

By Vernon Whetstone

Amateur Astronomer

December looks like it will be an interesting month astronomically. First, five of the visible planets are making a showing in the early evening skies during the first weeks of December.

Fleet Mercury will make a brief appearance in the evening sky in the first week and Mars, although fading away, can still be glimpsed just after sunset if you know where to look.

Gas giant planets Jupiter and Uranus travel together throughout December into February and bright Venus is very conspicuous in the early morning sky. Saturn is also in the morning sky and is growing stronger in brightness.

But, the real attention getter will be the total lunar eclipse on Dec. 20/21 and the usually faithful Geminid meteor shower on Dec. 13/14.

This total eclipse is the first since February of 2008 and will be the last total eclipse visible from the North American continent until April 2014.

An eclipse occurs when the Moon moves into Earth's shadow. It happens in two stages. First is the dimmer penumbral, or outer shadow stage then into the darker umbral shadow.

As viewed from here in southwest Nebraska the eclipse starts when the Moon moves into the lighter penumbra at 10:32 p.m. MST. There will be almost no obvious darkening of the Moon until it reaches the umbral shadow about an hour later.

It will then look like some giant something is taking a bite out of the Moon. The darker shadow will continue to grow until the entire lunar surface is darkened. It will often take on an eerie, reddish glow from the light of all the sunrises and sunsets from all around the edge of the Earth.

This darker, penumbral stage, will continue until a brightening starts on the opposite side from where the shadow started. This should start at about 1:53 a.m. MST on the morning of Dec. 21.

While the Moon is darkened, take the opportunity to look at nearby red stars Betelgeuse in Orion and Aldebaran in Taurus and compare the colors. Also look just above the darkened Moon for the open star cluster M35. Then up and right for M36, M37, and M38 in Auriga.

Now, if that is not enough excitement for you, dress warm, get a reclining lawn chair with a blanket or sleeping bag and some hot chocolate or coffee and head out the evening of Dec. 13/14 when the annual Geminid meteor shower reaches its peak.

The Geminids have been known to produce 100 to 120 meteors an hour which are best viewed from a dark place. The first-quarter Moon sets at about midnight which will increase viewing possibilities.

Sit in your lawn chair with your feet facing east and find the rectangle shape of Gemini with bright Castor and Pollux on the left side. The radiant of the shower appears to come from just above Castor, the upper of the twins.

Gemini is just above and left of Orion and below Auriga. The radiant will be almost directly overhead at 2 a.m. MST which will provide for the best viewing.

To really enjoy the experience take someone with you. They can help count the meteors and you both can keep each other awake until the brightening dawn begins to streak the skies.

SKY WATCH: New Moon, Sunday, Dec. 5, the Moon and Neptune near each other on Dec. 10.

The Moon and Aldebaran in Taurus group up on Dec. 19, and the Moon will be full on Dec. 20. By the way, the lunar eclipse on Dec. 20, occurs just 15 hours before the official time and date of the winter solstice when the Sun crossed the celestial equator heading south bringing winter for us and summer for the southern hemisphere.

NEXT WEEK: More astronomical blathering.