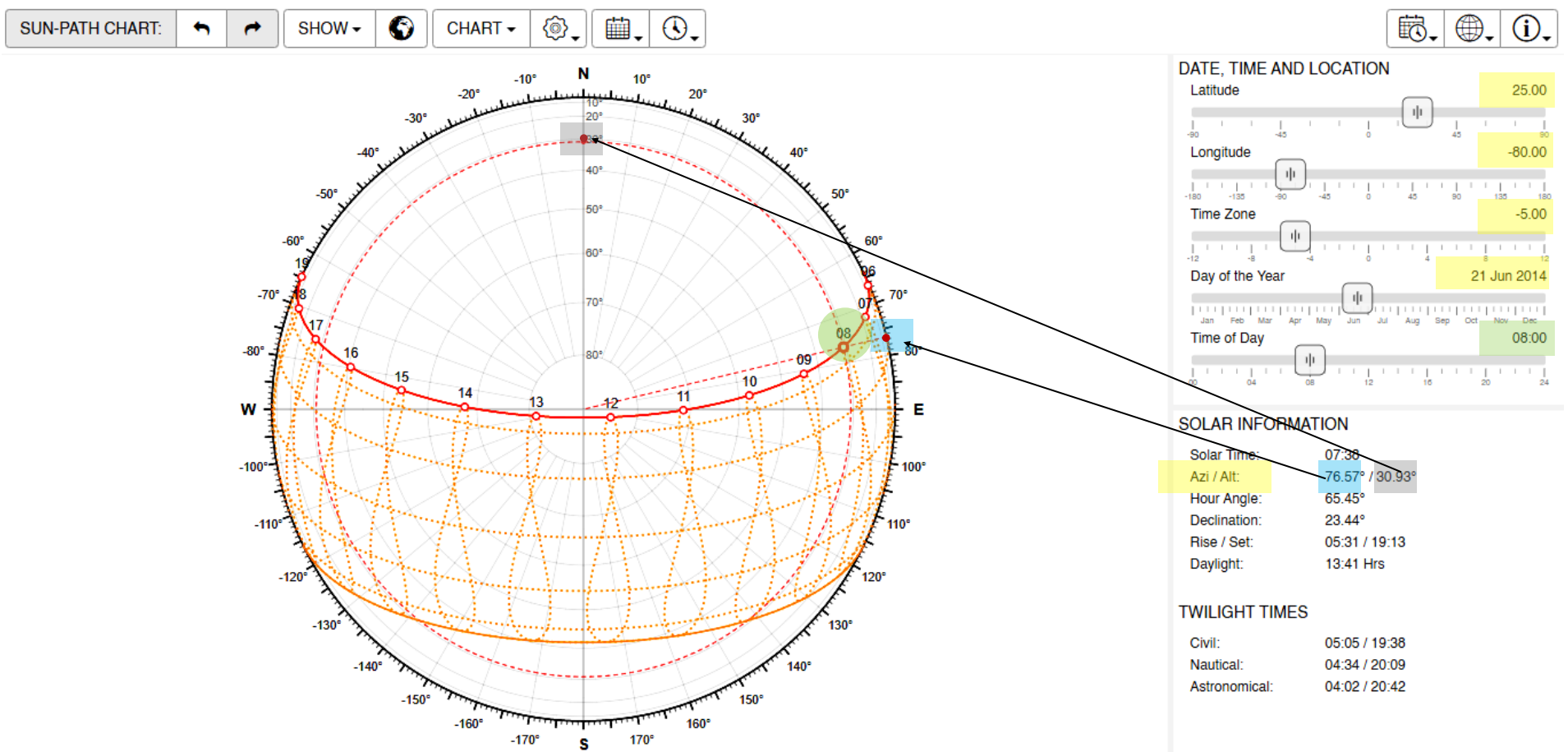
<https://www.timeanddate.com/time/zone/usa>

## 4- Seasons/Solstice/Summer & Winter

A **solstice** is an event occurring when the Sun appears to reach its most **northerly or southerly** excursion relative to the equator on the sphere. Two solstices occur annually, around **June 21 and December 21**. In many countries, the seasons of the year are determined by reference to the solstices and the equinoxes.

## 5- Sun-Path Calculator

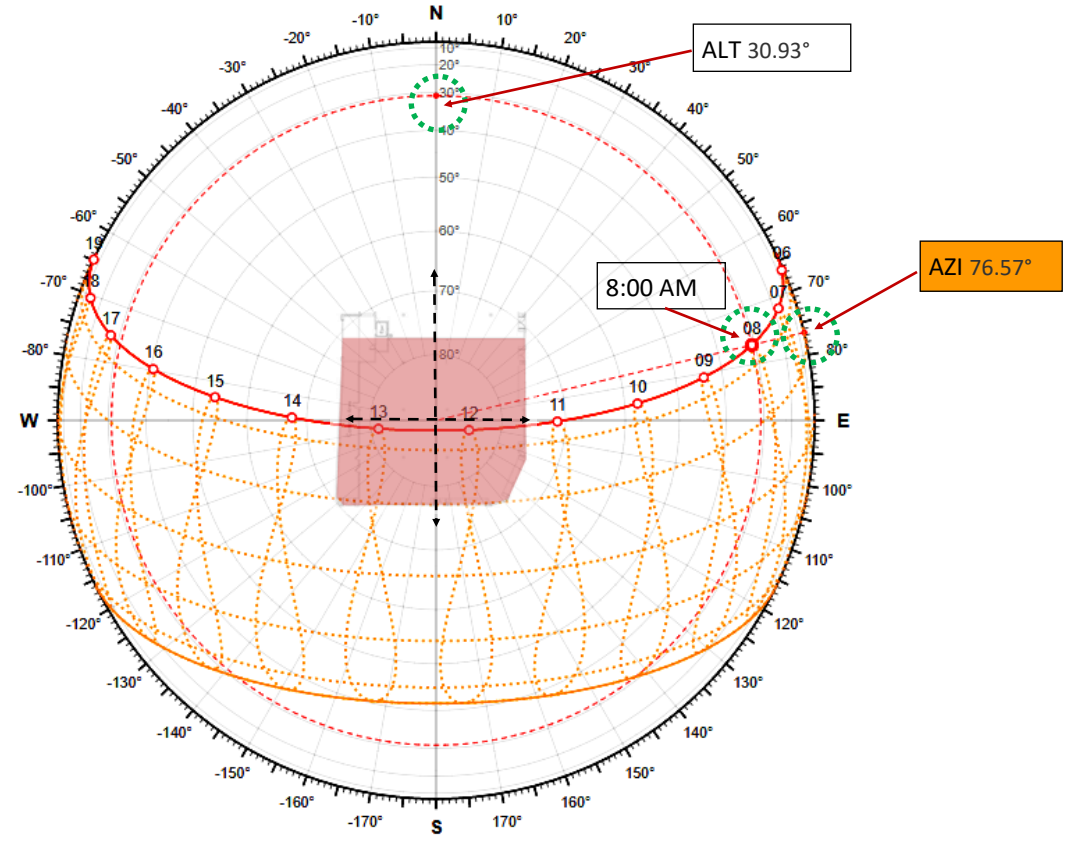
<http://andrewmarsh.com/apps/releases/sunpath2d.html>



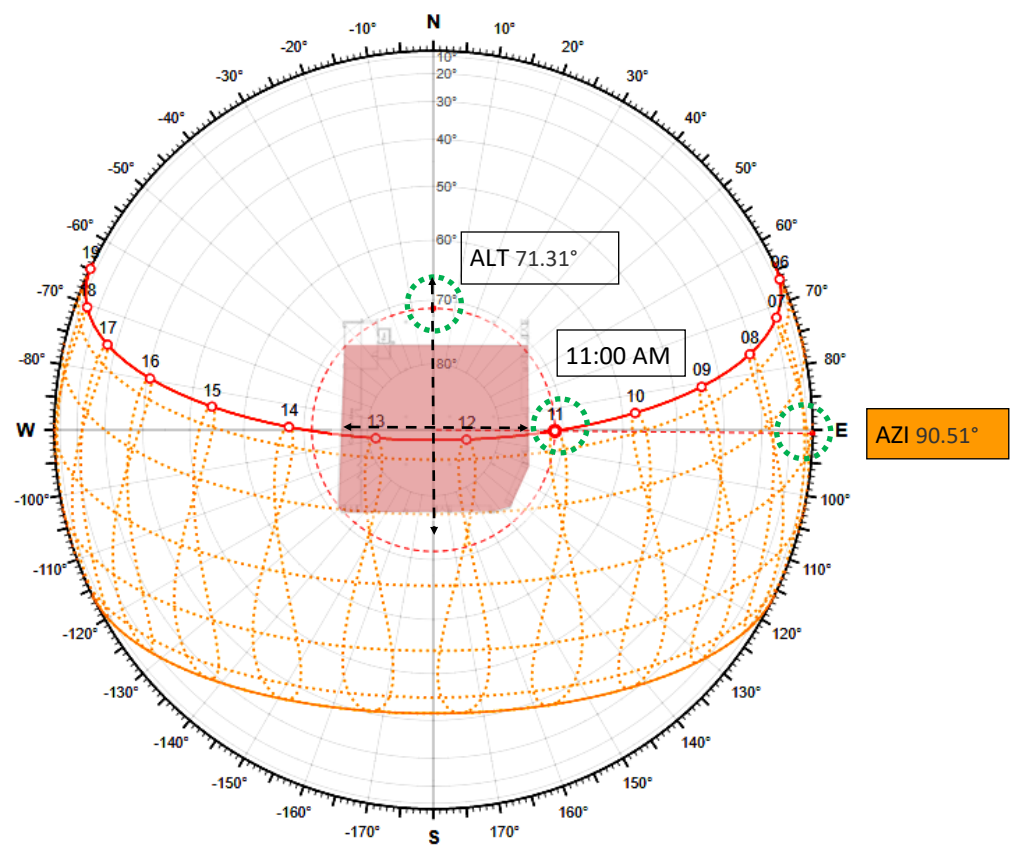
**Summer Solstice**

**Azimuth:** Shows at what times of the day will the direct sunlight enter the building.

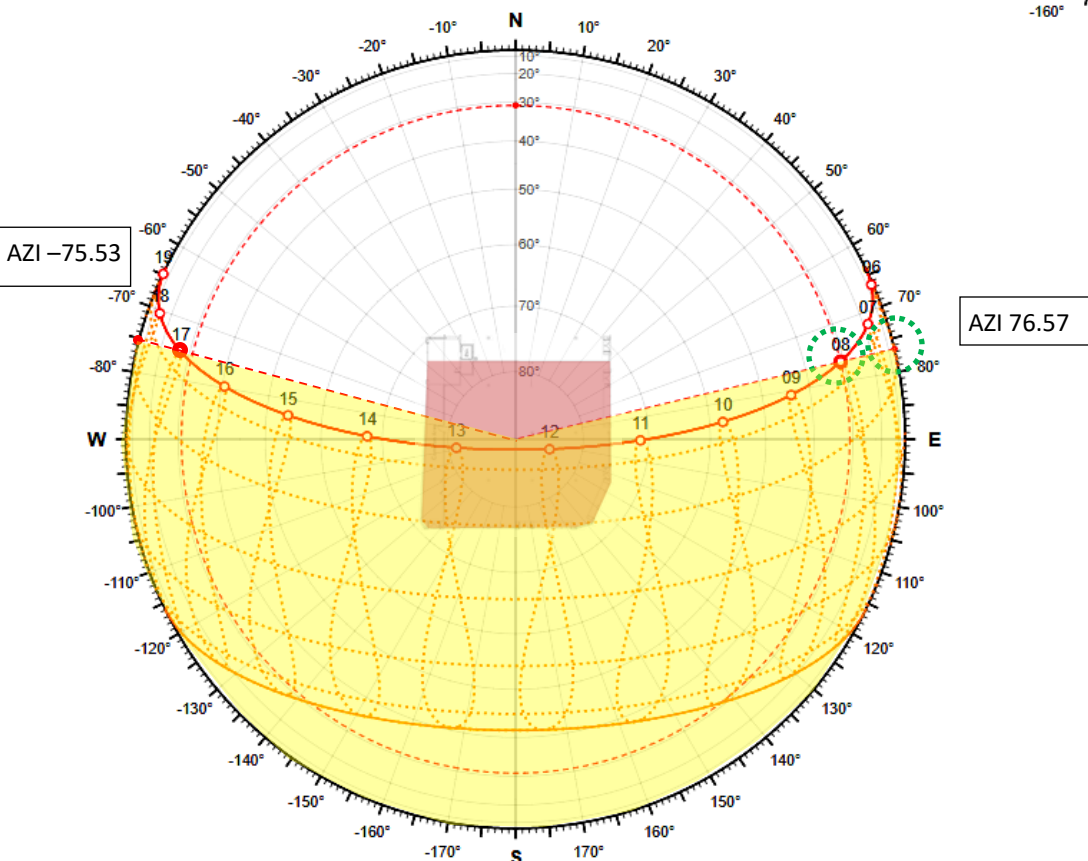
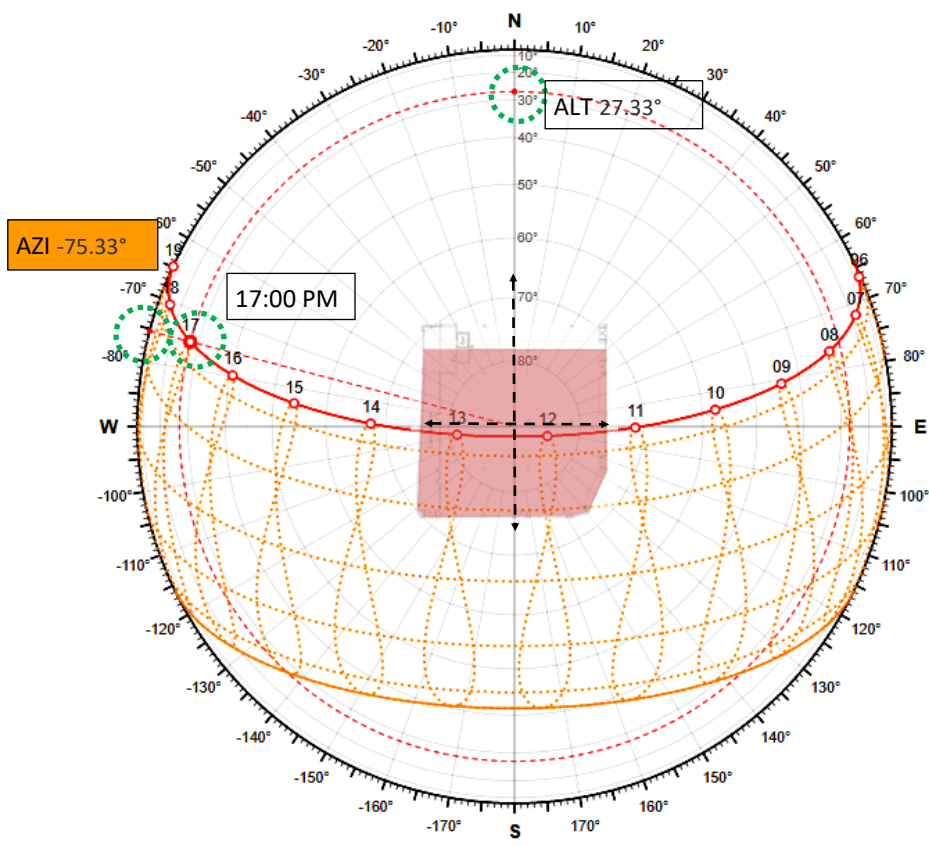
LATITUDE	25
LONGITUDE	-80
TIME ZONE	ET US - 5
DAY OF THE YEAR	21 JUN
TIME OF THE DAY	8:00 PM
<b>SOLAR INFORMATION</b>	
AZI	76.57°
ALT	30.93°



LATITUDE	25
LONGITUDE	-80
TIME ZONE	ET US - 5
DAY OF THE YEAR	21 JUN
TIME OF THE DAY	11:00 AM
<b>SOLAR INFORMATION</b>	
AZI	90.51°
ALT	71.31°



LATITUDE	25
LONGITUDE	-80
TIME ZONE	ET US - 5
DAY OF THE YEAR	21 JUN
TIME OF THE DAY	17:00 PM
<b>SOLAR INFORMATION</b>	
AZI	-75.33°
ALT	27.33°



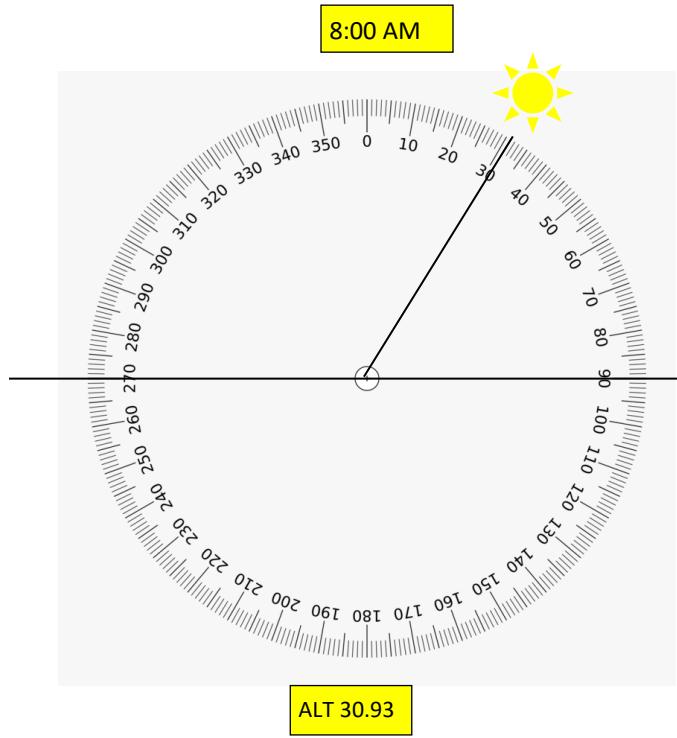
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LONGITUDE	-80
TIME ZONE	ET US - 5
DAY OF THE YEAR	21 JUN
TIME OF THE DAY	8:00 AM to 17:00 PM
<b>SOLAR INFORMATION</b>	
AZI	76.57/-75.33

**4100 NE 2nd Ave, Miami, FL 33137**

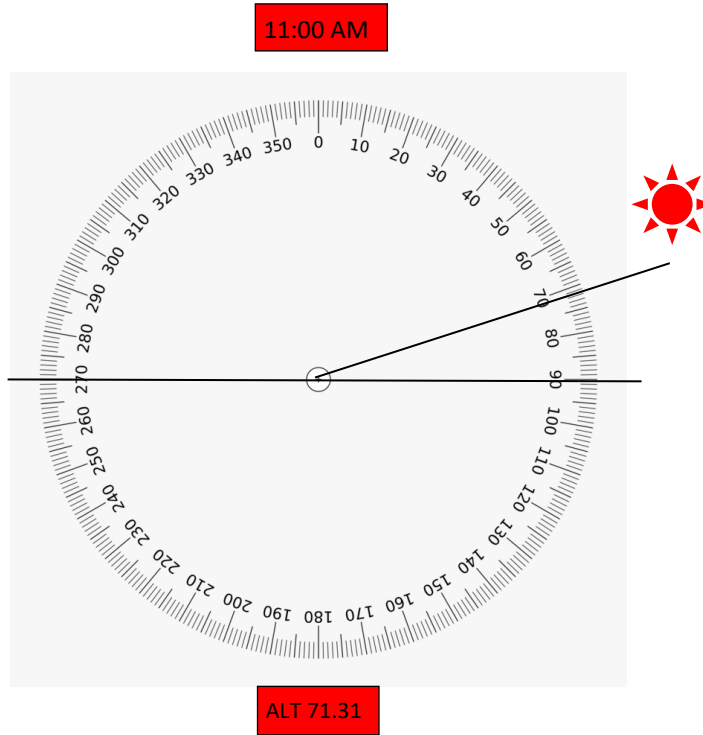
**Summer Solstice**

**Altitude** : provides you the angle the sun will be above the horizon line.

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