

Forthcoming CAWAS Meetings on Zoom at 7:00pm GMT

Friday November 13th	Dr Carlos Frenk	How our Universe was made: All from nothing
Friday December 11th	Party Evening	Members' Short Talks
Friday January 8th	Paul Fellows	Hawkins Black Holes and the edge of Physics

Observing Sessions with RADAS at Barby Cricket Club at 19:00 clock time.

In general two dates are given, the one to be used will be notified the day before.

November 13/14, 20/21**December 12/13, 18/19****2021 January 8/9, 22/23****November****Event**

Friday	13th	Moon near Mercury and Venus	●
Saturday	14th	Moon at perigee	
Sunday	15th	Moon - new, Mars stationary	
Tuesday	17th	Leonids peak	⚡
Thursday	19th	Moon near Jupiter and Saturn	🌙
Sunday	22nd	Moon - first quarter	🌙
Wednesday	25th	Moon near Mars	
Friday	27th	Moon at apogee	
Sunday	29th	Neptune stationary	
Monday	30th	Moon - full, penumbral eclipse	○

December

Tuesday	8th	Moon - last quarter	🌙
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Coventry and Warwickshire Astronomical SocietyThe society usually meets on the second Friday in the month, at Earlsdon Methodist Church Hall. The meetings begin at 19:15 and end at 21:30. (**Suspended until further notice**)**Web Site:** <http://www.covastro.org.uk>**Mailing list - Note the change to groups.io**

Join the CAWAS mailing list and receive irregular information of astronomical events and CAWAS news.

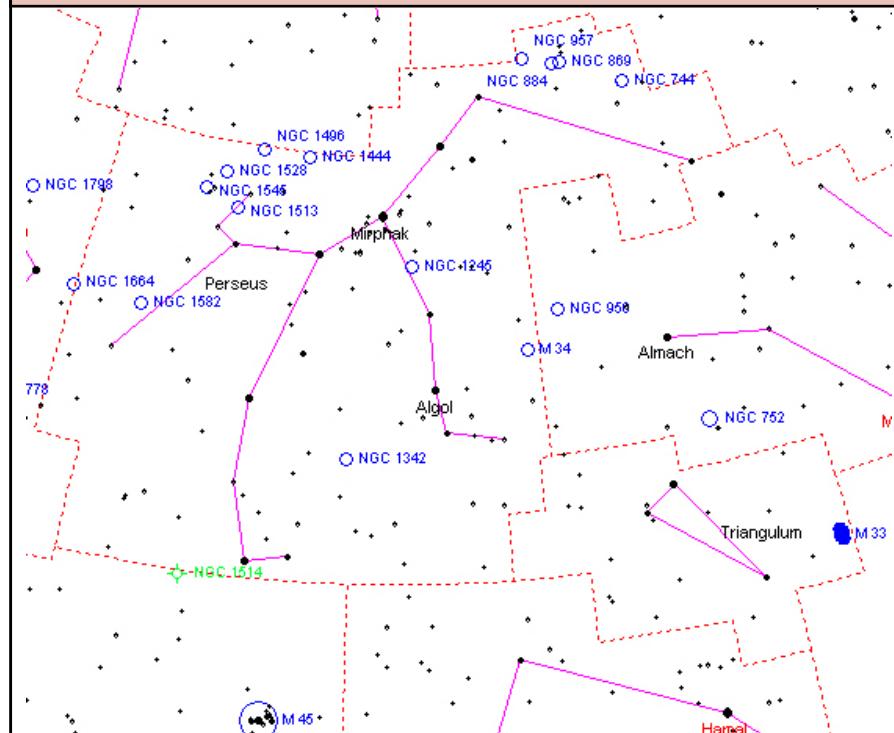
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Coventry and Warwickshire Astronomical Society

Sky Notes

November 13th to December 11th 2020 No. 278



The plane of the Milky Way passes through Perseus and in consequence a large number of open clusters can be seen within it, some of which are shown in the chart. The most famous and brightest of these are the double cluster (NGC869 & NGC884) in the north and the Pleiades (M45) in the neighbouring constellation of Taurus in the south. Although Perseus is devoid of bright galaxies, nearby in Triangulum M33 can be seen. This spiral galaxy is a member of the Local Group, lying at a distance of 2.73 million light years and although it has a magnitude of +5.7 is difficult to observe as it is face-on and spread over an area of 71' X 42'.

Time given in these skynotes is Co-ordinated Universal Time (UTC) known as GMT here in the UK.

Sun continues its journey south moving from Libra, through Scorpius into the 13th sign of the Zodiac, Ophiuchus.

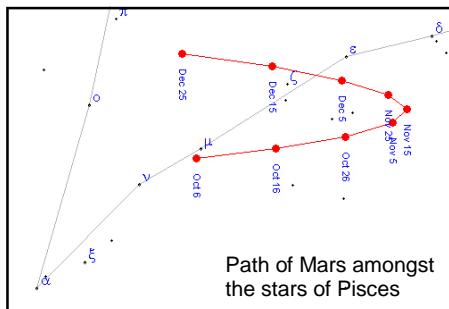
November 13th	Rise 07:24	Set 16:15	Dec $-18^{\circ} 06'$
December 11th	Rise 08:06	Set 15:52	Dec $-23^{\circ} 03'$

Mercury ($-0.6\ 6.3''$ 69% to $-0.9\ 4.7''$ 99%) moves from Virgo, through Libra and Scorpius into Ophiuchus and at the beginning of the month can be seen very low down in the SE just before dawn. It rapidly disappears into the Sun's glare throughout the month as it heads towards superior conjunction next month.

Venus ($-4.0\ 12.4''$ 85% to $-4.0\ 11.3''$ 91%) moves from Virgo into Libra and can be seen low in the SE for 3 hours before sunrise at the beginning of the month and 2 hours at the end. On Nov 13 the Moon lies 5° to the east of Venus and 8° to the west of Mercury

Mars ($-1.7\ 17.7''$ to $-0.8\ 13.0''$) lies in Pisces and is visible high in the southern sky for most of the night. Setting at 03:50 at the beginning of the month and 02:30 at the end.

Mars passes through its stationary point on Nov 15 and starts to move direct again as the Earth gradually draws away from it making it appear fainter and smaller. On Nov 25 the Moon lies 6° to the south.



Jupiter ($-2.1\ 35.8''$ to $-2.0\ 33.7''$) lies in Sagittarius and is visible very low down in the SSW in the early evening, setting at 20:05 at the beginning of the month and 18:45 at the end.

Saturn ($+0.6\ 16.0''$ to $+0.6\ 15.4''$) lies in Sagittarius and as Jupiter is gradually overtaking it (heading towards a great conjunction next month), it appears 4° to the east of Jupiter at the beginning of the month and 1° at the end. On Nov 19 the Moon lies 4° to the south of Saturn and 5° to the south of Jupiter.

Uranus ($+5.7\ 3.7''$) lies in Aries and as it passed through opposition last month is visible high in the southern sky for most of the night.

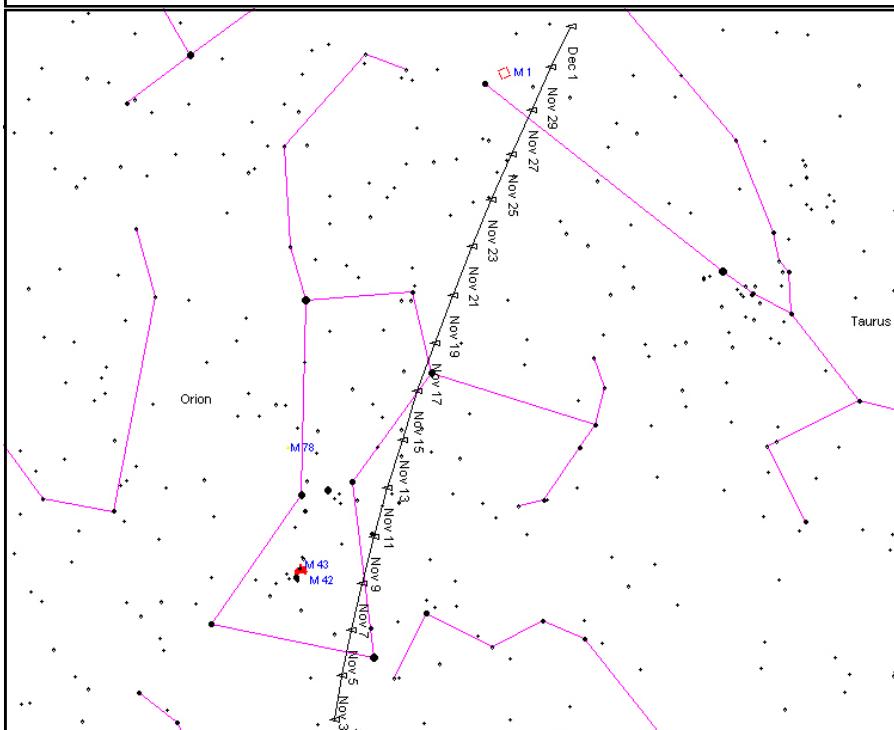
Neptune ($+7.7\ 2.3''$) lies in Aquarius and can be seen in the southern sky for the first half of the night, setting at 01:15 at the beginning of the month and 23:25 at the end. On Nov 29 it passes through its stationary point and starts to move direct again.

Moon undergoes a penumbral eclipse on Nov 30. The eclipse starts at 07:32, but as the Moon sets at 07:40, in effect the eclipse is not visible.

Meteors

The **Leonids** are active from November 15 to 20 and come from the debris of comet 55P/Tempel-Tuttle. The meteors appear to radiate from the sickle of Leo, many leaving persistent trails and are very swift (70km/s) due to their retrograde orbit. They are predicted to peak on the morning of Nov 18 at 05:00 with a ZHR of 15. As the Moon is only 3 days old it will not interfere with observations.

Comet C/2020 M3 (ATLAS) is not particularly bright at mag. +8.0, but it is easily located as it passes through Orion this month as shown in the chart below. It passed through perihelion on Oct 25 so is now moving away from the Sun.



Algol (mag. +2.1 - 3.4) (See chart on the front cover) goes through minimum brightness every 2.8673 days. This month on **Nov 16** at 00:11, **18** 20:59, **21** 17:49 and **Dec 8** at 22:43.

δ Cephei (mag. +3.48 - 4.37) goes through its maximum brightness every 5.366249 days and can be seen on **Nov 12** at 23:05 and **Dec 9** at 19:03.