

Forthcoming CAWAS Meetings on Zoom at 7:00pm clock time		
Friday March 12th	Peter Williamson	Herschel to Hawkwind
Friday April 9th	Dr David Rosario	Big Bang - atoms - stars - planets - supernovae
Friday May 14th	Jonathan Shanklin	Astronomy from Antarctica
Friday June 11th	John Davies	Missions to near Earth Asteroids

Observing Sessions with RADAS at Barby Cricket Club at 19:00 (subject to Covid restrictions). In general two dates are given, the one to be used will be notified the day before.
March 12/13, 19/20

ISS visible passes in March					
Date	Time	Alt	Date	Time	Alt
18	20:03	15	19	19:17	15
19	20:51	17	20	20:06	37
21	19:18	28	21	20:54	33
22	20:07	60	22	21:41	13
23	19:20	48	23	20:56	45
24	20:09	78	24	21:43	15
25	19:22	71	25	20:58	48
26	20:11	78	26	21:45	14
27	19:23	81	27	20:59	41
28	21:12	61	28	22:47	12
29	20:25	72	29	22:01	27
30	21:14	38	31	20:26	49

Month	Day	Event	Icon
March	Saturday	13th Moon - new	●
Friday	19th	Moon near Mars	
Saturday	20th	Vernal Equinox	
Sunday	21st	Moon - first quarter	☾
Friday	26th	Venus superior conjunction	
Saturday	27th	Algol at minimum	
Sunday	28th	Moon - full, BST starts	☉
Tuesday	30th	Algol at minimum	
April	Sunday	4th Moon - last quarter, Metis opposition	☾

Coventry and Warwickshire Astronomical Society
 The 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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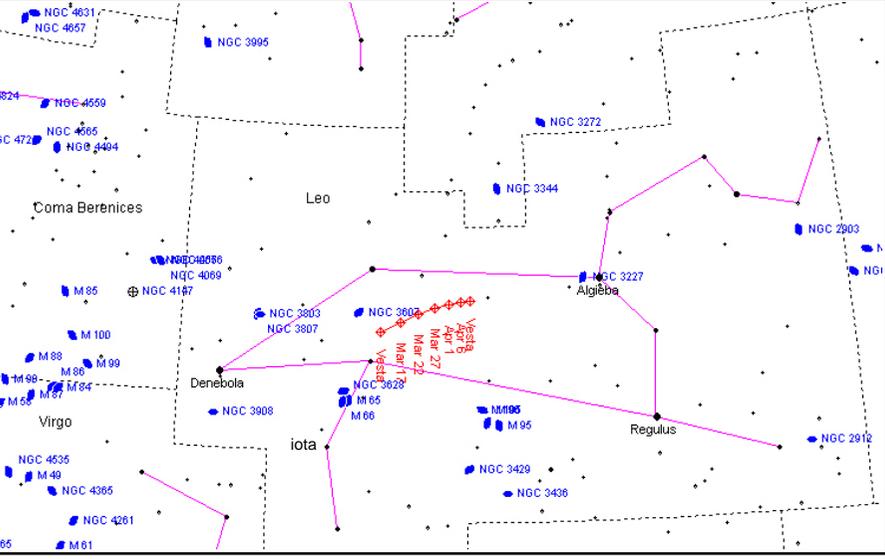
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Coventry and Warwickshire Astronomical Society

Sky Notes March 12th to April 9th 2021 No. 282



The Lion

Located away from the plane of the Milky Way, Leo is surrounded by galaxies. The most famous groupings are the Leo triplet of spiral galaxies M65 (mag. 10.3) , M66 (9.7) and NGC 3628 (9.4) and the M96 group consisting of the spiral galaxies M95 (11.4) and M96 (10.1) and the elliptical galaxies M105 (10.2) and NGC3384 (10.9).

Although they appear single, a number of the stars in Leo are in fact multiple gravitationally bound systems.

Regulus itself is formed of four stars, a spectroscopic binary (1.35) with an orbital period of 40.1 days and another pair 177" away (8.1 and 13.5) in an orbit of 600 years. **Algieba** is a pair of giant stars (2.28 and 3.51) lying 4" apart, which orbit each other every 510.3 years. **Iota** Leonis is a triple system consisting of a spectroscopic binary (4.0) and a companion (6.7) that orbits every 186 years. The pair is gradually separating such that they are currently about 2" apart.

Time given in these skynotes is Co-ordinated Universal Time (UTC) known as GMT here in the UK. British Summer Time (BST) starts at 01:00 GMT on March 28, from that time onwards add one hour to get clock time.

Sun moves north through Pisces this month crossing the Celestial Equator at 09:37 on March 20, the Vernal Equinox. Equilux (equal daylight and night) occurs a couple of days earlier due to refraction making the Sun visible before the geometric equinox.

March 12th	Rise 06:27	Set 18:05	Dec $-3^{\circ} 14'$
April 9th	Rise 05:21	Set 18:54	Dec $+7^{\circ} 39'$

Planets are poorly placed this month as most are close to the Sun and the eastern horizon at sunrise, except for Mars and Uranus which are visible in the evening sky in the west.

Mercury (+0.1 6.5" 65% to -1.0 5.1" 94%) moves from Capricornus, through Aquarius and Pisces into Cetus and is too close to the eastern horizon at sunrise to be visible this month.

Venus (-3.9 9.7" 100% to -3.9 9.7" 99.8%) moves from Aquarius, through Pisces into Cetus and back into Pisces and as it passes through superior conjunction on March 26 is not visible this month.

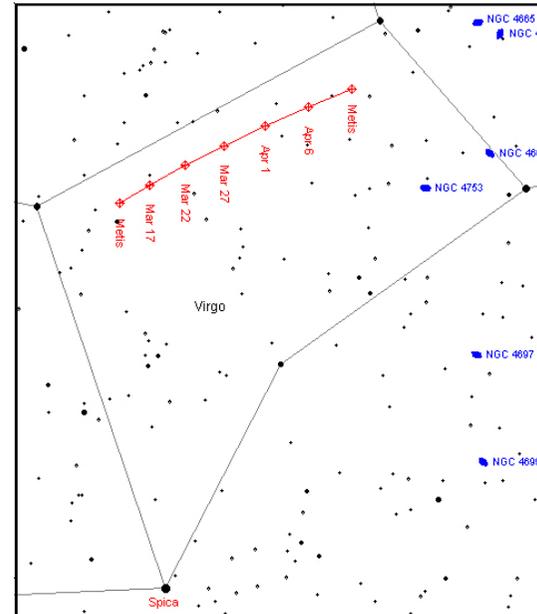
Mars (+1.1 5.9" to +1.4 5.1") lies in Taurus and is visible high in the west for the first half of the night, setting around 01:00. Mars starts the month lying between the Hyades and Pleiades clusters and throughout the month moves north through the constellation gradually appearing smaller and less brilliant. On March 19 the first quarter Moon lies 2° to the south.

Jupiter (-2.0 33.5" to -2.1 35.3") lies in Capricornus and is gradually drawing away from the Sun such that it might be glimpsed just above the SE horizon just before dawn at the end of the month.

Saturn (+0.7 15.5" to +0.7 16.0") lies in Capricornus and like Jupiter is gradually drawing away from the Sun. Given that its altitude is about 2.5° greater than Jupiter (which will compensate a little for the 2.7 magnitude difference) it too might become visible low in the SE just before dawn at the end of the month.

Uranus (+5.8 3.4" to +5.9 3.4") lies in Aries and is visible in the west in the early evening, setting at 22:20 at the beginning of the month and 20:40 at the end. Throughout the month it gradually draws closer to the Sun, being lost in its glare towards the end.

Neptune (+8.0 2.2") lies in Aquarius and as it passed through conjunction last month is too close to the Sun for observation.



Asteroid 9 Metis

(discovered at Markee Observatory, Ireland in 1848) is at opposition on April 4 when it reaches a magnitude of +9.5. Having a size of about 210 x 170 km its track through Virgo, north of Spica, is shown in the chart.

4 Vesta is still shining brightly (between mag. +6.1 and +6.5) even though now past opposition. Its track through Leo is shown on the first page of these skynotes.

Fireball! The recent UK fireball on Feb 28 and the one over Canada on Feb 22 reminds us that this is fireball season. Although there are no major meteor showers this month the weeks around the vernal equinox normally show an enhancement in fireballs of 30% compared to other times of the year. Report your sightings to ukmeteornetwork.co.uk/fireball-report

Algol minima occur every 2.867315 days and are visible on March 27 at 23:44 and March 30 at 20:33.

Twinkle, twinkle little star, but planets do not. This is because the angular size of stars is less than the size of turbulence in the Earth's atmosphere, but that of planets is greater. With Mars and Aldebaran being close and around the same brightness and colour at the moment, this is a good time to notice this effect.

Small radio sources also twinkle, however instead of the atmosphere their turbulent medium is produced by the charged particles of the solar wind. One way of estimating the size of such a source is by measuring the amplitude of its scintillations with angular distance from the sun. As the fluctuations in the solar wind are smaller closer to the Sun, watching the source as it draws closer to the Sun and noting when the scintillations disappear gives an idea of its size.

It was while using this technique to measure the size of quasars that Jocelyn Bell Burnell discovered pulsars in August 1967 and gave the 1974 Nobel prize for physics to her supervisors Antony Hewish and Martin Ryle.