



The Durham Region Astronomical Association

Bringing Astronomy to the People

Sky Calendar

The separation between celestial objects is normally indicated by angular degrees. If you hold your hand up at arms length to the sky, you can estimate angular measurements as shown in the pictures below.

Keep in mind that the Moon is 1/2 degree wide

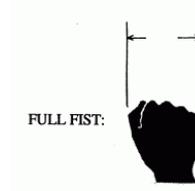
1 Degree



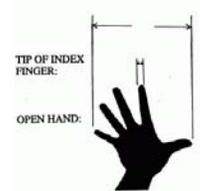
4 Degrees



10 Degrees



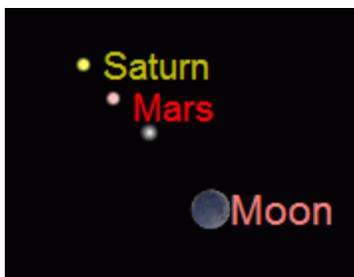
20 Degrees



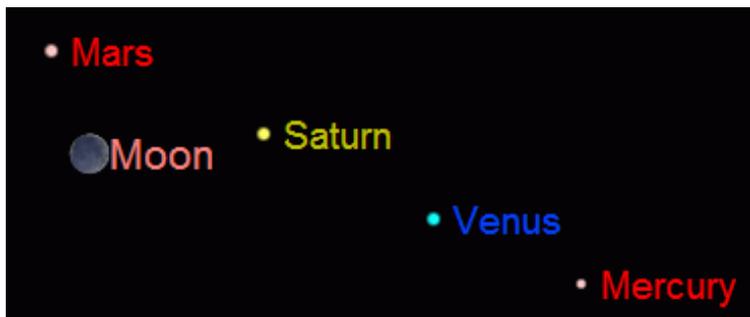
The nearly First Quarter Moon and Planet #6, 121,000 km wide Saturn, make a close encounter of just over a degree apart with the brightest star in the constellation Leo, Regulus, during the evening of **May 12**. Look for this trio again on **June 8** when you can find the red planet #4, Mars, 13 degrees to the west (right) of the grouping.



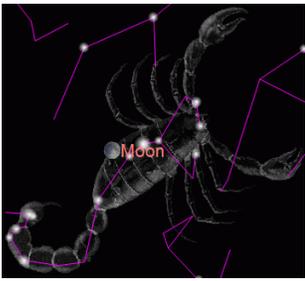
Look high in the south-west sky on the evening of **June 7** to see Planet #4, 7,000 km wide Mars, sitting less than 1 degree right over the crescent Moon. Check to see if you can see "Earth-shine" on the dark part of the Moon. That's sunlight bouncing off of the Earth and lighting up the dark part of the Moon.



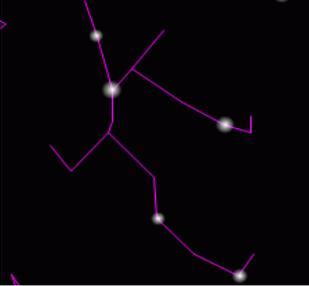
On **July 5**, The crescent Moon lines up nicely with Planet #4, 7,000 km wide Mars, and planet #6, Saturn sitting about 10 degrees away from the Moon. In the line-up between the Moon and Mars is the bright star, Regulus. This star is about 78 light-years away (that is, it takes 78 years for the light from the star to reach us, traveling at 300,000 km/second), and is 4 times the diameter of our own Sun.



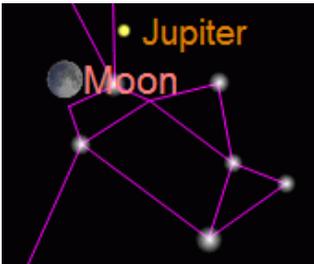
A more rare alignment of 4 planets with the nearby Moon can be seen in the west sky on **August 3**. Planet #4, Mars, will be right over the Moon and lines up with Planet #6, Saturn, and Planets #2 and #1, 12,000 km wide Venus and 5,000 km wide Mercury.



On the night of **August 10**, the Moon will be just a degree or so to the left of Antares (the bright star just left of centre in the image), the brightest star in the constellation Scorpius - the scorpion. While in mythology Antares represents the scorpion's heart, in fact, Antares is a red giant star 700 times bigger than the Sun. If Antares was placed where our Sun is, its outer surface would be somewhere between the orbits of Mars and Jupiter, and it would be impossible for the Earth to exist.



The Perseid meteor shower will occur on the night of **August 11-12**. It is best to wait until midnight or later and face North-East. Meteors are pieces of dust and rock that burn up as they enter the Earth's atmosphere. This shower is called the Perseids because they appear to radiate out of the constellation Perseus.



When certain stars of a constellation appear to outline common objects, this pattern of stars is called an asterism. The "Teapot", is part of the constellation Sagittarius. On the night of **September 9**, the Moon will be just to the left of the handle of the teapot. The spout is in the lower right of the image. It will also be easy to spot planet #5, 142,000 km wide Jupiter, just about 2 degrees away from the Moon. Jupiter is the biggest planet in the solar system. About 12 earth's wide. All of the other planets in the solar system would easily fit inside Jupiter.



In the south-west sky, Planet #5, Jupiter, can be seen brightly about 2 degrees above the nearly Full Moon on the evening of **October 6**. This view will be repeated on **November 3**.



With darkness falling earlier in the Fall evenings, look for the thin crescent Moon in the **November 30** western sky where it will be joined by planet #5, Jupiter, and planet #2, Venus. The brightness of these two planets and the thin crescent Moon should make for a spectacular sight. Jupiter and Venus will be less than a degree apart.



On the evening of **December 12**, planet #1, Mercury sits in between the Moon and planet #5, Jupiter. This trio will be about 20 degrees above the south-west horizon. The two planets will be about 1 degree apart.

For more information and to learn more about astronomy, visit our website

www.drastronomy.com