

“CHECK OUT THE MORNING SKY”

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*Venus/Jupiter
Conjunction
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photo by Teri Smoot*

The night sky is filled with so many amazing and wonderful things, from stars and constellations to planets and comets, but what about the morning sky? Mark your calendar for early dawn of February 1st and prepare to witness a spectacular view! You will see the planets Jupiter and Venus appearing right next to each other in the eastern sky.

I suggest you start looking for both planets in your southeastern horizon right before sunrise in early January. Jupiter and Venus, the sky’s brightest planets, will stand less than 11 degrees apart from each other. To estimate this distance in the sky, stand with your hand held at arm’s length with your fingers closed as if you were stopping traffic. This is about 10 degrees across. The planets will look like bright stars. The brighter and higher-up object is Venus. The fainter object – closer to the horizon - is Jupiter.

During the next couple of weeks the gap between these two planets will get smaller and smaller. By February 1st, they will be at their closest (1°) and appear to be right next to each other. This is known as a “planetary conjunction”. As viewed from Earth, the planets appear to be next to each other because they are located in a single line of sight. Actually, on that morning, Jupiter is 562 million miles away, or more than 4.5 times farther from Earth than Venus.

Conjunctions between Jupiter and Venus are fairly common and they happen about three times a year. So what’s the big deal? This year’s Jupiter-Venus event is the closest conjunction between any two planets in the morning sky in all of 2008! The next close pairing of these two bright planets won’t happen until 2011. All you need for this celestial experience is a jacket and a cup of coffee.

While you are up, check out Jupiter’s moons. Jupiter has over 60 known moons, with the largest four known as the Galilean Moons - Io, Europa, Ganymede, and Callisto. First seen in 1610 by the Italian scientist Galileo Galilei, these four moons each have their own distinct features. Through a small telescope or binoculars, they appear like faint stars lined up on either side of the planet, changing positions as they orbit. Sometimes one or more may be missing, either passing in front of or behind Jupiter.

Images from recent robotic spacecraft show that Io, the innermost moon and similar in size to our Moon, is covered with yellow-orange sulfur from its many active volcanoes. Europa is the smallest of the four with a smooth and icy surface resembling a cracked eggshell. Next is Ganymede, the largest moon in the Solar System and bigger than Mercury. Its surface is partly cratered and has dark patches and lighter grooves. Then there is Callisto, the outermost of the four moons. Callisto has a dark surface covered with impact craters.

You can observe other amazing celestial objects through one of the two 14” reflector telescopes at the Cameron Park Rotary Club - Community Observatory located behind the El Dorado Center of Folsom Lake College off of Green Valley Road. For more information about the observatory go to www.communityobservatory.com for current hours of operations and driving directions.