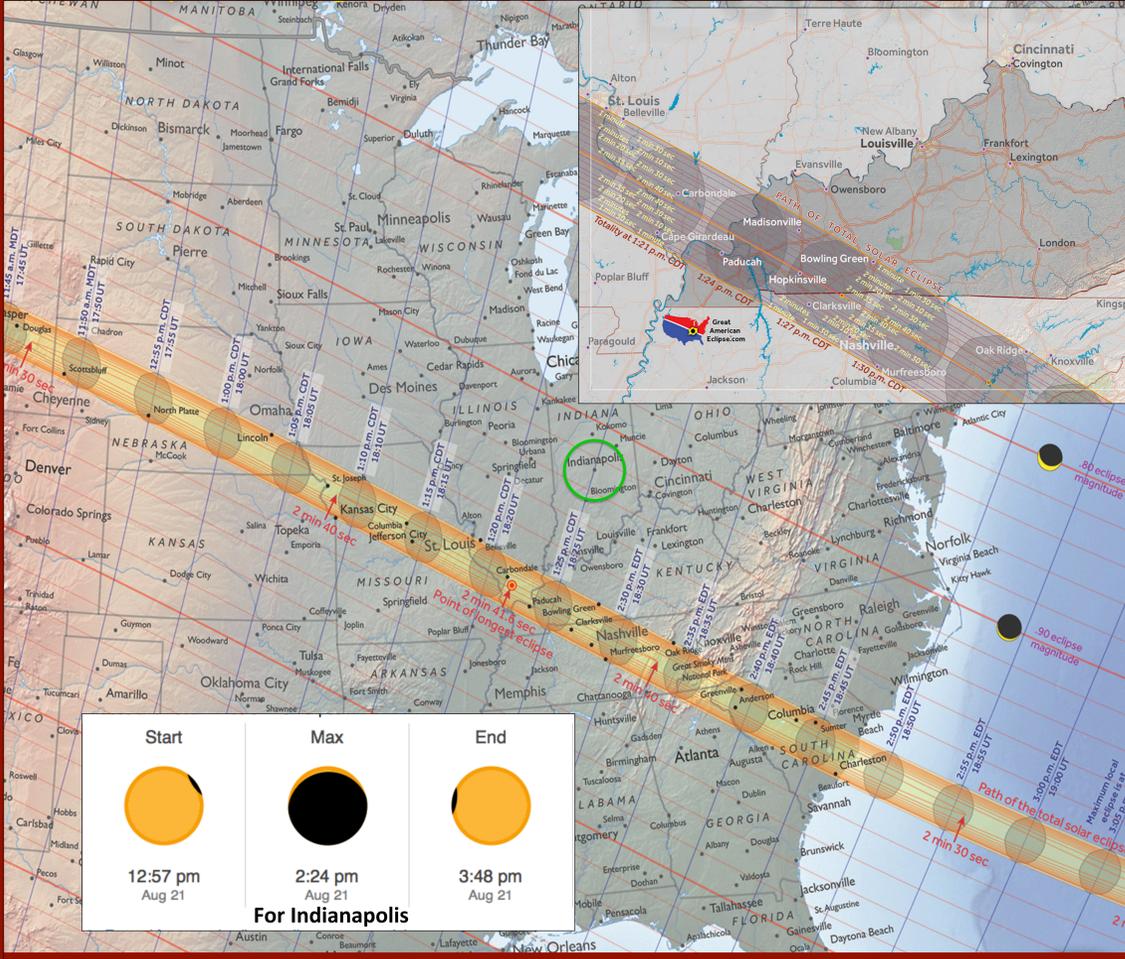
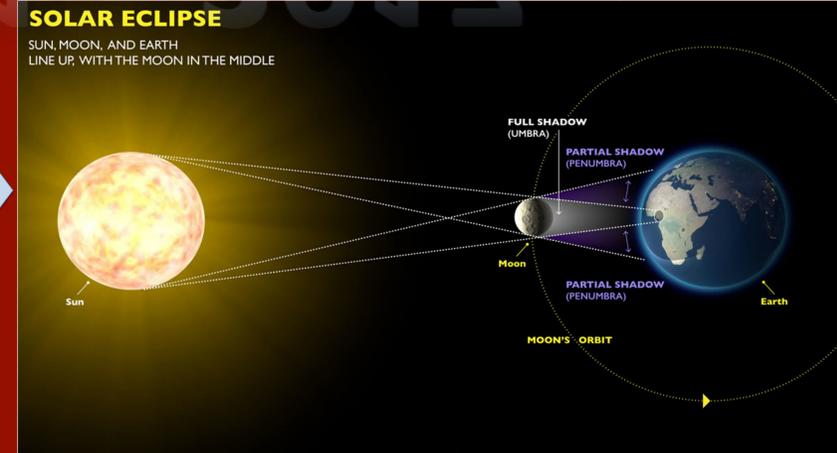




THE ECLIPSE OF AUGUST 21ST, 2017



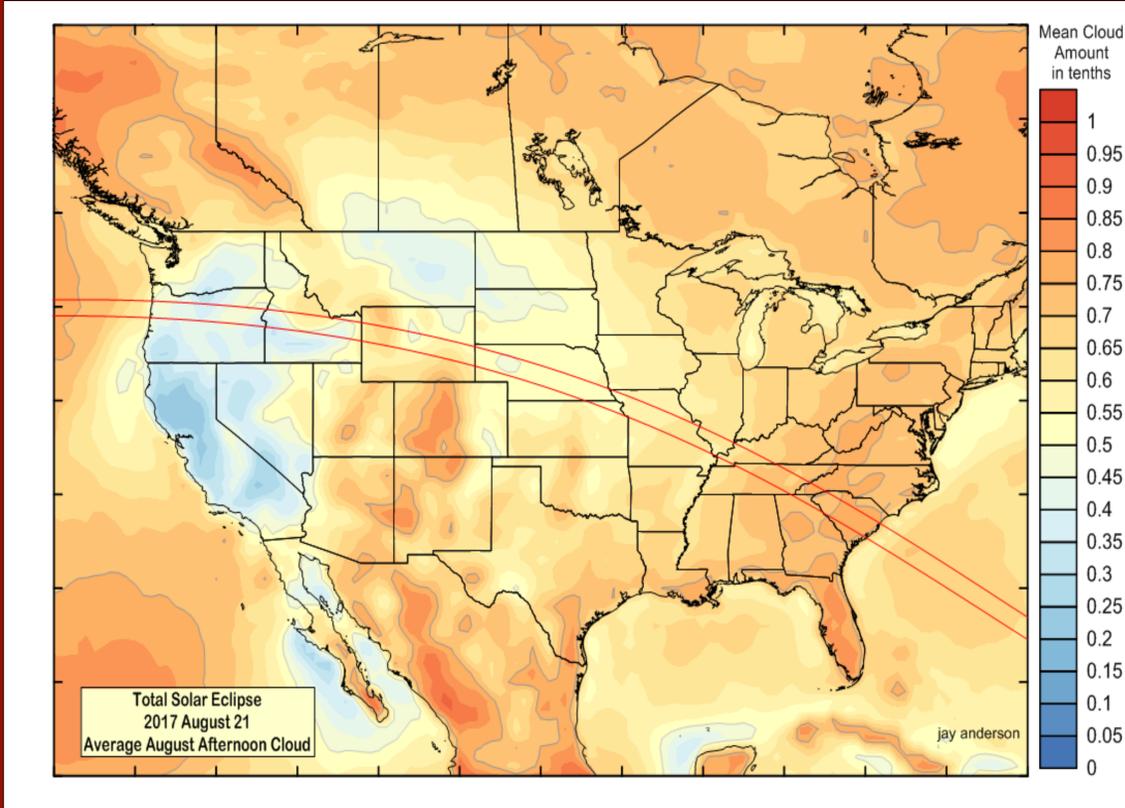
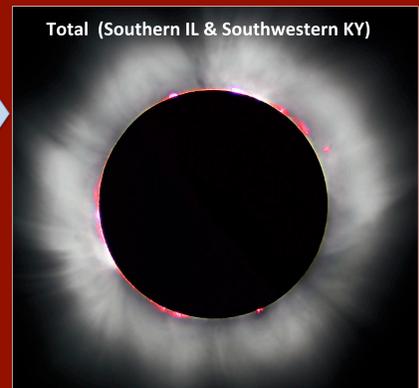
SOLAR ECLIPSES occur when the Moon passes directly between the Sun and Earth. This alignment can cause the shadow of the Moon to reach the Earth's surface. Depending which part of the shadow of the Moon you are in you will see either a partial or total eclipse. Typically the path of totality is quite narrow and the vast majority of people will see only a much less spectacular partial solar eclipse. Total eclipses are not rare. They typically occur once per year. But the path of totality is quite narrow so your chances of seeing a total solar eclipse at any given location is roughly once every 375 years! So travel is important.



LOCATION: The continental United States will have its first Total Solar Eclipse in 38 years. The path of the eclipse will cut through the USA from Northwest to Southeast. Most of the USA, including **ALL of Indiana will only** experience a partial solar eclipse. But just to the south and west of Indiana the Moon will completely cover the Sun causing day to turn to twilight for 2 and a half minutes. The path of totality is less than 100 miles wide. Outside of this path the Sun will remain shining though at a reduced amount. The best viewing for the total solar eclipse will be southern Illinois and Western Kentucky. A detailed path of totality is shown in the diagram to the left. For the Indianapolis area the time of maximum partial eclipse will be at 2:24 PM EDT when 91% of the Sun's surface will be covered by the Moon.

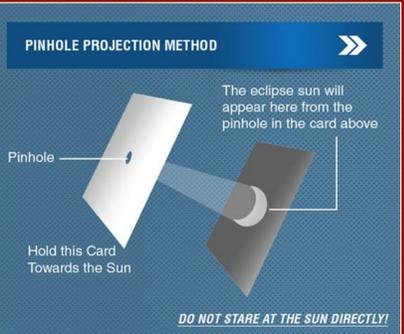


PARTIAL vs. TOTAL: Though solar eclipses are quite common, typically twice a year, your likelihood of seeing any sort of eclipse, partial or total, is roughly once every few years due to the area of the Earth covered by the Moon's shadow. Total solar eclipses are the most spectacular astronomical events you can experience. During a total solar eclipse the Sun is completely blocked by the Moon and you are able to safely look directly at the solar corona and pink colored chromosphere. Totality last several minutes and is similar to twilight with bright stars and planets easily seen. During partial phases the Sun is still shining and typically your eyes adjust to the change in sunlight, so not much is noticed. The image to the right shows the difference between being in the path of totality and just out of it. Remember Indianapolis will only experience a partial eclipse.



CLOUD COVER will be a determining factor as to whether or not the eclipse can be seen. The map to the left shows the likelihood of afternoon cloud cover in August. If you plan on traveling to the path of totality make sure you are very mobile so you can travel quickly to relocate yourself at a another site if there are clouds in your target site. Thin cloud cover is not a problem and in fact can allow you to see the shadow of the Moon racing from west to east at 2000 mph!

SAFETY: You should never look directly at the Sun without solar viewing glasses or filters sold by astronomical specialists. The only time the Sun can be viewed directly is during totality which will not occur in Indiana. Holcomb Observatory is selling eclipse glasses in the Spring and Summer of 2017 prior to the eclipse. These glasses will allow you to view the eclipse. If in doubt about observing the partial phases of the solar eclipse use indirect projection methods such as the pinhole method shown to the right.



PLEASE NOTE: HOLCOMB OBSERVATORY WILL BE CLOSED THE DAY OF THE ECLIPSE SO OUR FACULTY, STAFF, & STUDENTS CAN TRAVEL TO THE PATH OF TOTALITY. KEEP IN MIND TO SEE THE ECLIPSE ALL YOU'LL NEED ARE ECLIPSE GLASSES AND NOT A TELESCOPE.