

# Crewkerne & District Astronomical Society

## Sky Notes April 2019

All timings are Universal Time (G.M.T.), U.K. local time is now the same.

### Moon's Phases

|                                      |       |                |                  |
|--------------------------------------|-------|----------------|------------------|
| New                                  | April | 05d. 08h. 52m. |                  |
| First Quarter                        | "     | 12d. 19h. 07m. |                  |
| Full                                 | "     | 19d. 11h. 13m. |                  |
| Last Quarter                         | "     | 26d. 22h. 19m. |                  |
| Moon at apogee (furthest from Earth) | April | 01d. 00h.      | Diameter 29' 58" |
| Moon at perigee (nearest to Earth)   | "     | 16d. 22h.      | " 32' 49"        |
| Moon at apogee                       | "     | 28d. 18h.      | " 30' 02"        |

### The Planets

**Mercury** ; A late morning object all month. On the 1<sup>st</sup>. it rises at 05.00, 40 minutes before dawn. On the 30<sup>th</sup>. it rises at 04.15, ¼ hour before the Sun. It starts the month in N.W. Aquarius close to the border with Pisces. During the month it travels 30° N.E. in Pisces, ending it some 8° from the border with Aries.

Mid month Mercury will be mag. 0.3, diam. 7.3", elongation 27° W. and rising at 04.40, 35 minutes before sunrise.

**Venus** : Remains a late morning object until August. At the start of the month it rises at 04.50, 50 minutes before dawn. By the end it rises at 04.00, ½ hour before the Sun. It also begins the month in Aquarius, further S.W. than Mercury. Also going N.E. it crosses into Pisces around the 25<sup>th</sup>. and ends it just North of the border with Cetus. A total distance of 32°.

Mid month it will be mag. -3.9, 12.4" diam., elongation 32° W. and rising at 04.25, an hour before dawn.

**Mars** : Continues to be an evening object - for the next 6 months. On the 1<sup>st</sup>. it sets at 23.15, and on the 30<sup>th</sup>. at 23.00. It starts the month in Western Taurus. Moving 17° N.E. during the month it ends it near the borders with Auriga & Gemini.

Mid month Mars will be mag. 1.6, 4.4" diam., elong. 40° E. and setting at 23.10.

**Jupiter** : A morning object, getting earlier. On the 1<sup>st</sup>. it rises at 01.10, and by the 30<sup>th</sup>. at 23.10. It starts the month in S.W. Ophiuchus near the border with Scorpius. It moves a few degrees E. to a stationary point around the 10<sup>th</sup>., then moves back 3° W.

Mid month Jupiter will be mag. -2.4, 41" diam., elong. 105° W. and rising at midnight.

**Saturn** : Also a morning object, getting earlier. At the start of the month it rises at 02.50, and by the end at 01.10. In N.E. Sagittarius, it travels a couple of degrees E. during the month, ending it 6° from the border with Capricornus.

Mid month it will be mag. 0.5, disc diam. 16.7", rings 38", elong. 63° E. and rising at 02.00, 3 hours before dawn.

Titan, mag. 8.5 & elong. 150". Greatest W. elong. on 7<sup>th</sup>. & 23<sup>rd</sup>. Greatest E. elong. on 15<sup>th</sup>. & 30<sup>th</sup>.

**Uranus** : An early evening object, by the 20<sup>th</sup>. setting at sunset. During the month it moves 1.4° N.E. in S.W. Aries close to Pisces.

Mid month it will be mag. 5.9, 3.5" diam., elong. 34° E. and setting at 19.30.

**Neptune** : A late morning object. On the 1<sup>st</sup>. rising at 05.00, 40 minutes before dawn, and on the 30<sup>th</sup>. at 03.10. Still in Aquarius (like Venus) close to the Pisces border. It travels ¾° N.E. during the month, passing a few arc minutes N.W. of 6<sup>th</sup>. mag. star Phi (80) Aqu.

Mid month it will be mag. +7.9, 2.2" diam., elong. 31° W. and rising at 04.10, 50 minutes before dawn.

### Meteors

**Lyrids** : April 14 - 30. Maximum April 22d. 16h. Radiant at R.A. 18h.07m., Dec. +33.1, 9° S. of 1<sup>st</sup>. mag. star Vega, Alpha (30) Lyr. Zenith Hourly Rate 15. Moon rise 22.54, sets at 06.48 on the 23<sup>rd</sup>. (Full on the 19<sup>th</sup>.)

### Deep Sky Objects

**M81 (NGC 3031)** ; A spiral galaxy in Ursa Major discovered by John Bode in 1774. He noted it as "a nebulous patch, more or less round, with a dense nucleus". Also found by Mechain in 1779 and observed by Messier in 1781. M81 is seen nearly face-on at a distance of 5 million L.Y., twice as far as M31. Its diam. is 90,000 L.Y., with a mass of 250 billion Suns. The first spiral to reveal signs of its rotation, when Max Wolf examined it spectroscopically and calculated that its edge was rotating at around 300 km./sec. Its angular size is 27' x 14' and integrated mag. 6.9. M81 is the brightest member of a group of at least 10 galaxies, which include NGC 2366, 2403, 2976, 3077 & IC 2574. To find it, go diagonally N.W. across the bowl of the 'Plough' from Phad (Gamma) to Duhbe (Alpha) and continue a similar distance (10°) and slightly N. to M81.

**M82 (NGC 3034)**. An irregular galaxy, probably a badly disrupted spiral seen edge-on. Found by Bode at the same time as M81. His description "A nebulous patch, very pale, elongated". Noted by Messier in 1781, who wrote "Nebula without a star near the preceding (M81), both appearing in the same field of the telescope". In 1871 Lord Rosse observed it with the 6ft. telescope at Birr and remarked on its strange irregular form. He noted "A most extraordinary object, at least 10' in length and crossed by several dark bands". It is postulated that some 200 billion years ago M81 passed close by and its much greater mass (about 5 times M82's) created the disruption. There is still intense activity evident, particularly at infra-red, which makes M82 the brightest known galaxy in this respect. At a similar distance from us as M81, its diam. is around 16,000 L.Y., with an apparent size of 11' x 4', and an integral mag. of 8.4.

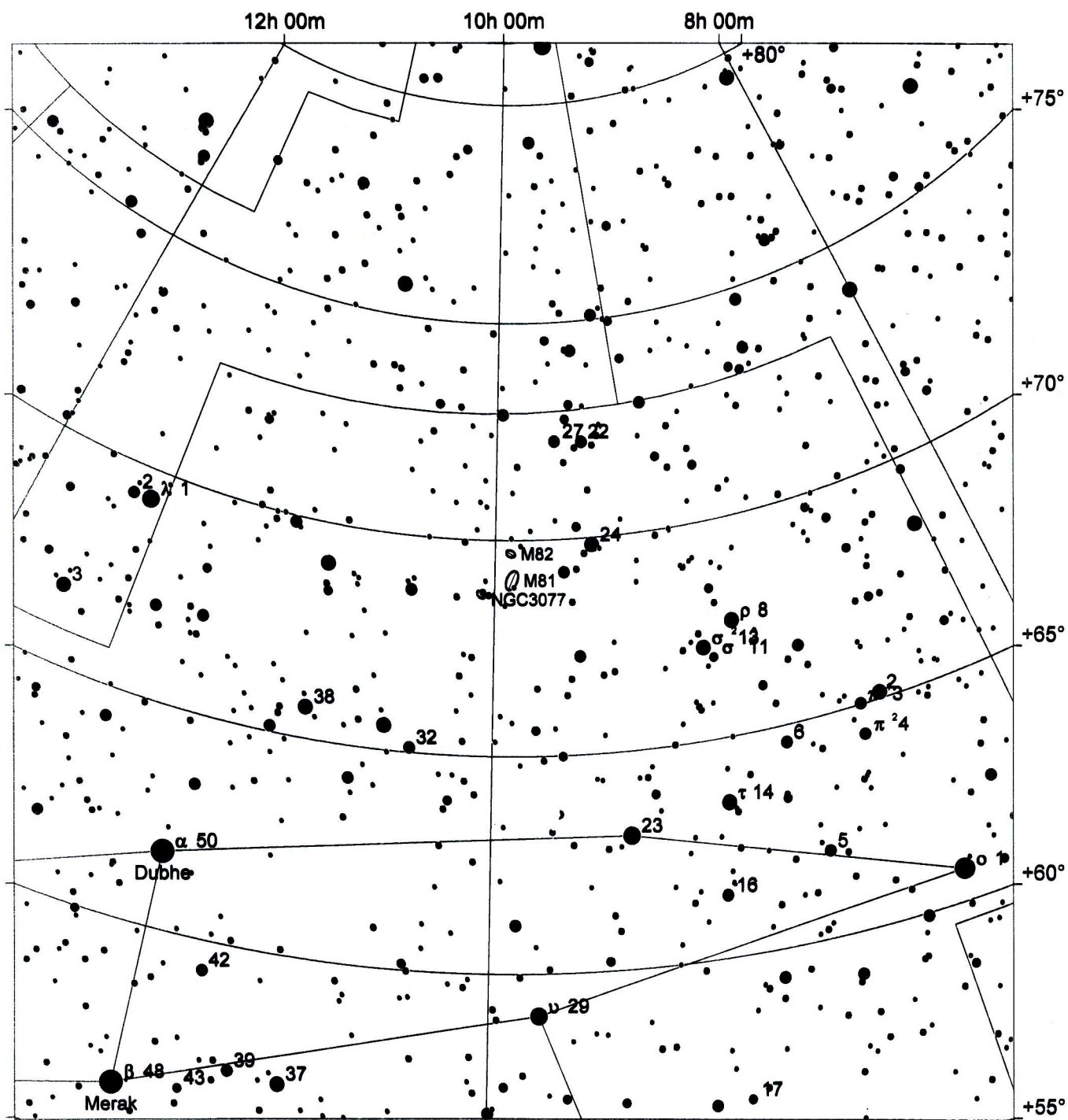
M82 lies 38' N.N.E. of M81.

R.A. 9h. 55.8m., Dec.+69°41'

Arthur Davis March 2019

# MegaStar

|                      |             |  |             |             |             |                |             |  |  |  |                             |  |                               |  |  |  |
|----------------------|-------------|--|-------------|-------------|-------------|----------------|-------------|--|--|--|-----------------------------|--|-------------------------------|--|--|--|
| N<br>E <div></div> W |             | <div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div> <div>0 1 2 3 4 5 6 7 8 9</div> |             |             |             |                |             |  |  |  | 24° 42.8'<br>x<br>22° 44.0' |  | 09h 55m 33.5s<br>+69° 04' 00" |  | Aug 3, 2019<br>8:27pm LT<br>18:27 UT<br>N 51° 0' 0.0"<br>W 3° 0' 0.0"<br>Alt: 50.9°<br>Azim: 326.5°<br>Trans: 13:25<br>Rise: ---<br>Set: --- |  |
| Galaxy               | Glxy Cl     | Globular   | Open Cl     | Planetary   | Clust+Neb   | UMa            |             |  |  |  |                             |  |                               |  |  |  |
| <div></div>          | <div></div> | <div></div>  | <div></div> | <div></div> | <div></div> | Uranometria 23 |             |  |  |  |                             |  |                               |  |  |  |
| Bright Neb           | Dark Neb    | Asterism   | Unknown     | Quasa       | Dbl Star    | Comet          | Asteroid    |  |  |  |                             |  |                               |  |  |  |
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M81 (NGC 3031) & M82 (NGC 3034) in Ursa Major.