

Dundee Astronomical Society

Sky Notes for May 2018

Sky Map for 15th May 22:00

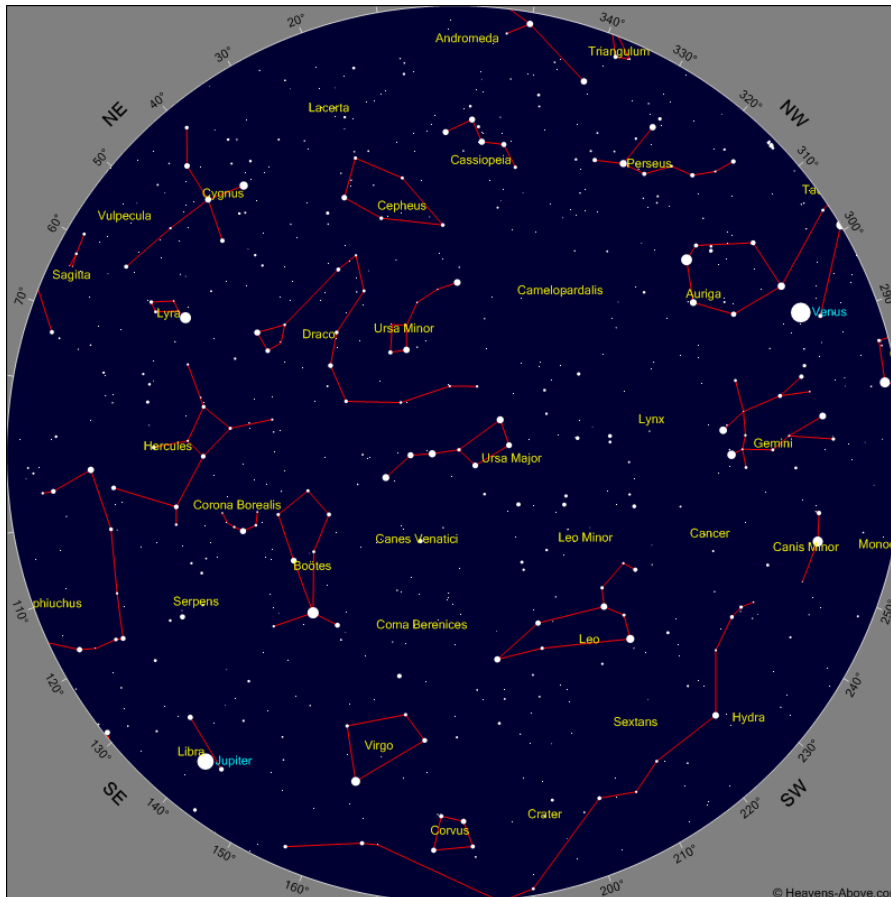


Illustration Courtesy of www.heavensabove.com

The nights are getting shorter making observing just a bit harder. However, weather permitting there a few key dates worth putting in your diaries.

6th May, Ganymede will chase its shadow across Jupiter's disc from 2050 UT whilst on the 14th May Ganymede precedes its shadow across the planets disc at 00:30 UT.

8th May Io transits Jupiter at 03:00 UT. Unfortunately, Io will be almost on top of its shadow.

The 13th sees Europa transiting Jupiter from 00:30 UT, and on the 14th Ganymede transits the planet. Quite a busy time for viewing the planet.

On 17th May Venus and a 7% waxing crescent Moon appear close in the twilight.

Keep an eye out for M81 (Bodes Galaxy) and Galaxy M82 (Cigar Galaxy) both can be found quite easily, just follow the line from Merak and Dubhe in the plough towards Polaris and about 1/3 north

and to the east, there they are. Through a medium telescope both are quite easy to see, M81 (mag 6.94) and M82 (Mag 8.1). Why not have a go?

By the end of the month we will have lost Orion, but there are still many more objects in the night sky to observe. Now look at Perseus and find the Double cluster NGC 869 (mag 3.8) and NGC 884 (mag 3.8) they are both naked eye clusters. best seen with binoculars and even better in a telescope. They make a fabulous target for imaging as well.

The Planets

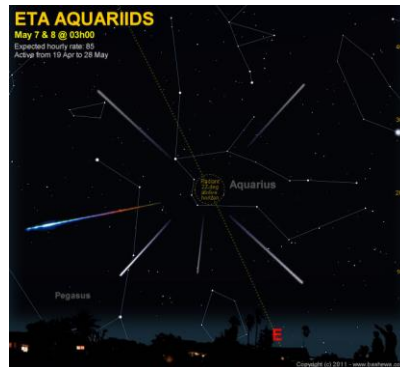
Mercury	Barely coming above the horizon this month, Mercury is not well placed for viewing.
Venus	A lovely bright evening planet this month, setting nearly 3 hours after sunset.
Mars	Still visible (just) in the morning sky moving from Sagittarius into Capricornus. On 6 th Mars will be close to a waning gibbous moon at 07:00 UT.
Jupiter	Reaching opposition on 9 th May, visible all night long and at its best for the year.
Saturn	Visible low in the evening sky in the early hours of the morning.
Uranus	Not visible this month
Neptune	Not visible this month

The Moon

Third Quarter	8 th May
New Moon	15 th May
First Quarter	22 nd May
Full Moon	29 th May

Meteor Showers

The Eta Aquarids is an above average shower, capable of producing up to 60 meteors per hour at its peak. The rate can reach about 30 meteors per hour (ZHR). It is produced by dust particles left behind by comet Halley. The shower runs annually from April 19 to May 28. It peaks this year on the night of May 6 and the morning of the May 7. The waning moon will block out most of the, not so bright, meteors.



Kens monthly Moon notes (Mare Nectaris)

Summer isn't the best time to study the night sky as we have astronomical twilight lasting all night from the 3rd May. However, the Moon is bright enough to be seen in less than dark conditions – and temperatures are usually more civilised so observing the Moon can be a real pleasure at this time of year.

I have chosen the 19th May when there is a 4.5-day old Moon which will be easily observable by 2130 UT towards the west. At this time, the terminator is uncovering Mare Nectaris, a relatively small and fairly circular basin. This impact basin was formed around 3.8 – 3.9 billion years ago and was subsequently filled with lava. It is part of a larger impact structure with a diameter of about 860 km and defines the Nectarian Period of lunar formation which is taken to be between 3.92 and 3.85 billion years ago.

On the night of the 19th May, the terminator crosses the lava flooded remnant of an old impact crater called Fracastorius. This is one of the best examples of a lava flooded crater on the Moon with its northern wall missing and presumably still below the basalt. The remaining wall which forms a bay into Mare Nectaris is quite heavily eroded and impacted by a few smaller craters. There is a thin rille which runs east – west on the floor of Fracastorius but you will require a large telescope and good seeing to catch a glimpse of this.

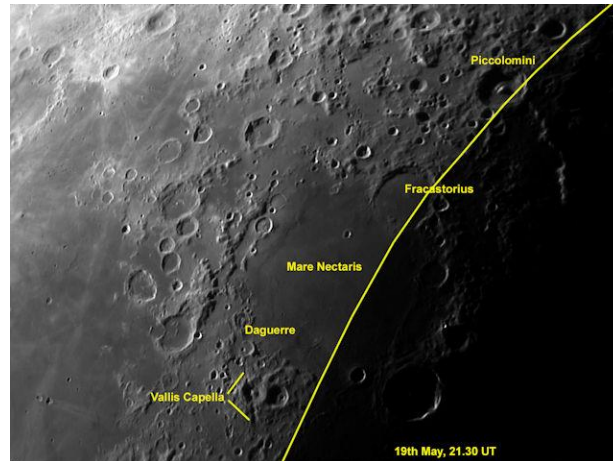
To the south, and still hidden in shadow is one of the main walls or escarpments which form the impact basin. This is Rupes Altai and it will be revealed and ideal for observation for a few days after the 19th. At the east end of Rupes Altai is the prominent crater Piccolomini, 88 km. in diameter and which the terminator crosses on the 19th May. The crater will be in deep shadow and the central peak will stand out brightly against the dark interior. This is an ideal date to observe Piccolomini, but it is certainly worth looking at for a further two days. With higher magnification you should see the classic terracing within the walls.

Moving to the north end of Mare Nectaris, it is also a good evening to look for the Vallis Capella, a valley formed by a chain of craters which almost bisects the crater Capella and extends on both sides

for a total of 110 km. This isn't a very prominent feature but because it will lie so close to the terminator on the 19th it is certainly worth looking for.

Lastly, have a look, only on the 19th, at the northern floor of Mare Nectaris and see if you can spot a faint almost circular area which mirrors Fracastorius but is much more deeply buried. The crater Daguerre is 46 km in diameter but the 'walls' only reach about 1.5 km so if you don't see it on the 19th you will have to wait until the terminator is in a similar position.

The image shows this area described with the terminator, in yellow, as it will be at around 2130 UT on the 19th May.



Forgotten Women of NASA

Born in 1925, Nancy Grace Roman formed an astronomy club with her friends at the early age of 11. In her late 20's she discovered unusual behaviour in the emission spectra of the star AG Draconis. After working at the Naval Research Laboratory, she applied to the newly formed NASA and became the first Chief of Astronomy for its Office of Space Science, as well as the first woman to hold an executive position at NASA. She is most famous for her work in the planning of the Hubble Space Telescope and is often called "The Mother of Hubble". Nancy received the NASA Exceptional Achievement Medal in 1969. NASA's Nancy Grace Roman Scientific Space Fellowship in Astrophysics. The asteroid 2516 Roman is named in her honour.



NLC's

From the middle of the month, keep an eye open for Noctilucent Cloud displays (NLC's). If you see any, and maybe had the good fortune to grab an image, send a report to Ken Kennedy and myself detailing date, direction, time (please tell us if UT or local) and location.

Jim's Focus of the Month

Coma Berenices (Berenices Hair) is named after the Egyptian Queen Berenice II.

Although it is not considered to be a large constellation it does contain many well-known Deep Sky Objects such as M64 the Black Eye Galaxy, Needle Galaxy NGC4565 and M53 a Globular Cluster amongst others, the Coma Cluster and the Virgo Cluster of Galaxies.



Queen Berenice II

Lying above the tail of Leo and being quite faint, this constellation will be quite challenging to find, however it is worth the effort.

M64 at magnitude of +8.52 is just at the very limit of naked eye observation but well worth at with a medium telescope.





NGC4565 the Needle Galaxy at magnitude +12.43 will be more difficult to view unless you use a medium to large telescope but well worth looking at.

Did You Know?

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| 1 st May 1966 | USSR's Venera 3 reaches Venus' surface, becoming the first spacecraft to land on another planet. |
| 18 th May 1965 | Alexi A. Leonov becomes the first Astronaut to walk in space. |
| 27 th May 1969 | Mariner 7 was launched towards Mars. |
| 29 th May 1974 | Mariner 10 makes its first flyby of Mercury and transmits the first pictures of the planet back to NASA. |

Jim Barber

Director of Observations

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