**"What's Up Tonight?" – February 2008**

Don't Miss the Lunar Eclipse

Ken From – Star Enthusiast

A lunar eclipse on Wednesday, February 20 in the evening during prime viewing hours is one of the year's highlights. Anyone in North America with clear skies will have opportunity to see the last lunar eclipse until 2010. A lunar eclipse can only occur at the time of a full moon when the sun, earth and moon are in a straight line and the moon moves into shadow of the earth. At about 7:00 PM Mountain Standard Time, the moon begins to move into the shadow of the earth and by 8:00 PM the total lunar eclipse begins. About 9:00 PM the total eclipse ends and over the next hour the moon slowly moves out of earth's shadow and reappears as a full moon. The lunar eclipse last August occurred at 3 AM so viewing this eclipse in the evening will be more convenient for most people.

A lunar eclipse is always spectacular and this one will be no exception. A full moon always offers us bright sky and plenty of light for an evening stroll. But during a lunar eclipse the moon's light is blocked, the sky darkens and for almost an hour the stars shine as brightly as on a moonless night. From a dark, rural location the Milky Way slowly emerges across the sky and then just as slowly disappears as the eclipse ends. During this eclipse, the planet Saturn sneaks into the picture and can be found just to the left, or east of the moon. With binoculars or telescope you will want to move back and forth between these two beautiful celestial objects. The bright star, Regulus, will be almost the same distance as Saturn from the moon but to the west. Normally it is difficult to see stars next to a full moon as the bright moon washes out nearby stars. However, during a lunar eclipse you may be fortunate enough to see the lunar disk glide in front of a star or see a bright star emerge from behind the moon. The visible movement of the moon against background stars reminds us of the moon's 29 day orbit around earth.

Even though the moon is totally in earth's shadow we can see the moon turn various shades of red, orange and yellow. A small amount of sunlight is refracted through earth's atmosphere and reaches the moon. If you think of a beautiful sunset, we have a similar occurrence as sunlight is refracted through earth's atmosphere, providing us with a colorful evening sky. We see similar colors on the moon for the same reasons during an eclipse.

As noted already, Saturn is visible again in evening skies and those with telescopes will quickly notice that its rings have closed up considerably from last spring's view. Throughout the spring there should be many opportunities to watch this beautiful yellowish planet and its rings. During February, Mars remains bright in the evening skies but is quickly losing its shine as the earth pulls away from it in our shorter orbit around the sun. The constellation Orion dominates the evening skies as the famous hunter chases its prey, Taurus the bull, across our southern skies. To the north you might take advantage of the position high overhead of the constellation, Cassiopeia. In the shape of a "W" Cassiopeia is home to several splendid star clusters that can be revealed with binoculars or a telescope. While this constellation, like the big dipper, is visible all year, the longer evenings and its position in the sky make late winter an ideal time for discovery of its many hidden splendors.

With the sun rising late on February mornings many will have opportunity to see the two brightest planets blazing to the southeast in the hours before dawn. After the sun and moon, these two planets are the brightest objects in the sky. Those living in the vicinity of an airport often mistake the two planets for two airplanes lined up for a landing.

As winter slowly moves toward spring, February offers great evenings and mornings of discovery for those who turn their eyes toward the sky.

*Ken and his wife, Bev, offer regular public observing nights at their acreage near Didsbury, Alberta. Information on observing nights and further observing resources are available on their website, www.All-StarTelescope.com or by calling them at 1-866-310-8844.*