

By Vernon Whetstone

Amateur Astronomer

Wow, busy week, let's get started. On Monday, Jan.3, Earth was at its closest approach to the Sun for the year. Now, I can hear you. "If it was so close, why was it so cold outside?" Well, let's remember that pesky 23.5 degree tilt of Earth's axis.

That tip gives us our seasons, and right now the Northern Hemisphere is tipped away from the Sun. So, even though the planet we are riding on is at the closest point in its orbit, we are, in effect, leaning away from the direct rays of the Sun thus making it colder outside.

Our good friends in the Southern Hemisphere are now enjoying a delightful summer soaking up those "closest-to-the-Sun" rays. That is why we can see pictures in the newspaper of folks in Australia enjoying Christmas with a day at the beach.

Bright Jupiter is still making a fine showing in the southwest about an hour after sunset.

Tonight (Jan. 6) use binoculars, or that new telescope you got for Christmas, to watch the four Galilean moons move around the gas giant. Also in the same field of view in your optics of choice will be the next most outer giant planet, Uranus. This is the last of the four times these two were in conjunctions.

Uranus is the tiny bluish green dot less than half a degree to the right of Jupiter. Watch each evening as Uranus moves down and away from Jupiter.

A waxing crescent Moon will join the planetary pair on Jan. 9 and 10.

On Thursday look for a slender three-day old Moon in the southwest sky. Below and left of the Moon is another of the outer gas giants, Neptune. Use binoculars and look at about the 7 o'clock position for a tiny blue-green dot.

Also in the morning skies this week look east at about 6:30 a.m. MST for tiny, fleet-footed Mercury just above the horizon. You only have the next three or four days to catch the elusive planet.

Enough of the early morning stuff. In the evening check the eastern skies for the brightest stars of winter. Our old friend, Orion, the Hunter, is making a fine showing in the early evening skies.

By 6 p.m. the hour-glass shape of Orion has cleared the horizon. Bright, reddish Betelgeuse for a right shoulder, blue-giant Rigel for a left knee and the three stars of his belt mark a shape you can't miss.

Just for your information, first magnitude Bellatrix is his left shoulder and second magnitude Saiph is the right knee. There are three "stars" hanging from the belt which many call his sword.

Now here is where it gets interesting. None of those three are single stars. The top-most is a nebula-like structure with several stars and a cloud of gas and dust. The bottom is a small cluster of stars with no particular notice or identification except the brightest is called Nair al Saif.

But, the middle "star" is where the fireworks occur. The middle star is the Great Orion Nebula, M-42 on Charles Messier's list of things that are not comets. In binoculars, the distinct fuzzy shape can be seen, but this is where a good telescope will come in handy.

A telescope will reveal first the four stars in the center of the nebular cloud called the Trapezium. They are the stars that give the power to excite the gas molecules of the nebula and cause them to glow.

M-42 is second only to Saturn in producing what I call the "Wow" factor. That is the response of individuals when they first get sight of the objects through a telescope.

For other great winter objects look above Orion for the distinct "V" of Taurus, the Bull. The bright star that looks like the eye of the critter is Aldebaran and the stars behind it are the stars of the Hyades star cluster. A great binocular sight.

NEXT WEEK: More winter stars and more astronomical blathering.