

Crewkerne & District Astronomical Society

Sky Notes February 2019

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

Moon's Phases

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|--------------------------------------|----------------|-------------------|
| New | February | 04d. 21h. 05m. |
| First Quarter | " | 12d. 22h. 27m. |
| Full | " | 19d. 15h. 25m. |
| Last Quarter | " | 26d. 11h. 29m. |
| Moon at apogee (furthest from Earth) | Feb. 09d. 09h. | Diameter 29' 54". |
| Moon at perigee (nearest to Earth) | Feb. 19d. 09h. | " 33' 30" |

The Planets

Mercury ; An early evening object all month. On the 3rd. it rises at sunset, 16.50. On the 28th. it sets at 19.20, an hour & 40 minutes after Sunset. On the 27th. it reaches its greatest E. elongation (from the Sun), 18°. It starts the month in mid. Capricornus, 1° N. of the 6th. mag. star Eta Cap. Travelling N.W., it ends the month in mid Pisces, just over 1° S.W. of 5th. mag. star Lambda. A total travel of 45°.

Mid month Mercury will be mag. -1.1, diam. 5.5", elongation 13° W. and setting at 18.20, 65 minutes after sunset.

Venus : A late morning object. At the start of the month it rises at 05 00, 2½ hours before dawn. By the end it rises at 05.20, 1½ hours before the Sun. It begins the month on the border of Ophiuchus with sagittarius. During the month it moves East through Sagittarius and ends it close to the border with Capricornus. A distance of 40°.

Mid month it will be mag. -4.2, 17.5" diam., elong. 43° W. and rising at 05.20, 2 hours before dawn.

Mars : An early evening object - for the next 7 months. On the 1st. it sets at 23.20, and maintains this time all month.. Starting in S.W. Pisces, it moves E.N.E. during the month, ending it in Eastern Aries, having crossed into it around the 15th. A total travel of 18°.

Mid month Mars will be mag. 1.1, 5.7" diam., elong. 60° E. and setting at 23.20.

Jupiter : A late morning object. At the start it rises at 04.30, 3 hours before dawn. By the end it rises at 03.00, nearly 4 hours before the Sun. It starts the month in S. Ophiuchus. During the month it travels 4½° E., remaining in that constellation during the month, ending it 2½° N. of 4th.mag. Theta.

Mid month Jupiter will be mag. -2, 34.5" diam., elong. 75° W. and rising at 03.40, 3 hours before the Sun.

Saturn : Remains a very late morning object On the 1st. it rises at 06.20, an hour & 20 mins. before dawn. On the 28th. it rises at 04.50, 2 hours before the Sun. Continuing to lie in Sagittarius, East of the 'Teapot'. On the 1st. it is 5° N.E. of 'Nunki', 2nd. mag. Sigma. It moves 3° E. during the month.

Mid month it will be mag. 0.6, disc diam. 15.4", rings 35", elong. 40° E. and rising at 05.40, 1 hour & 40 minutes before dawn.

Titan, mag. 8.5 & elong. 150". Greatest W. elong. on 2nd. & 18th., Greatest E. elong. on 10th. & 26th.

Uranus : An evening object. On the 1st. it sets at midnight, and by the 28th. at 22.20, 4½ hours after sunset. It remains in Southern Pisces, on the border with Cetus. It moves ¾° N.E. during the month, ending it ¼° S.S.W. of 6th.mag. star 54 Ceti.

Mid month it will be mag. 5.9, 3.4" diam., elong. 60° E. and setting at 23.00.

Neptune : A very early evening object. At the month's start it sets at 19.50, 3 hours after sunset and by the end at 18.00, ½ hour after sunset. Still in Aquarius. It starts the month 1¼° S.E. of the 7th. mag. star 82 Aqu. It travels 0.8° N.E. during the month.

Mid month it will be mag. +7.9, 2.2" diam., elong. 31° W. and setting at 18.50.

Meteors

There are no meteor showers in February or March. The next one is the Virginids, peaking around April 11th. & 12th.

Deep Sky Objects

M37, M37 & M38 : Three open star clusters in Auriga, noted by Giovanni Hodierna around 1654, listed by Le Gentil in 1749 and observed by Charles Messier in 1764 and entered into his Catalogue of objects to ignore when looking for Comets.

M36 (NGC 1960) : It contains at least 160 stars, the ten brightest being mag. 8 or 9. The brightest, at mag. 8.8 is a blue giant star with 360 times the Sun's luminosity. M36 lies 4,300 L.Y. away with a diam. of 15 L.Y. It has an apparent size of 15' and integrated magnitude 6.0. The youngest of the trio at 30 million years.

R.A. 5h. 36.1m., Dec. 34° 08'.

M37 (NGC 2099) : M37 is the largest at 33 L.Y., apparent diam. 25' and integrated mag. 5.6. There are at least 2,000 stars in the cluster with some 150 brighter than mag. 12.5, and 500 brighter than mag. 15, with the brightest at mag. 9.5, one of over a dozen 'red giants'.

At a distance of 4,600 L.Y. it is reckoned to be 150 million years old.

R.A. 5h. 52.4m., Dec. +32° 33'.

M38 (NGC 1912) : The oldest of the three, with an estimated age of 150 to 200 million years. With a diam. of 15 L.Y. it has an apparent size of 20' and and int. mag. 6.4 and at least 200 members. The brightest is a yellow giant star at mag. 7.9 and an actual luminosity of about 900 Suns. M38 is some 3,500 L.Y. away from us.

R.A. 5h. 25.7m. Dec. +35° 50'.

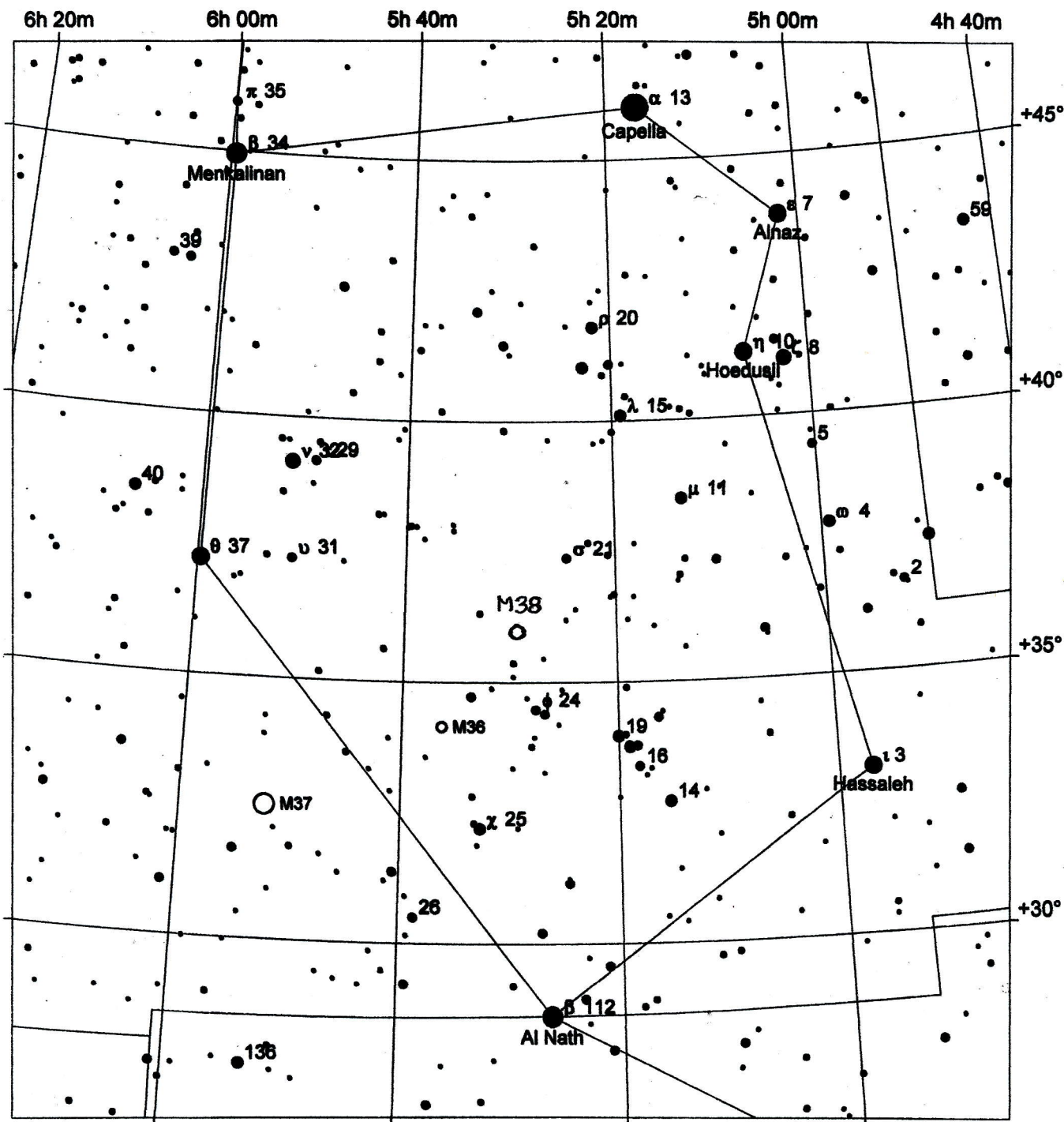
All can be seen with binoculars and are great in a telescope using a low power eyepiece.

To find them, start from Capella, mag. 0.2 Alpha (13) Aurigae. Go 18° S. to Al Nath, mag. 1.8 Beta (22) Tauri. 11° N.E. of Al Nath is mag. 2.7 Theta (37) Aur. M36 is equidistant from them, offset nearly 2° to the N.W. of a line joining them, whilst M37 is a similar distance S.E. of the line. M38 lies 2½° N.W. of M36. Thus all three are nearly in a straight line 6° long.

Arthur Davis Jan. 2019

MegaStar

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| <div><div>N</div><div>E<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></div><div>012345678</div></div> | | | | | | | <div><div>20° 35.5'</div><div>x</div><div>18° 58.6'</div></div> | <div><div>05h 30m 0.0s</div><div>+37° 00' 00"</div></div> | <div>Jan 9, 2019</div> <div>7:36pm LT</div> <div>19:36 UT</div> <div>N 51° 0' 0.0"</div> <div>W 3° 0' 0.0"</div> <div>Alt: 57.0°</div> <div>Azim: 98.4°</div> <div>Trans: 22:30</div> <div>Rise: 12:14</div> <div>Set: 08:45</div> | | |
| <div>Galaxy</div> <div><div></div></div> | <div>Gby Cl</div> <div><div></div></div> | <div>Globular</div> <div><div></div></div> | <div>Open Cl</div> <div><div></div></div> | <div>Planetary</div> <div><div></div></div> | <div>Clust+Neb</div> <div><div></div></div> | <div>Aur</div> <div>Uranometria 97</div> | | | | | | | |
| <div>Bright Neb</div> <div><div></div></div> | <div>Dark Neb</div> <div><div></div></div> | <div>Asterism</div> <div><div></div></div> | <div>Unknown</div> <div><div></div></div> | <div>Quasa</div> <div><div></div></div> | <div>Dbl Star</div> <div><div></div></div> | <div>Comet</div> <div><div></div></div> | <div>Asteroid</div> <div><div></div></div> | | | | | | |



M36 (NGC 1960), M37 (NGC 2099) & M38 (NGC 1912) in Auriga.