

Dundee Astronomical Society The Night Sky in December 2009



The Sky at 8pm on 15th December 2009

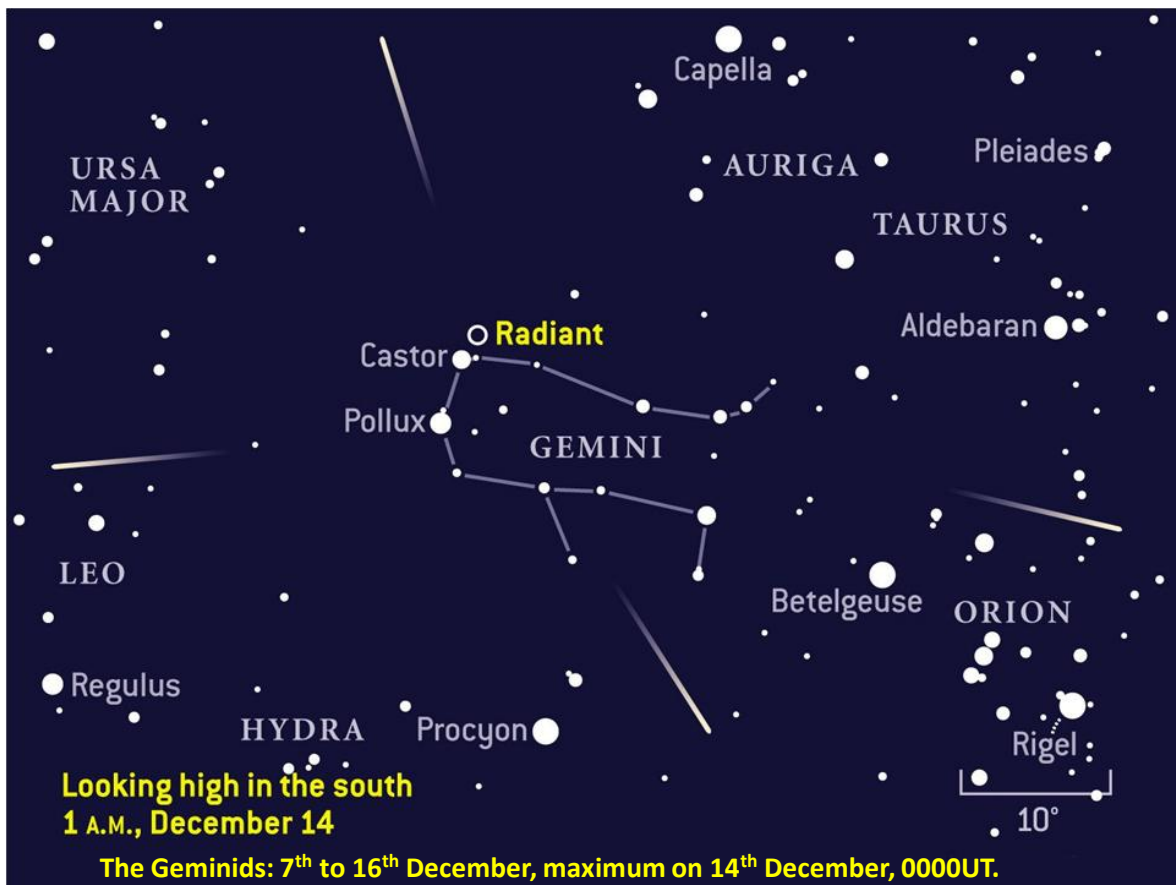
[chart courtesy of www.heavens-above.com]

The saying 'once in a blue moon' is usually understood to describe a very rare event, but this month we have just such an occurrence. From the 1940s this term has been used to describe the second full moon which appears in any month. There are usually twelve full moons each year but the calendar year has an extra 11 days compared to the lunar cycles. Every so often (on average every 2.7154 years) a month will have two full moons and December this year is one such month with a 'blue moon' on the last day of the year. However, there have been blue moons recorded in the past when the moon was actually blue in colour. I well remember the 26th September 1950 when I witnessed a blue moon which was said to have been caused by smoke in the upper atmosphere from forest fires in Canada. The Sun also had a strange blue colour during the day which was widely reported in newspapers. So remember to have a look at the 'blue moon' on Hogmanay but don't expect it to be blue! The next blue moon will be in August 2012.

By chance, there will also be a partial eclipse of the Moon on 31st December. This will not be a spectacular eclipse, however, with only about 8% of the moon being covered by the Earth's shadow at 7.22pm.

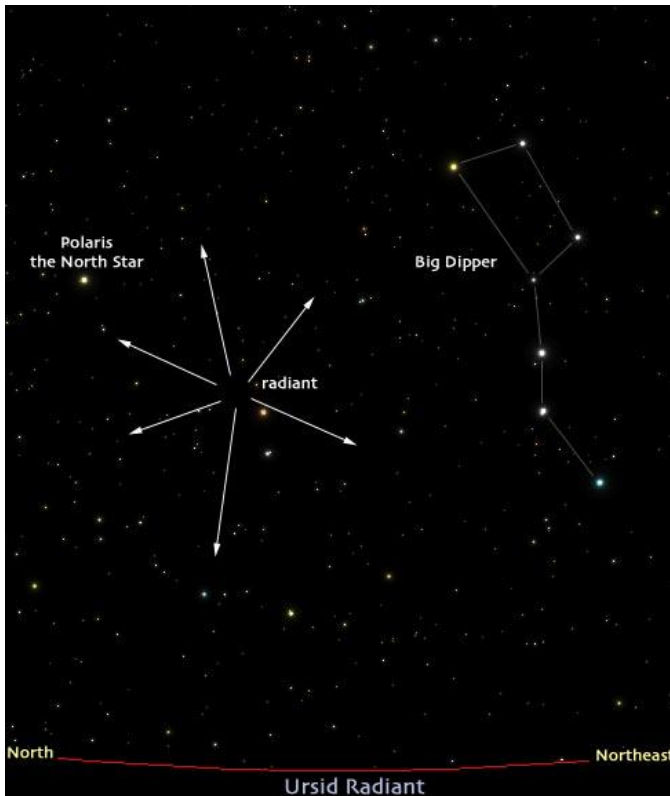


This month, the Geminid meteor shower will be active between the 7th and 16th December with a maximum on the night of the 13/14th. Up to 100 meteors an hour may be seen on the night of maximum and these are often slow and bright making this a fine display, especially this year as moonlight will not interfere. The shower is associated with asteroid Phaethon 3200 which may be an extinct comet.



The Ursid meteors also appear in December and can be seen between the 17th and 25th of the month with a maximum on the 22nd. The ZHR at maximum is only about 10 and the Moon is 6 days old. There have been outbursts recorded in 1945, 1982

and 1986 so you never know – we may get another. If you are willing to interrupt your Christmas preparations, they might be worth a look!



By mid evening throughout the month, Taurus, the bull, is quite high in the south east with the V shape of the bull's head and the bright orange coloured star Aldebaran marking its eye. Below, and following Taurus, is the universally popular Orion, the Great Hunter. The three stars of the belt and those of the sword draw the eye with the two bright stars, Betelgeuse above, and Rigel below, the belt.

Mercury will be in the evening sky around the 22nd December but will be so low that it is unlikely to be seen from this latitude.

Venus is heading towards the Sun and will not be observable this month.

Mars is in the constellation of Leo and will rise at about 8pm mid month and will be well placed for observation by 2am. As it brightens towards the end of the month it will be the brightest object in that area of the sky.

Jupiter will be low in the south west in the evening and will be poorly placed as it heads towards the Sun.

Saturn rises at about 1am during December. It can be seen in the constellation of Virgo and will be reasonably high in the sky by 5am.

Uranus is still quite well placed in Pisces.

Neptune is even closer to Jupiter this month and will not be easy to observe.

The Moon is full on the 2nd, at last quarter on the 9th, new on the 16th, at first quarter on the 24th and again full on the 31st.

Ken Kennedy
Director of Observations
Dundee Astronomical Society