

JANUARY 2008 ASTRONOMY

From the Herbert Trackman Planetarium at Joliet Junior College
www.jjc.edu/planetarium/ <<http://www.jjc.edu/planetarium/>>

Welcome to January, not the best month for astronomy, unless you like frozen toes and fingers. However, the sun is getting higher in the sky each day, which means it is giving us more warmth, and by the end of January, the sun sets after five o'clock.

On January 2nd, the earth is as close as it will get to the sun all year (perihelion), 91,405,800 miles away. The sun is farthest away (aphelion) on July 4th - 94,517,500 miles. Because of the sun's size and its distance, the change in the sun's appearance is barely noticeable. Since the earth is closest to the sun in January, it is also moving at its fastest in its orbit around the sun - about 2200 miles per hour faster than in July. Also, because the sun is orbiting faster in winter, there are 7 fewer days between the first day of fall (autumnal equinox) and the first day of spring (vernal equinox) than between the first day of spring and the first day of fall. Winter is shorter!

Mars and Saturn are the planets in the evening sky. Mars is almost directly overhead in mid-evening, above the constellation of Orion. If you watch Mars closely, you will see it moves westward in relation to the stars. At the end of the month, it will stop and move back eastward across the top of Orion. This is called retrograde motion and it is caused by the faster-moving earth passing Mars.

Saturn rises late in the evening (9:15 pm) at the beginning of the month, and like the stars, rises four minutes earlier each night. By January 31st, it is rising at 7:15. On January 24th, the moon will be right below Saturn.

On January 5th, the friends of the planetarium will be at Plum Creek Nature Center in Beecher, Illinois to conduct a seminar on "How to use your telescope". Later that evening we will be outside looking at the evening sky including (hopefully) Comet 8/P Tuttle which is now visible in telescopes. You must register for the telescope seminar. There is no charge, but space is limited. Call the Nature Center at 708-946-2216 for more information. We are planning a "How to use a telescope" for JJC in February.

The moon will be next to Mars on January 19th. The full moon in January is on the 22nd.

Orion, one of the easiest constellations to locate, is in the southern sky during January evenings. If you have binoculars, look at the nebula (cloud) below his belt. This cloud is new stars that are just forming. Follow his belt to the left and you will find Sirius, the brightest star in the sky besides the sun. The red star in Orion's shoulder is Betelgeuse. Betelgeuse is a giant star, hundreds of times larger than the sun, and it is in the process of dying, which is why it is turning red. Sometime in the next few hundred thousand years, it will explode and go super nova. Above Orion is the red planet, Mars. And above and to the left of Mars are the Gemini twins and their bright stars, Castor and Pollux. For a full star map, go to Heavens-above.com.

The January shows at the planetarium include a special show on January 10th at 6:30 titled "The Skies in 2008 for Kids." The show starts with the winter sky and what to look for on that night. We then start changing the sky on the planetarium dome just as it changes during the year showing the moon phases, the planets moving, and the sun appearing to move among the stars as the earth orbits the sun. Weather permitting, we will finish outdoors with a brief tour of the real sky.

Our shows during January are:

Tuesdays at 7:30

1/15 - Solar System Spectacular

1/29 - The Month,s Sky for February

Thursdays at 6:30

1/10 - The Skies in 2008 for kids.

1/24 - Solar System Stakeout

All shows at the Trackman Planetarium are offered at no charge by Joliet Junior College.

We are still accepting reservations for shows for school and scouting groups. Call Christine at 815-280-6670 between 7:00 am and noon to make reservations.

Looking ahead: On February 20th, there will be a lunar eclipse during the evening hours. More next month.

The Herbert Trackman Planetarium

E-mail: amaurer@jjc.edu <<mailto:Amaurer@jjc.edu>>