

Forthcoming CAWAS Meetings		
Friday 9th August	Geoffrey Johnstone	The Life and Astronomy of Margaret Burbidge 1919-
Friday 13th September	Dr Andrew Green	In search of Aurorae
Friday 11th October	David Arditti	What Astronomy can I do from the City?
Friday 8th November	Dr Nick Hewitt	Neighbours. Introducing the Local Group and CAWAS Anniversary Celebrations
Friday 13th December	Christmas Meal	King's Hill Nurseries, King's Hill Lane, Coventry. CV3 6PS

Saturday 28th September 20:30 - 22:30 Come and help at the Stargazing event at Ryton Pools

BAA Saturday 24th August 10:00 - 17:00	Spectroscopy Software Training Workshop 9 Margaret St., Birmingham. B3 3BS
Sunday 29th September 10:00 - 17:00	Asteroids & Remote Planets Section Meeting Clanfield Memorial Hall, Clanfield, Hampshire. PO8 0RB

August	Event	
Friday 9th	Moon near Jupiter	
Saturday 10th	Mercury greatest elongation west	
Monday 12th	Perseid maximum	☞
Tuesday 13th	Eunomia opposition	
Wednesday 14th	Venus superior conjunction	
Thursday 15th	Moon - full	☉
Friday 23rd	Moon - last quarter	☾
Saturday 24th	Occultation of $\delta 1$ & $\delta 2$ Tauri	
Friday 30th	Moon - new	●
September		
Monday 2nd	Mars conjunction	
Wednesday 4th	Mercury superior conjunction	
Friday 6th	Moon - first quarter	☾
Sunday 8th	Moon near Saturn	
Tuesday 10th	Neptune 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.

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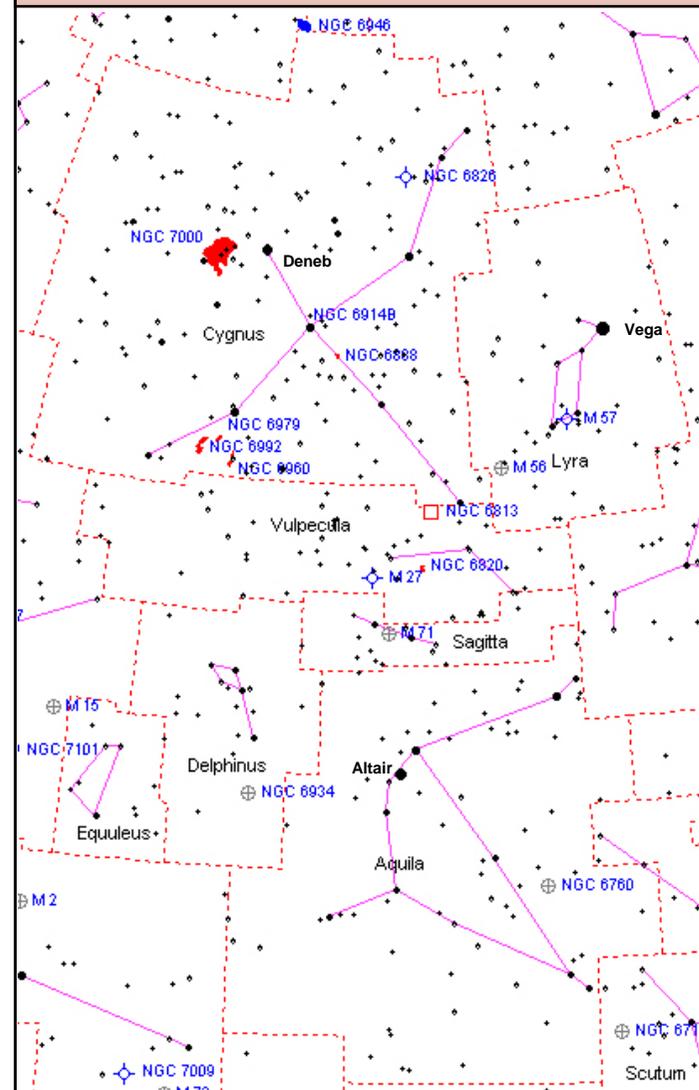
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Sky Notes

August 9 to September 13 2019 No. 263



Summer Triangle

It must be summer if there are thunderstorms and Cygnus the Swan flies high in the southern sky!

Near to Deneb (which with Vega and Altair form the Summer Triangle) is the North America Nebula, NGC7000, an emission nebula that shows up well on long exposure photographs as does the Veil Nebula, NGC6992, a supernova remnant.

Further south in Vulpecula (the Little Fox) is the planetary Dumbbell Nebula, M27 and in Sagitta (the Arrow) the globular cluster, M71.

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 moves south from Cancer into Leo.

August 9th	Rise 04:38	Set 19:44	Dec +15° 53'
September 13th	Rise 05:36	Set 18:27	Dec +3° 40'

Mercury (+0.1 7.7" to -1.0 4.9") moves from Gemini through Cancer and Leo into Virgo. It can be seen low in the ENE shortly before sunrise at the beginning of the month as it passes through its greatest elongation west of 19.0° on Aug 10. At the end of the month it is not visible as it passes through superior conjunction on Sept 4.

Venus (-3.9 9.6" to -3.9 9.8") moves from Cancer through Leo into Virgo, but is not visible this month as it passes through superior conjunction on Aug 14.

Mars (+1.7 3.5") lies in Leo and like Venus is not visible this month as it passes through conjunction on Sept 2.

Jupiter (-2.4 41.6" to -2.1 37.5") lies in Ophiuchus and passes through its stationary point on Aug 11 when it starts to move prograde again. It is visible low in the SSW for the first part of the evening, setting at 23:40 at the beginning of the month and 21:30 at the end. On Aug 9 the Moon lies 2° to the north.

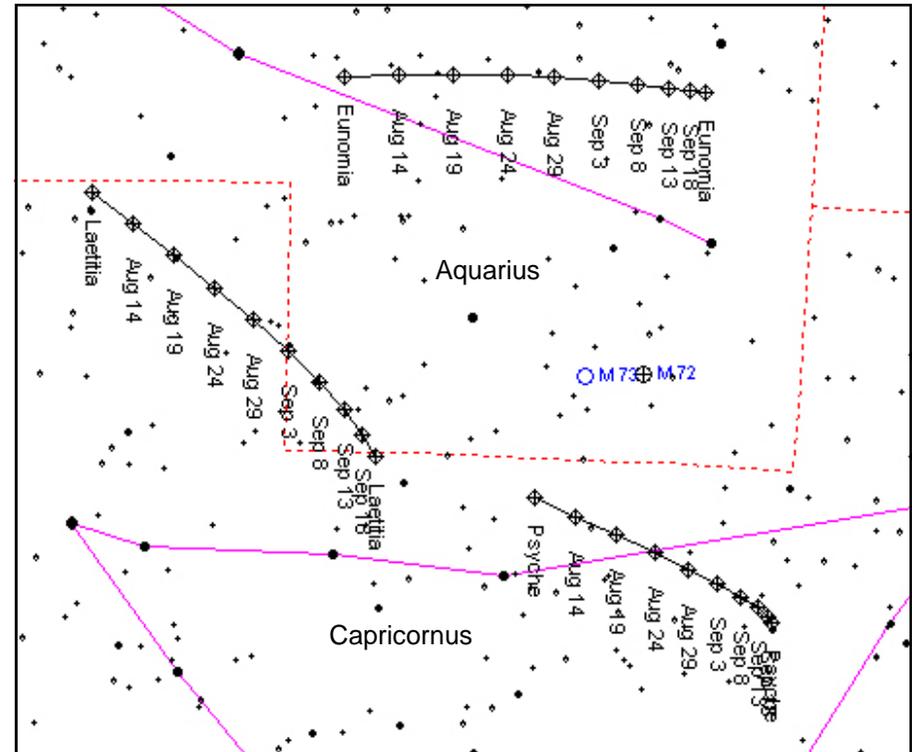
Saturn (+0.2 18.0" to +0.4 17.2") lies in Sagittarius and is visible low in the south for the first part of the night culminating two hours after Jupiter. At the beginning of the month it sets at 01:50 and 23:30 at the end. On Sept 8 the Moon lies 4° to the east.

Uranus (+5.8 3.6" to +5.7 3.7") lies in Aries and passes through its stationary point on Aug 12 starting to move retrograde as it heads towards opposition later in the year. It can be seen high in the ESE in the later part of the night as it rises at 22:00 at the beginning of the month and 19:40 at the end.

Neptune (+7.7 2.3") lies in Aquarius and as it passes through opposition on Sept 10 can be seen reasonably high in the south all night.

Meteors The glorious twelfth! The **Perseid** meteor shower 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 usually over the night of 12 / 13, but good rates are also likely on the nights of 11 / 12 and 13 / 14. Unfortunately, this year there is a gibbous Moon to contend with, but due to its low declination (-23°) it sets at around 02:00.

Occultation of mag. +3.9 δ 1 Tauri by the bright limb of the Moon starts at 02:44 on Aug 24 and finishes at 03:53. During the occultation the fainter (+4.8) δ 2 Tauri is also occulted starting at 03:28 and finishing at 04:11. Then on Aug 27 the Moon just misses mag +3.5 δ Geminorum at 04:14. The occultation can be seen from Oxford, so it will be a grazing occultation from a place in between there and Coventry.



Asteroid (15) Eunomia comes to opposition on Aug 13 when it will reach mag. +8.2. Its path through the stars of Aquarius is shown in the chart, along with the paths in nearby Capricornus of mag +9.1 (39) Laetitia, at opposition on Aug 17 and mag +9.3 (16) Psyche on Aug 7.

Another asteroid (2006 QV89), 20 to 50 m in diameter, had been predicted to have a 1 in 7000 chance of hitting Earth on Sept 9. However, ESA have confirmed that it will now miss the Earth. They did this by not seeing it in an area of sky it should occupy if it were on a course to hit. The object was discovered in August 2006 and observed for 10 days after which it disappeared, never to be seen again - hopefully!