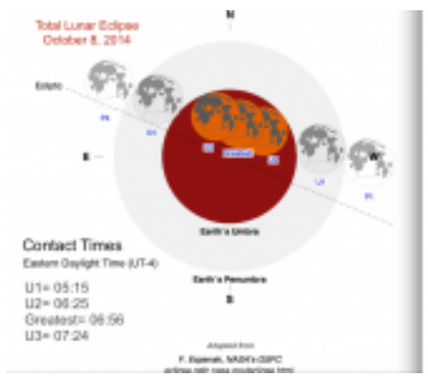
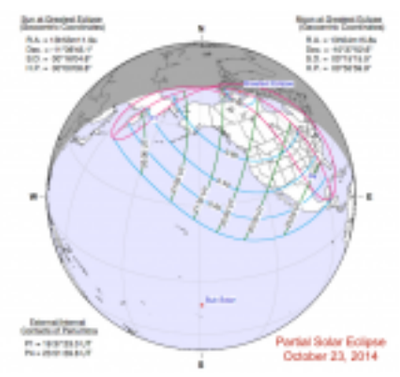
Blog

Eclipses in October 2014

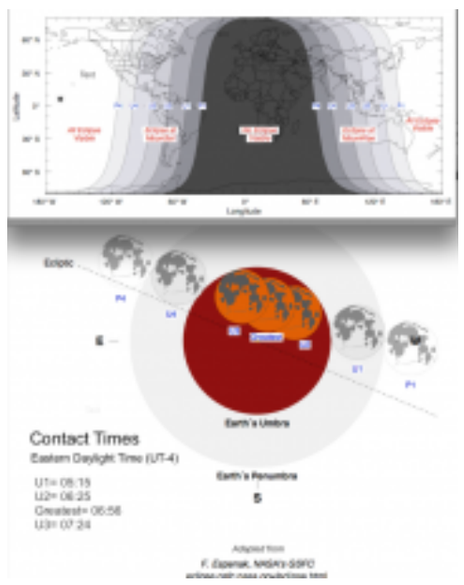
Posted by admin on September 17, 2014





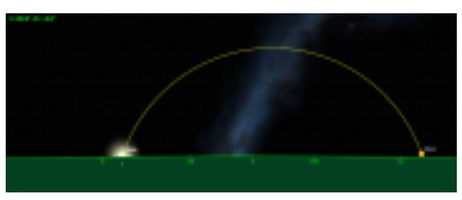
A pair of eclipses are visible from South Bend, IN, in October 2014. First, early morning risers will see a total eclipse of the moon on Wednesday, October 8, when earth's shadow is cast on the full moon. Two weeks later, when the moon has revolved to the other side of the earth, the new moon will block out a chunk of the sun. The partial solar eclipse gets underway the evening of Thursday, October 23, when the sun approaches the horizon and continues through sunset. Find a good western horizon and settle in for a natural treat.

October 8, Total Lunar Eclipse



Circumstances are not ideal for the lunar eclipse, as seen from Michiana (near Michigan-Indiana border). Having a low western horizon or viewing from a tall structure with no obstructions is preferred. No protective eyewear is required during a lunar eclipse, for you are not looking toward the sun.

The first contact in the umbral stage, shown as U1, is at 5:15 a.m. EDT when the sun is 17 degrees above the horizon. This is when the left edge of the moon begins to darken, until the whole moon is enveloped in an orange hue. The beginning of the total lunar eclipse, shown as U2, occurs at 6:25 a.m. EDT, when the sky is already starting to brighten after astronomical twilight. Greatest eclipse is at 6:56 a.m., with totality ending (U3) at 7:24 a.m.



Twilight times are shown in the right column. Sunrise is at 7:49 a.m., which means the moon and sun are briefly above the horizon at the same time, since the moon sets with the eclipse underway at 7:57 a.m. EDT. This phenomenon is called a selenelion, described in Joe Rao article. Thanks to Samuel Wakim for pointing this out. As Rao notes, the eclipse will be difficult to discern when sunrise approaches, though made easier to see when viewed through a telescope. And if you have a scope, check out visible Jupiter to the southeast, and Uranus near the moon itself.

(Note: The penumbral portion of the eclipse depicted in the diagram is barely discernible except to the trained eye.)

The 2014 lunar eclipse continues an uncommon sequence of four total lunar eclipses in a row, called a tetrad, which began with the April 15 Tax Day Eclipse. The October 2014 lunar event is dubbed The Pumpkin Eclipse by John French, while others refer to that full moon as the Blood Moon.

See also the NASA article and video: Colorful Lunar Eclipse

Note: The Astronomy Club at Andrews University announced it is have a viewing opportunity at Weko Beach on the shore of Lake Michigan. Details at http://nightsky.jpl.nasa.gov/event-view.cfm?Event_ID=60238.

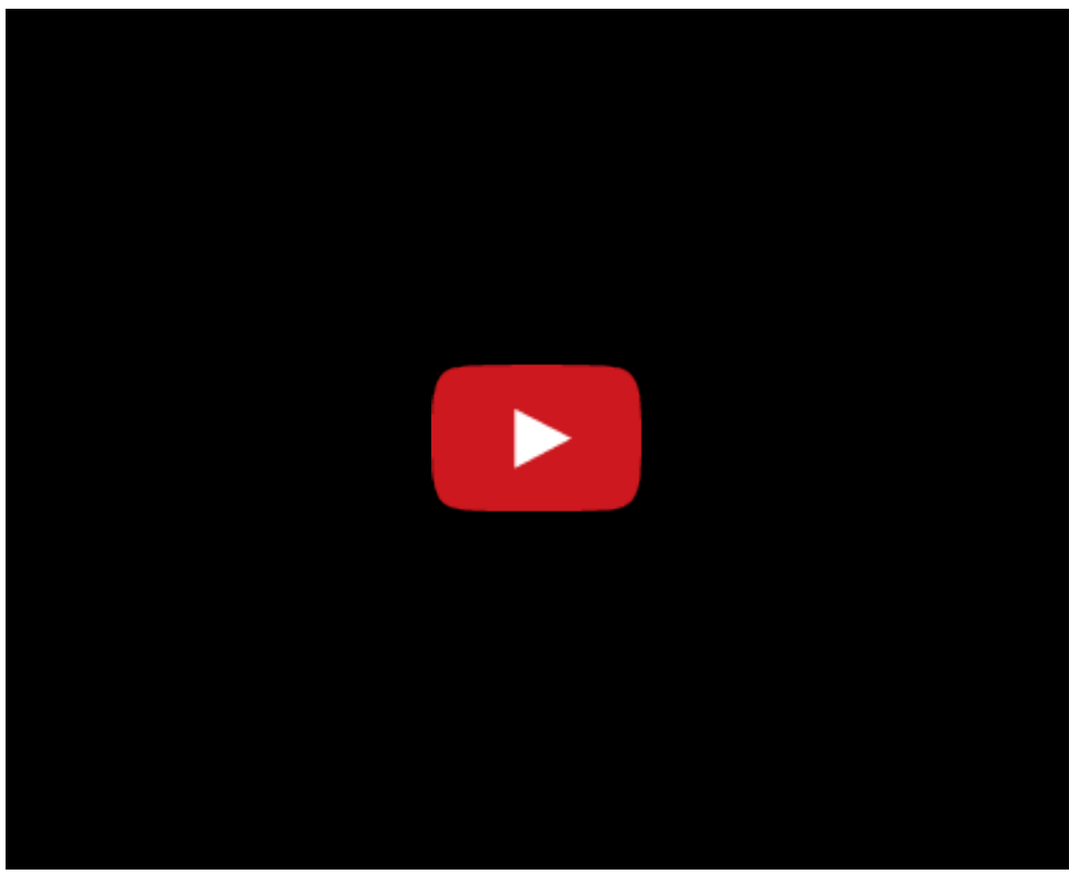
October 23, Partial Solar Eclipse

The partial solar eclipse of October 23, 2014, also requires a favorable western horizon, only this time at sunset. Just before 5:38 p.m. EDT, as seen from South Bend, IN, when the sun is 12 degrees above the horizon, the moon begins to encroach into the sun. The new moon seems to continue its creep until it obscures the maximum amount of the sun for this eclipse just before 6:44 p.m. EDT. The sun then sets at 6:50 p.m. EDT.

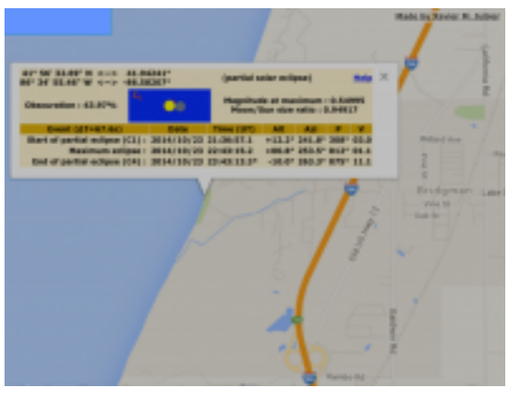
A good view would be at sunset from the shore of Lake Michigan looking westward (254 degrees on a compass at maximum eclipse). The sun would appear to be setting with a chunk bitten out of it, as depicted in the video below. Times will vary slightly by location, which you can look up at Fred

Espenak's Solar Eclipse Explorer.

With a solar eclipse you are still looking at the sun, so approved protective eyewear is necessary to avoid the damaging ultraviolet radiation. Staring at the sun can harm your eyes or even cause blindness. You can build a Sun Funnel to allow a group to observe a magnified view of the sun safely.



To observe the partial solar eclipse from Weko Beach on Lake Michigan, see http://nightsky.jpl.nasa.gov/event-view.cfm?Event_ID=60239 or the FB event at https://www.facebook.com/events/286550648204602/?notif_t=plan_user_invited.



« Previous

Next »

- 2014
  - October
  - September
    - **Eclipses in October 2014**
    - Michiana Astronomical Society Deemed a 501(c)(3) Public Charity
    - It's Night, Gosh Dim It!
  - August
  - July
  - May
  - April
  - March
  - February
  - January
- 2013
- 2012

Tags

South Bend, IN
(Eastern Daylight Time)

October 8, 2014

Twi A: 6:17am
Twi N: 6:49am
Twi: 7:21am
Sunrise: 7:49am
Sunset: 7:17pm
Twi: 7:44pm
Twi N: 8:17pm

Twi A: 8:49pm
Moonrise: 7:30pm
Moonset: 7:56am
Full Moon: 6:52am

October 23, 2014

Twi A: 6:33am
Twi N: 7:05am
Twi: 7:38am
Sunrise: 8:06am
Sunset: 6:53pm
Twi: 7:21pm
Twi N: 7:54pm
Twi A: 8:26pm
Moonrise: 7:46am
Moonset: 6:54pm
New Moon: 5:58pm

Times from http://www.sunrisesunset.com/usa/Indiana.asp.