

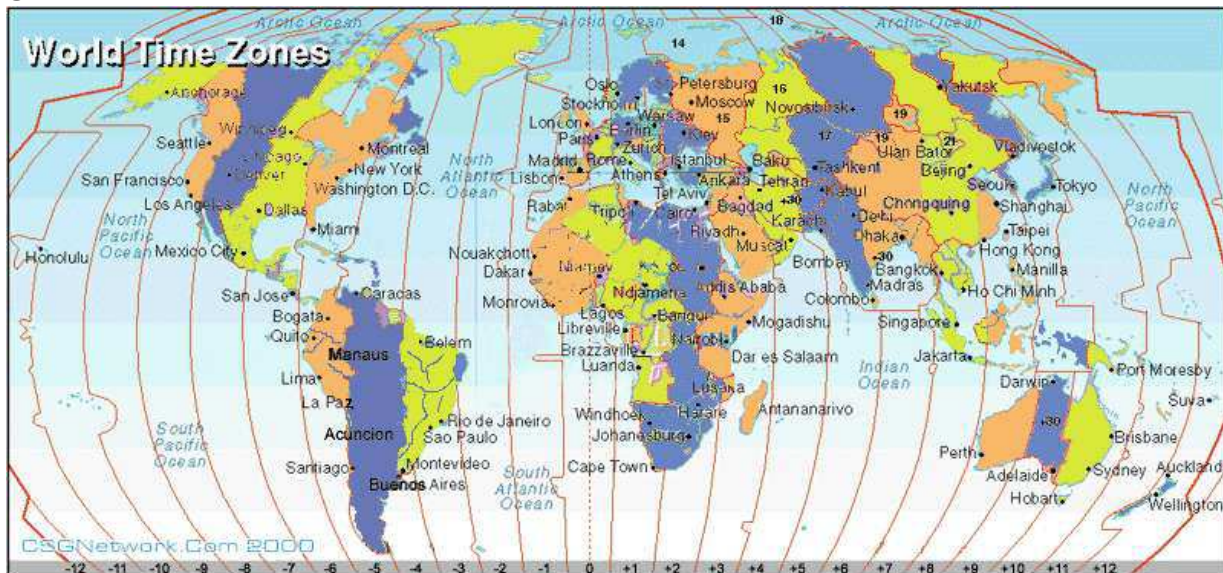
Military Time: Complete the chart

0000 (2400)	12 AM	1200	
0100	1 AM	1300	
0200		1400	2 PM
0300			
0400	4 AM		4 PM
0500	5 AM	1700	5 PM
0600			6 PM
	7 AM	1900	
0800			8 PM
0900	9 AM		9 PM
1000	10 AM	2200	
	11 AM	2300	11 PM

Carson City is in what time zone?

Draw a sphere and construct the following: equator, prime meridian, N Pole, S Pole, 45° Lat N, 39° Lat N, 119° Long W.

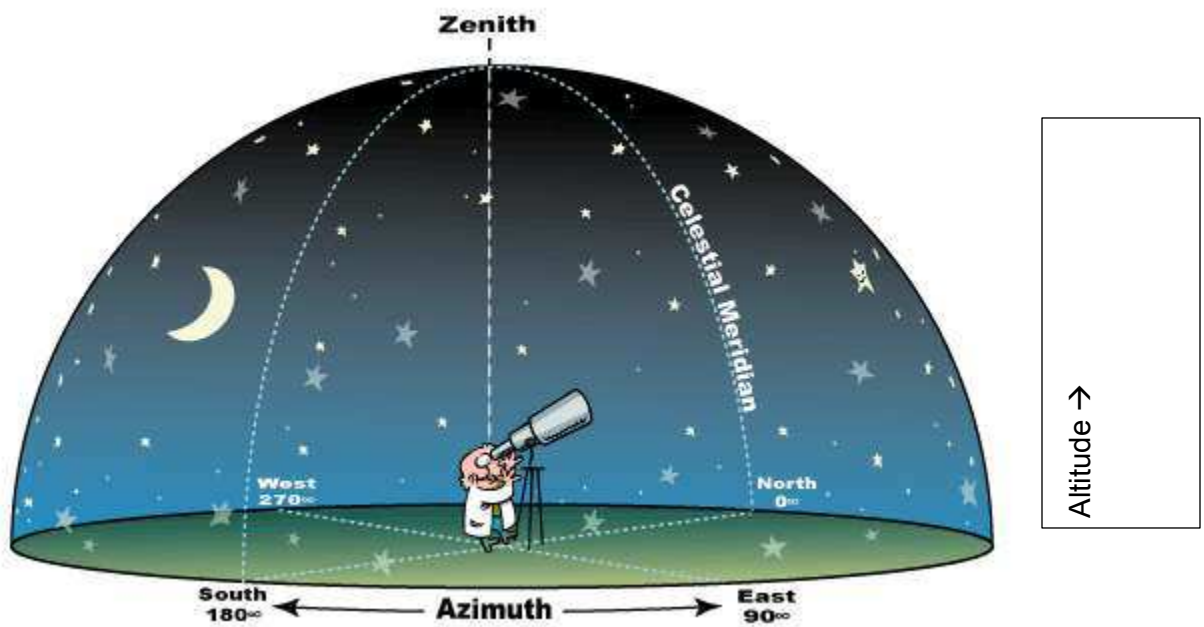
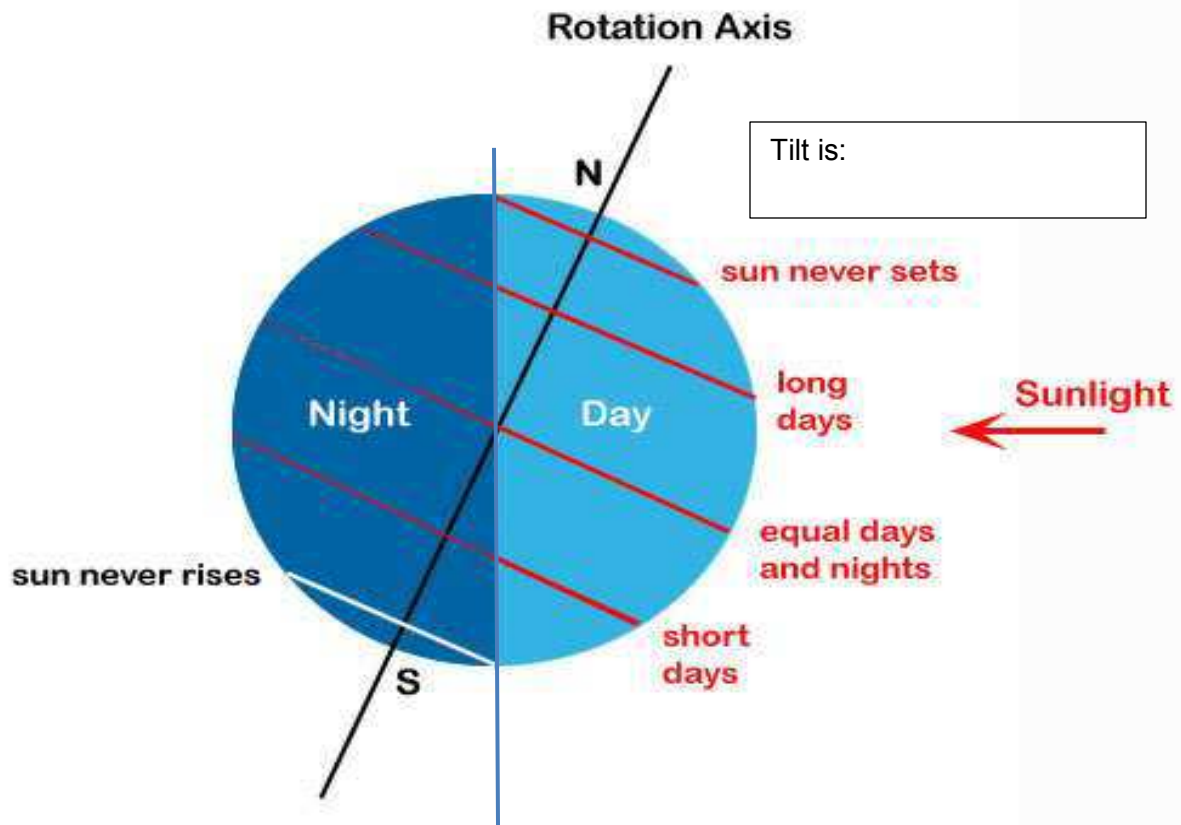
UTC...

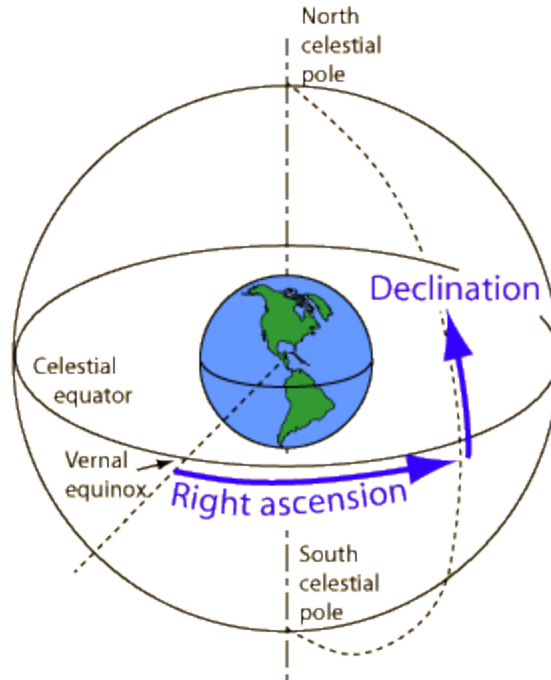


Daylight Saving Time (United States) began **Sunday, March 11, 2012, 2:00am**, and ends **Sunday, November 4, 2012, 2:00am**.

Except Arizona and Hawaii. Move your clocks ahead 1 hour in spring and back 1 hour in fall ("Spring forward, fall back").

Normally Carson City you have to add 8-hours to get UTC. Because of daylight savings, we add 1-hour. Think about it????





Solar Day: one rotation of Earth: the time taken for the Earth to make a complete revolution on its axis, measured with respect to the Sun

24 hours = _____ min = _____ sec

Sidereal Day = The length of time which passes between a given "fixed" star in the sky crossing a given projected meridian (line of longitude).

- The sidereal day is 23 h 56 m 4.1 s, slightly shorter than the solar day because the Earth's orbital motion about the Sun means the Earth has to rotate slightly more than one turn with respect to the "fixed" stars in order to reach the same Earth-Sun orientation.

How much shorter?

Local Mean Sidereal Time and the Meridian:

Celestial coordinates: (RA & Dec)

Celestial Latitude: Declination

- Now imagine the lines of latitude and longitude projected onto the sky. The celestial equator lies directly above the Earth's equator, and the north and south celestial poles are above the Earth's poles.
- Imaginary lines of latitude and longitude are there as well. But in the sky, latitude is called *declination*. By convention, the celestial equator has a declination of 0 degrees. North and south of the celestial equator, declination is marked with a "plus" and "minus" sign. The star Vega, for example, has a **declination of +39°**. The southern star Achernar has a declination of about -57°.
- Each degree is split into 60 smaller units called "minutes of arc", marked by a ', and each minute is split into 60 "seconds of arc", marked by a ". So the more precise declination of Achernar is -57° 14' 12". And Vega is at +38° 47' 01".

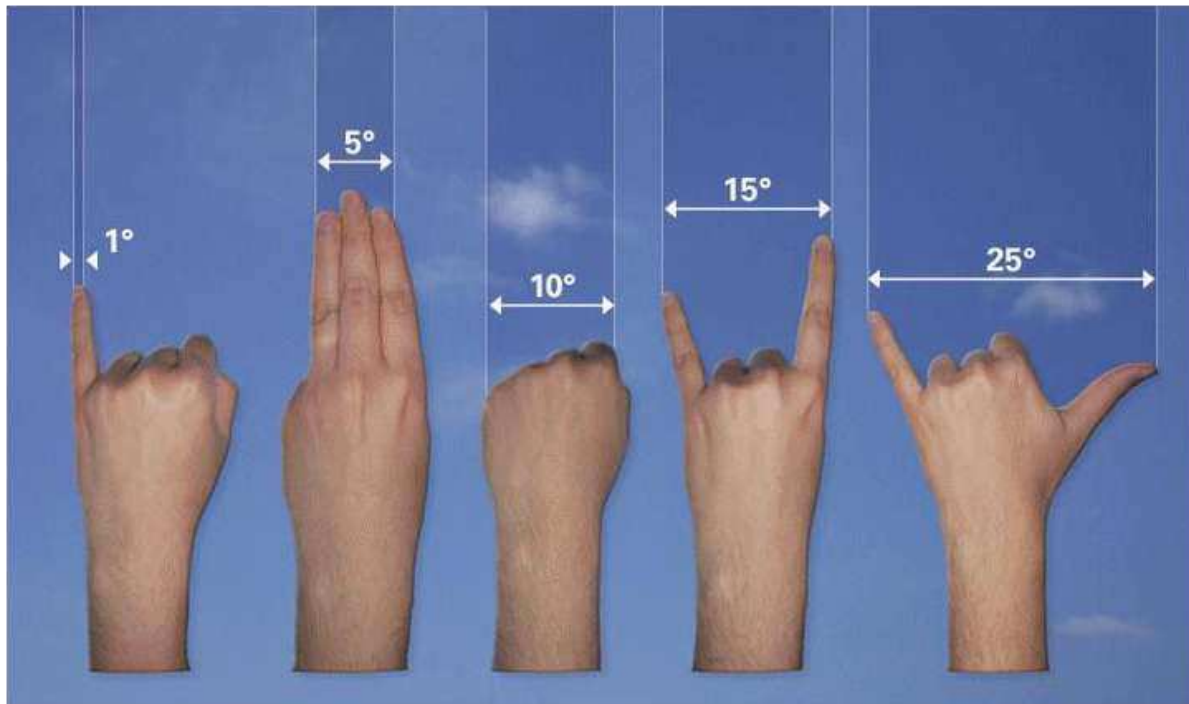
Scale Example:**Celestial Longitude: Right Ascension**

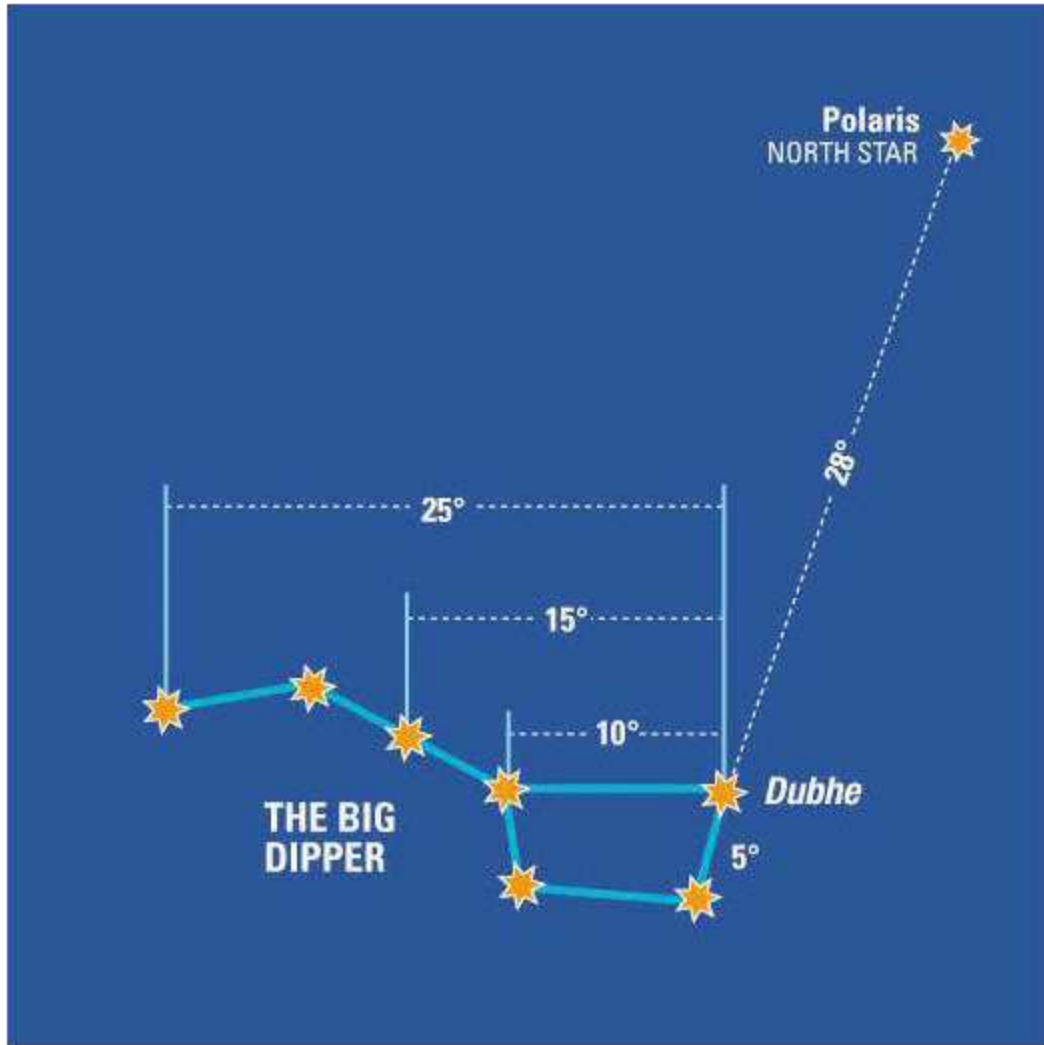
- The celestial equivalent to longitude is called *right ascension*. It's measured not in degrees but in "hours", from 0h to 24h. Astronomers cooked up this arrangement long ago because the celestial sphere appears to turn once every 24 hours. With 24 hours in the full 360 degrees of sky, each hour corresponds to 15 degrees of angular distance. Like degrees, each hour is split into 60 minutes, and each minute into 60 seconds.
- The right ascension of Achernar, for example, is 01h 37m 43s; Vega is at right ascension 18h 36m 56s.

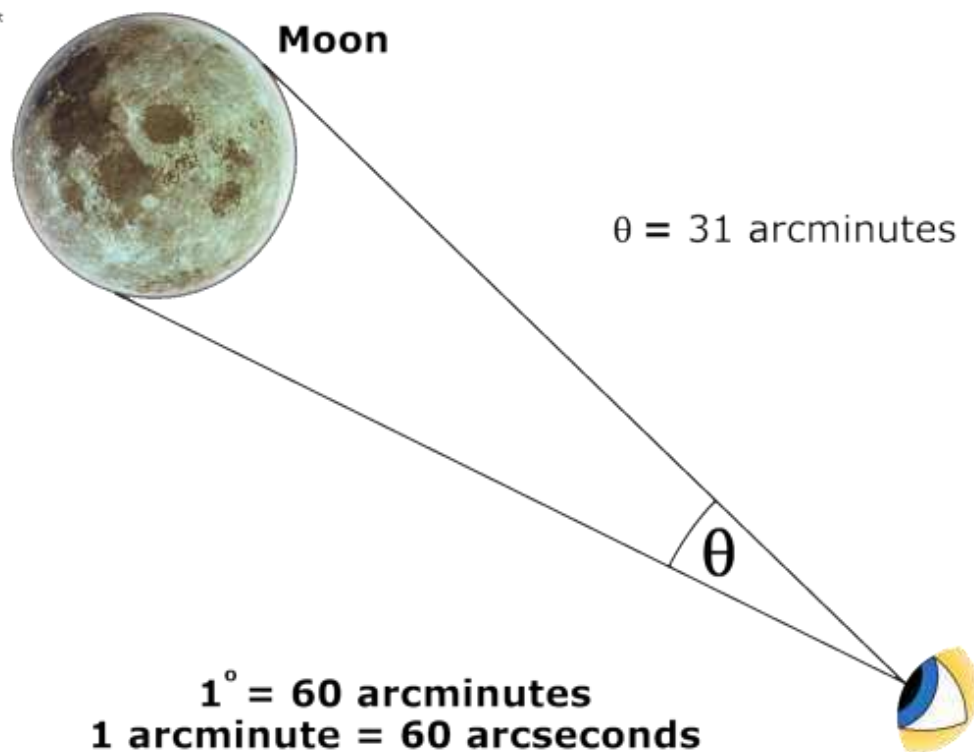
Scale Ex:

24 hours in 1-day:, 1 hours is about 15 degrees

Angle measure:







See Section 1.10 or page 14