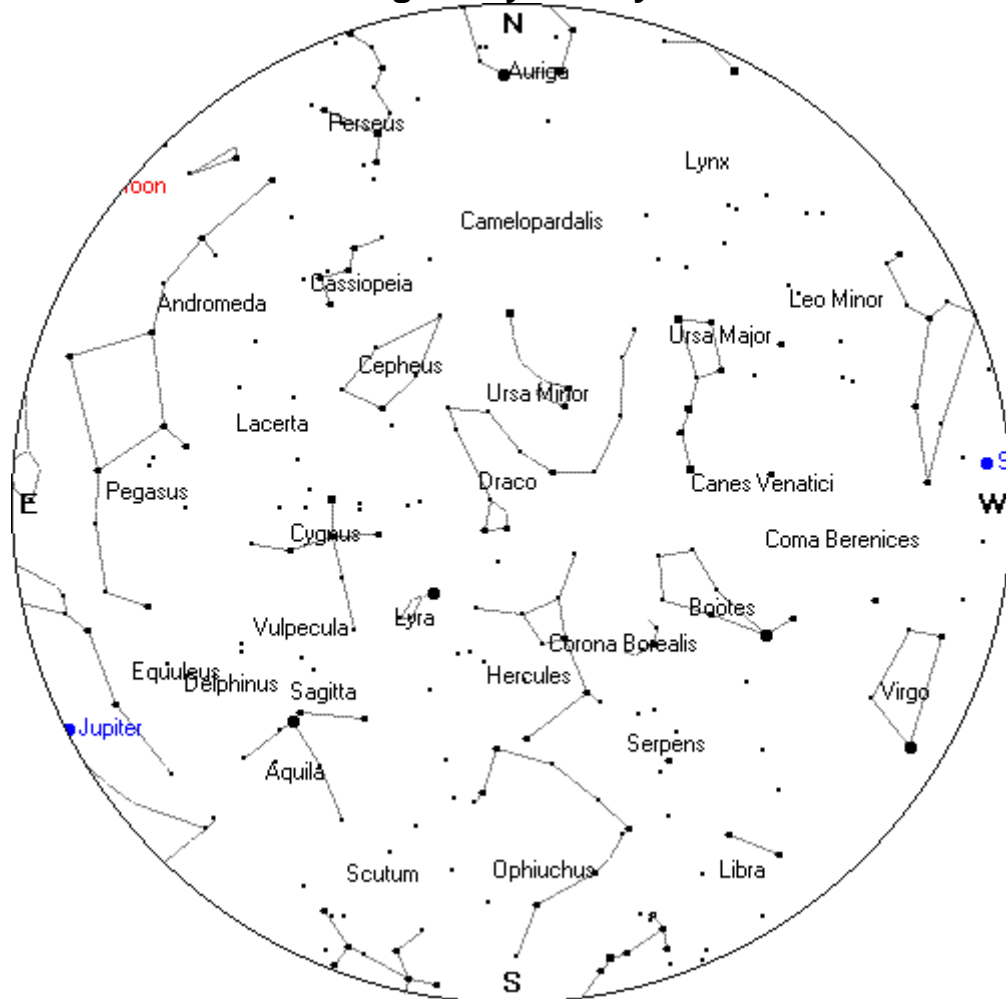


Dundee Astronomical Society The Night Sky in July 2009



The Sky at 10pm on 15th July 2009

[chart courtesy of www.heavens-above.com]

During July, the nights remain bright until quite late and the Summer Triangle formed by the three main stars of the constellations Lyra, Cygnus and Aquila stand out high in the south west. July should, if we are lucky, provide a reasonable amount of sunshine and warmth as the Sun is high in the midday sky. Fortunately for us, the Sun is a stable star unlike the many variable stars we can see in the night sky. It is, however, not completely stable and has an approximately 11 year cycle during which its energy output varies by only about 0.1%. This cycle is marked by an increasing and decreasing number of sunspots. By the average of past solar cycles, we should have seen a minimum of activity in about 2006 after which the Sun would usually have shown an increase in sunspots. By 2009 we would have expected to have been clearly into what is called Cycle 24. By June of this year, the Sun had not yet started to show increasing activity and only a few small new cycle spots have appeared. The solar output of energy has been measured and is at its lowest for about 100 years.

It is very likely that the Sun will soon 'kick-start' but this low activity has probably contributed to the fine early displays of noctilucent clouds (NLC) reported this year

from late May. If the trend continues, we should see many more displays through the July nights towards the north after sunset and before sunrise. These delicate pearly white or blue clouds are worth waiting up to see and there is every chance they will be seen on any clear night this month.

There will be a total eclipse of the Sun on July 22nd but it will only be seen in south-east Asia and the western Pacific. Nothing will be seen in the UK which is unfortunate as the duration of totality is a very respectable six and a half minutes.

Mercury will not be visible during July.

Venus will be brilliant in the north east about 40 minutes before sunrise.

Mars will also be seen in the morning sky moving away from Venus through the month. It is much less bright than Venus and is only a disc of five arc seconds.

Jupiter is well placed for observation throughout the night towards the south. The planet is a little higher in the sky this year but it is still low for detailed telescopic study.

Saturn is becoming less bright and will be low in the western twilight during July.

The Moon is full on the 7th, at last quarter on the 15th, new on the 22nd and at first quarter on the 28th.

To mark the 40th anniversary of the first Moon landing there will be a talk by Robert Law about the Apollo 11 mission on Wednesday 22nd July at 2pm. There will be no charge for this event.

As part of the International Year of Astronomy, Mills Observatory and Dundee Astronomical Society will run a Sunwatch Week from Tuesday 14th July until Friday 17th July between 1pm and 5pm. If the sky is clear the Sun will be safely projected so that visitors can see its surface. Other specialised telescopes will be used to view solar prominences. A talk entitled 'Enjoy the Sun – It Won't Last Forever!' will be given by Ken Kennedy on Tuesday 14th and Thursday 16th July at 2pm. Members are invited to come along on any of the days to give a hand.

Ken Kennedy
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