

Dundee Astronomical Society

Sky Notes for December 2016

Sky Map for 15th December 22:00

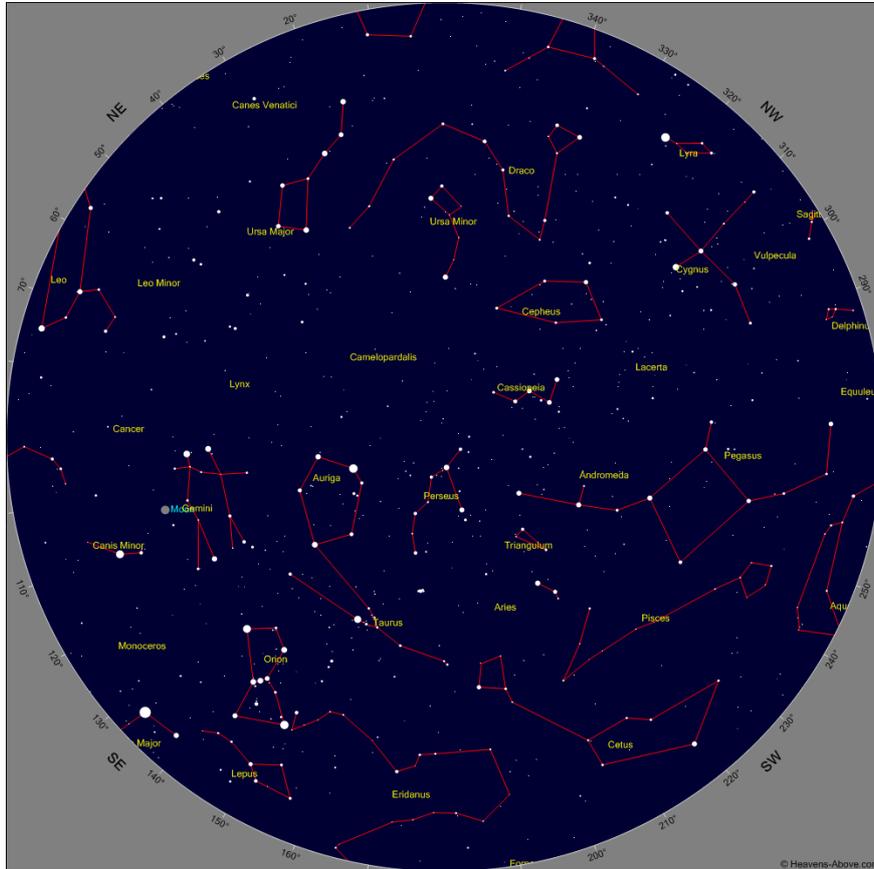


Illustration Courtesy of www.heavensabove.com

We are now well into winter and the longer and darker evenings, so plenty of opportunities to go outside and freeze whilst looking at some of our favourite objects. This month the Moon occults Aldebaran, the eye of Taurus the Bull and the Hyades (an open cluster) in the early hours of 13th December. The moon at this time will be showing a 97% lit waxing gibbous phase. This will be a fabulous opportunity to view and image if the weather and cloud permit. The occultation starts with gamma Tauri being occulted at 21:35 ut and ending after the Aldebaran occultation has completed at around 05:22 UT. Why not try and image star trails, just point your camera up towards Polaris and open the shutter for a reasonable period of time (say 30 seconds), the longer you expose the stars the greater will be the star trails. Have a go and experiment. The image below was taken by Pam Foster a member of our Society.



Other objects you can look for includes the indomitable M31, the Andromeda Galaxy. Look at the photo gallery on our website for Ken Kennedy's brilliant image. And of course, why not look out for our nearest neighbour, the Moon. Although not as bright as The Sun, it is still advisable to use a moon filter, as prolonged viewing through the eye piece without this can cause eyestrain.

Look out for Orion and M42 another nice object, easily visible with the naked eye. Beautiful in binoculars and stunning through a scope.

The Planets

Mercury	Look on the 17 th low in Sagittarius after sunset.
Venus	End of the month around 17:30 UT in Aquarius.
Mars	Still low in the sky in the south west but disappearing just after darkness falls.
Jupiter	Rising at around 03:00 and setting at 12:30. Early morning is a good time to see, it lies just above Spica and to the West.
Saturn	Lies very close to the Sun in the early morning so take care if you intend to view. The planet may be visible in the morning sky if you look carefully on the 31 st .
Uranus	Should be good viewing during the month with the Planet lying in Pisces
Neptune	Best viewing early in the month, but by the 31 st of the month is very close to Mars.

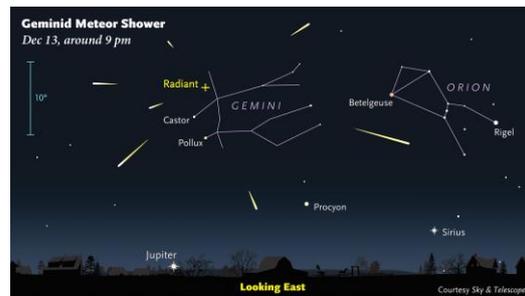
The Moon

First Quarter	7 th December
Full Moon	14 th December This is another Supermoon. This full moon was known by early Native American tribes as the Full Cold Moon because this is the time of year when the cold winter air settles in and the nights become long and dark. This moon has also been known as the Full Long Nights Moon and the Moon Before Yule. This is also the last of three supermoons for 2016.
Third Quarter	21 st December
New Moon	29 th December

Meteor Showers

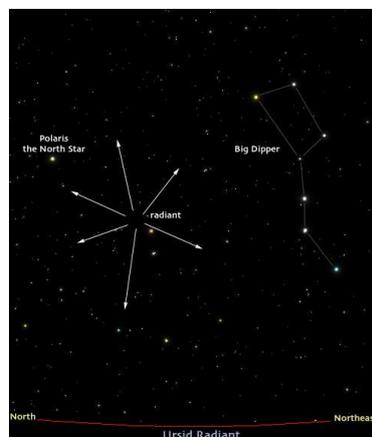
Geminids Meteor Shower.

This month brings the Geminids meteor shower and with a ZHR (Zenithal Hourly Rate) of approximately 120, we should get a reasonable show. It is produced by debris left behind by an asteroid known as 3200 Phaethon. Activity reaches its peak on the night of 13/14 of this month. The radiant is located near Castor in Gemini. Unfortunately, a Full Moon will be resplendent but with perseverance I am sure you will see some meteor trails. Wrap up as it is very cold out there.



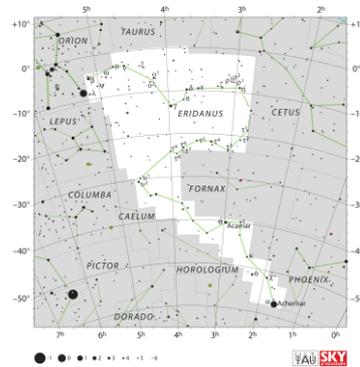
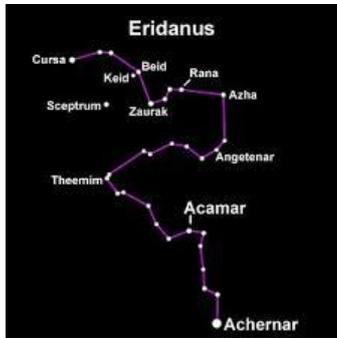
Ursids Meteor Shower.

This month also brings the Ursids meteor shower with a ZHR (Zenithal Hourly Rate) of approximately 10. Activity reaches its peak on the night of 22nd. The radiant is located near Kochab in Ursa Minor. Fortunately, the Moon is out of the way so this could be a better prospect for sightings than the Geminids. Again wrap up well.

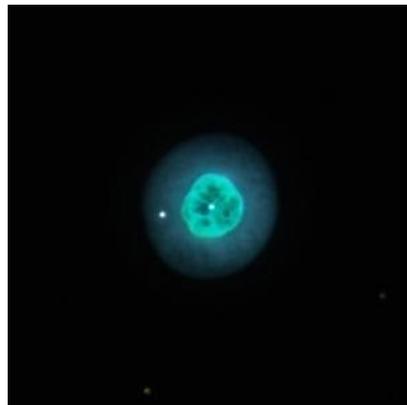


Jim's Focus of the Month

Eridanus - is represented as a river. The same name was later taken as a Latin name for the real Po River and also for the name of a minor river in Athens. Although there are several DSO's visible in Eridanus, below are details on two.



NGC 1535 is a small blue-gray planetary nebula with a magnitude of +9 - +10 and should be visible in small amateur telescopes, with a disk visible in large amateur instruments. It is also known as Cleopatra's Eye.



You should be able to see this (although small) in a 6-inch telescope.

NGC 1300 is a face-on barred spiral galaxy. The center of the bar shows an unusual structure within the overall spiral structure, as a spiral within a spiral.



There are many other DSO's in this constellation, go outside and have a look.

Did You Know?

3rd December 1971 USSR's Mars 3 spacecraft makes the first soft landing on Mars.

3rd December 1993 Space Shuttle Endeavour was launched to carry out the first in orbit service of the Hubble Space Telescope.

10th December 1998 Swedish micro satellite Astrid-2 was launched from the USSR.

15th December 1965 Gemini 6 carrying US Astronauts Walter Schirra and Thomas Stafford makes first space rendezvous with Gemini 7.

15 December 1970 First soft landing and return of signals from Venus by USSR's Venera 7.

21st December 1988 Soviet Cosmonauts on board MIR set a space endurance record of 365 days.

Jim Barber

Director of Observations

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