Forthcoming CAWAS Meetings on Zoom at 7:00pm BST

July 10th	Dr Richard McKim	Perihelic Oppositions of Mars
August 14th	Lyn Smith	The Solar Cycle (Speaking from Scotland)

Meteors After a period of inactivity, there are a number of minor showers from the Summer Antihelion Source that have their maxima this month:-

Southern Delta Aquarids	July 12 to August 23,	max. July 28/29
Alpha Capricornids	July 15 to August 20,	max. August 1
Iota Aquarids	July to August,	max. August 6

However, as the Moon is around full, conditions are not very favourable.

The most famous shower this month is of course the **Perseids** which runs from July 17 until August 24. The meteors originate from the tail of the great comet of 1862 (comet 109P/Swift-Tuttle) and at their peak normally produce a ZHR (zenith hourly rate) of 80. The peak of activity is predicted for the afternoon of August 12, so good rates are likely on the nights of 11/12 and 12/13. Unfortunately, the last quarter Moon is nearby in Taurus so will drown out the fainter members of the shower.

July	**Event**	
Monday	13th	Moon - last quarter
Tuesday	14th	Jupiter opposition
Friday	17th	Moon near Venus
Sunday	19th	Moon near Mercury
Monday	20th	Moon - new, Saturn opposition
Wednesday	22nd	Mercury greatest elongation west
Monday	27th	Moon - first quarter
August		
Saturday	1st	Moon near Jupiter
Sunday	2nd	Moon near Saturn
Monday	3rd	Moon - full
Sunday	9th	Moon near Mars
Tuesday	11th	Moon - last quarter, Perseids maximum
Thursday	13th	Venus greatest elongation west

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.

Web Site: http://www.covastro.org.uk
Mailing list
Join the CAWAS mailing list and receive irregular information of astronomical events and CAWAS news.

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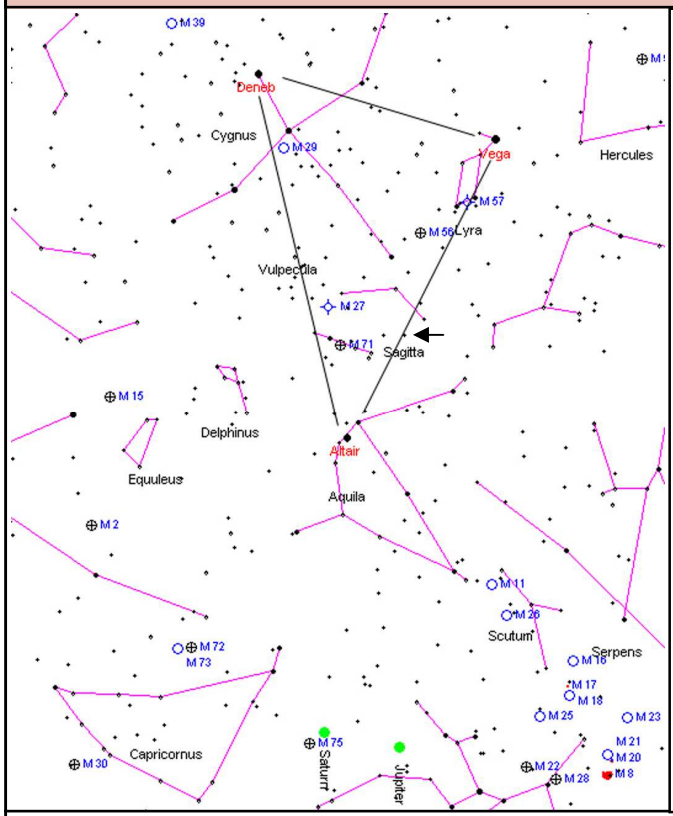
Coventry and Warwickshire Astronomical Society

Sky Notes

July 10th to August 14th 2020 No. 274



Formed by the three bright stars: Deneb in Cygnus, Vega in Lyra and Altair in Aquila, the Summer Triangle dominates the southern sky for the next few months. As the plane of the Milky Way passes through the triangle it is a good hunting ground for open clusters and nebulae, the most famous of which is the North America Nebula (NGC7000) near Deneb. Near Vega is the Ring Nebula, M57, a planetary nebula and further south in Vulpecula is another planetary, The Dumbbell Nebula, M27.

The Summer Triangle

Just on the edge of the triangle, the arrow shows the location of Brocchi's Cluster, which looks like an upside down coathanger and below the triangle the two gas giant planets, Jupiter and Saturn, come to opposition in Sagittarius this month. Jupiter is by far the brightest of the two and acts as a pointer to the fainter Saturn.

Time given in these skynotes is Co-ordinated Universal Time (UTC) known as GMT here in the UK. Add one hour to get clock time in BST.

Sun continues its journey south moving from Gemini through Cancer into Leo and as a consequence from July 26 dark skies return.

July 10th	Rise 03:56	Set 20:26	Dec +22° 09'
August 14th	Rise 04:48	Set 19:32	Dec +14° 07'

Mercury (+2.6 10.6" to –1.9 5.0") moves from Gemini through Cancer into Leo and is visible very low down in the ENE just before sunrise as it nears its greatest elongation west of 20.1° on July 22. The thin crescent Moon lying 3° to the north on July 19 might help in locating it.

Venus (-4.7 37.0" to –4.4 23.2") moves from within the Hyades cluster in Taurus through Orion into Gemini and is visible low in the east in the early hours of the morning, rising 2 hours before the Sun at the beginning of the month and 4 hours at the end. It reaches its greatest elongation west of 45.8° on Aug 13. On July 17 the crescent Moon lies 2° to the north.

Mars (-0.7 12.3" to –1.4 16.3") moves from Cetus into Pisces and is visible high in the SE for the second half of the night, rising at 23:20 at the beginning of the month and 21:30 at the end. On Aug 3 Mars reaches its perihelion of 1.3814 AU, sadly before opposition in October. On Aug 9 the Moon lies 2.5° to the south.

Comet C/2020 F3 (NEOWISE) passed through perihelion on July 3 and is hoped to be visible to the naked eye (around mag. 3) at the start of the month, low in the NW just after sunset . As the month progresses it draws further away from the Sun and fades, but at the same time entering a darker evening sky. If it does not turn out to be as bright as expected locating it is helped by its close approach to M64 on Aug 4 and M53 on Aug 6, both in Coma Berenices.

Jupiter (-2.7 47.6" to –2.7 46.2") lies in Sagittarius and is visible low down in the south all night as it passes through opposition on July 14. Unfortunately at its highest it is still only 15.5° above the horizon. On Aug 1 the Moon lies 2.5° to the south.

Jupiter Red Spot transit times:-
July 11 00:14, **13** 21:43, **15** 23:21, **18** 01:00 20:51, **20** 22:29, **23** 00:07, **25** 01:45 21:37, **27** 23:15, **30** 00:53 20:45
Aug 4 00:01 19:53, **6** 01:40 21:31, **8** 23:09, **9** 19:01, **11** 00:48 20:39, **13** 22:17

Saturn (+0.2 18.4" to +0.3 18.3") lies in Sagittarius 7° to the east of Jupiter and is visible all night as its opposition is on July 20. It culminates at a slightly higher elevation than Jupiter at 17°, but still very low. On Aug 2 the Moon lies 6° to the east .

Uranus (+5.9 3.5" to +5.8 3.6") lies in Aries and is visible in the east in the morning sky, rising at midnight at the beginning of the month and 21:50 at the end.

Neptune (+7.7 2.3") lies in Aquarius and is visible in the SE in the later part of the night rising at 22:40 at the beginning of the month and 20:20 at the end.

Beta Lyrae is a multiple star system whose two main components form an eclipsing binary where their close orbit means that part of the atmosphere of one star is being dragged into an accretion disc surrounding the other. As the plane of their orbit is almost in line with Earth they mutually eclipse one another causing their overall brightness to fall from +3.4 to +4.4 over a period of 12.9414 days. This period is also gradually becoming longer by 19 seconds per year. The chart below shows its location and some comparison stars to help judge its brightness.