The Otter Creek Astronomical Observatory

The Observer

December 2008 (#16)

Upcoming Evening Programs:

December 6th (6:30 pm)

Join the observatory staff for a tour of what is visible in the night sky, including the moon, stars, and planets. *All times are Eastern time zone. All evening programs are "weather permitting" -- if the sky is not clear enough for celestial objects to be visible the observatory will not be open.*

Upcoming Daytime (solar) Programs:

December 20th

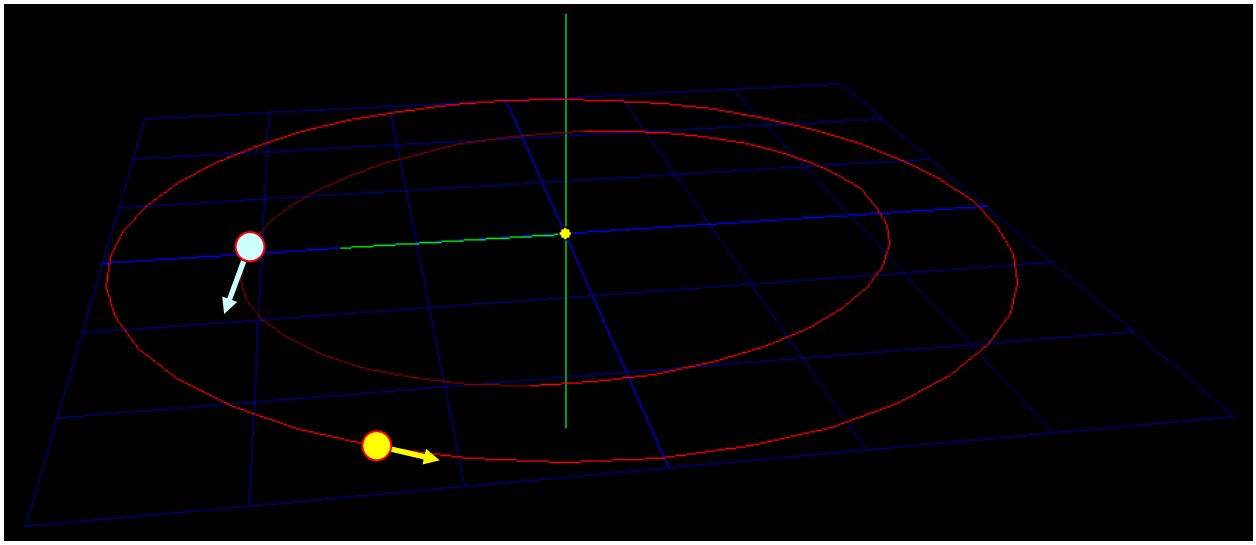
Daytime programs are "open house" at the observatory. Come safely observe the Sun, with its prominences and sunspots. Walk the model solar system trail and get a sense of the size of things in space. Check out our telescopes and learn about the observatory -- after all, you can't really see what's in the observatory when it is dark. *Daytime programs begin at 11 AM. All times are Eastern time zone. Daytime programs are held "rain or shine" -- the observatory is open regardless of weather.*

Visit the Otter Creek Observatory web page at

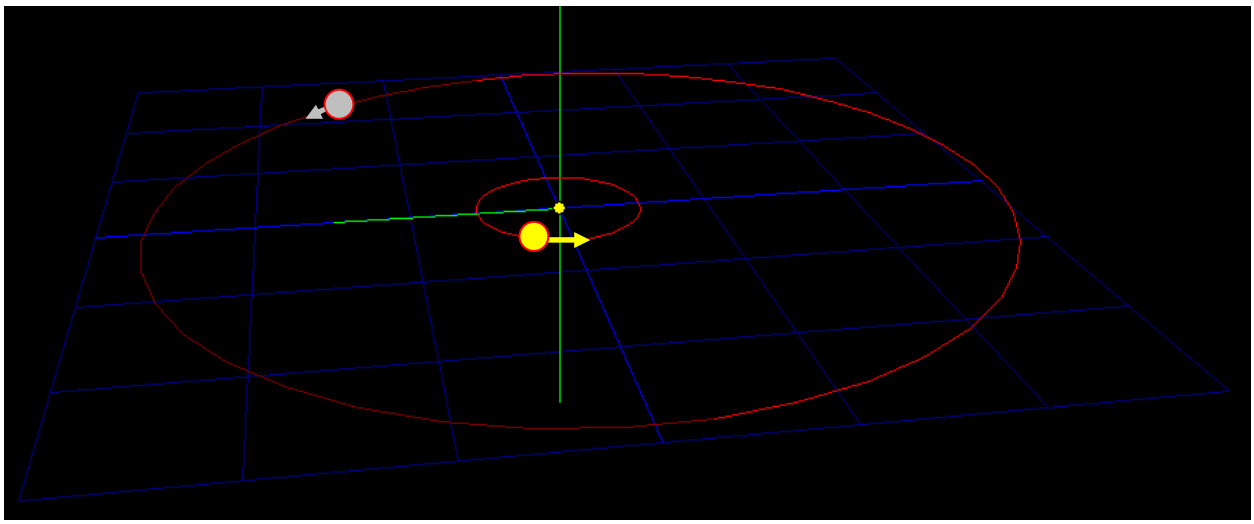
www.ottercreekpark.org

Dance of the Planets

This short newsletter is to let you know about the sky spectacle going on at sunset right now. Shortly after sunset in the western sky you can see two bright star-like objects. These are Venus and Jupiter. Currently Venus is moving away from the Sun as seen by us on Earth. This is because Venus (blue in the figure below) is gaining on Earth (yellow) as the two planets race around the Sun -- Venus moves faster than Earth; it is swinging wide around the curve of its orbit, closing the gap between the two. It will continue to appear to move away from the Sun until it starts to make its pass between the Earth and the Sun in 2009.



By contrast, Earth is leaving Jupiter behind. Jupiter (gray in the figure below) moves much slower than the Earth; as Earth races around the Sun we see the Sun moving between us and Jupiter. Soon Jupiter will disappear behind the Sun completely. It will not be visible until Earth swings around its orbit and starts catching up with Jupiter on the other side.



Currently Jupiter appears to be further away from the Sun in the sky than does Venus. But with the Sun-Jupiter distance decreasing and the Sun-Venus distance increasing, that situation is changing rapidly. Over the coming days watch Jupiter and Venus, the two brightest celestial bodies after the Sun and the Moon, pass each other in the sky. The Moon gets involved in the action, too. Check out the sky charts below.

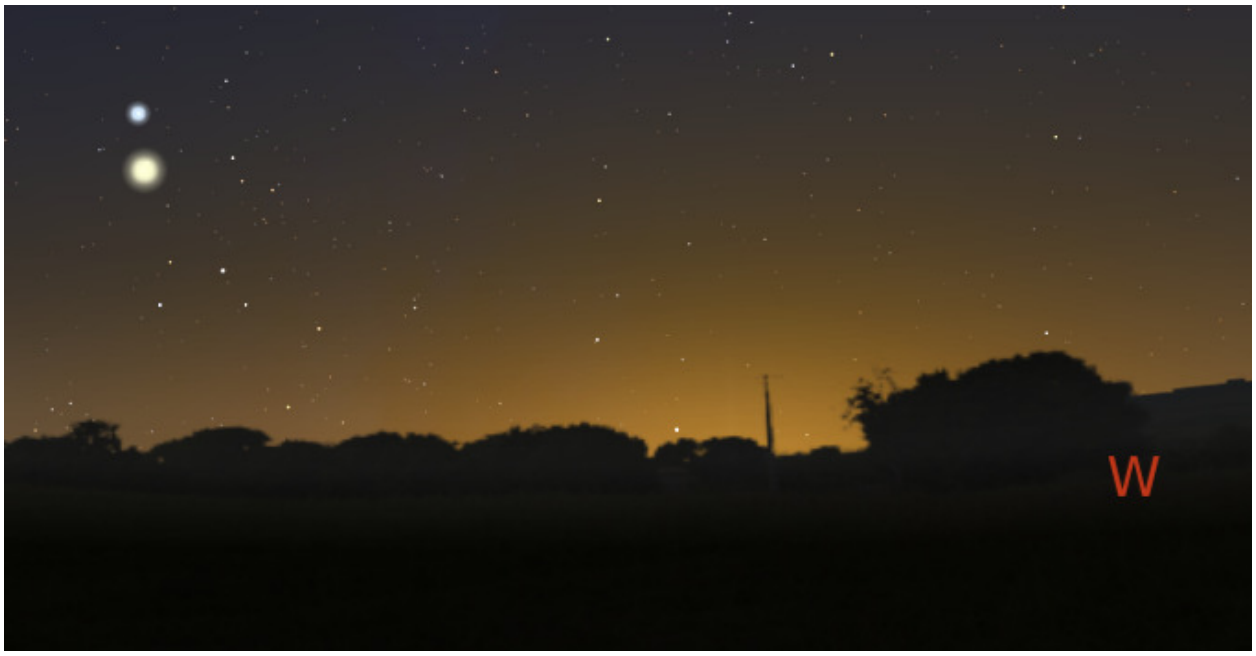
November 24:

Venus is the larger object in this simulation (made with the free software *Stellarium* -- www.stellarium.org). Venus is to the West of Jupiter.

November 26:

The gap is closing.

November 28:



Venus is almost directly under Jupiter.

November 30:

The moon joins in.

December 1:

The three brightest night-time celestial objects -- very close.
You don’t see this every night.

December 2:

The Moon passes beyond the pair of planets.

December 4:

The two planets have changed positions now -- Jupiter is to the East, Venus to the West. Keep watching and see what they do as we move into the New Year.

Learn About the History of Astronomy

2009 is the International Year of Astronomy in honor of 400 years of telescopic observations of the sky. Learn about the history of astronomy -- learn not just *what* we know about astronomy but *why* we know it and *how* we figured it out! Otter Creek Observatory has a free astronomy history book available on-line. Just visit www.jefferson.kctcs.edu/observatory/iya2009

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YOURS TO DISCOVER

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