## M67, Open Cluster, Cancer

Continuing a series of photograph's of the Messier Objects


By Jim Mazur - http://www.skyledge.net/Messier67.htm, CC BY-SA 4.0, https://commons.wikimedia.org/w/ index.php?curid=108285022

| Rugby \& District Astronomical Society |  | www.rugbyastro.org.uk |  |
| :---: | :---: | :---: | :---: |
| Honorary President : | - | Chair: | Chris Longthorn |
| Treasurer: | Dennis Osborne | Secretary: | Richard Heath |
| Speakers Secretary: | Roland Clarke | Membership Secretary: | Dave Hopkinson |
| Webmaster : | David Riley | Sky Notes: | Chris Longthorn |
| E-Mail: rugby-astro@hotmail.co.uk |  |  |  |
| ©R\&DAS 2024 |  |  |  |

Rugby \& District Astronomical Society

## Monthly Sky Notes

No. 171, March 2024, by Chris Longthorn


The night sky at 23:00 U.T.C., March 15th, 2024
8

## Sky Events for March 2024

```
03 15:24 LAST QUARTER MOON
08 04:59 Mars 3.5 % N of Moon
08 17:01 Venus 3.3 }\mp@subsup{}{}{\circ}\textrm{N}\mathrm{ of Moon
10 09:00 NEW MOON
14 01:02 Jupiter 3.6 % S of Moon
15 02:54 Pleiades 0.4 }\mp@subsup{}{}{\circ}\textrm{N}\mathrm{ of Moon
15 19:00 Observing at Barby, 36% Moon
16 19:00 Observing at Barby, 36% Moon
16 19:57 ISS, 39}\mp@subsup{}{}{\circ},\mathrm{ SSE
17 04:11 FIRST QUARTER MOON
17 11:00 Neptune in Conjunction with Sun
17 17:00 Mercury at Perihelion
1 7 \text { 19:30 AGM and Members Evening}
18 19:55 ISS, 60', SSE
19 19:05 ISS, 47}, SSE
19 20:41 ISS, 53', WSW
20 03:07 Vernal Equinox
20 19:52 ISS, 77o, S
21 19:02 ISS, 68o,S
21 20:39 ISS, 62o, WSW
21 22:00 Venus 0.3 }\mp@subsup{}{}{\circ}\textrm{N}\mathrm{ of Saturn
22 19:49 ISS, 80o, S
23 18:59 ISS, 80o,S
23 20:36 ISS, 53', SSW
24 19:46 ISS, 67}, SSW
24 22:00 Mercury at Greatest Elong: 18.7}\mp@subsup{}{}{\circ}\textrm{E
25 07:00 FULL MOON
25 07:13 Pen. Lunar Eclipse; mag=0.956
26 19:43 ISS, 45', SSW
29 19:00 Observing at Barby
30 19:00 Observing at Barby
```



Received on 4th February, 54x300s light frames, darks, flats and bias frames.
David said-There have been a couple of clear nights since Christmas and I've tried to take advantage of them, in between learning new bits of kit and clouds that seem to appear as soon as it gets dark!

Taken from my garden in Rugby (Bortle 5-6), with my AT65 EDQ Telescope with an ASI2600MC camera, and an Optolong L-Enhance light pollution filter. The telescope was sitting on a ZWO AM5 mount.

The Andromeda Galaxy is a barred spiral galaxy and is the nearest major galaxy to the Milky Way. It was originally named the Andromeda Nebula and is catalogued as Messier 31, M31, and NGC 224. Andromeda has a diameter of about 46.56 kiloparsecs ( 152,000 light-years)
${ }^{[8]}$ and is approximately 765 kpc ( 2.5 million light-years) from Earth. The galaxy's name stems from the area of Earth's sky in which it appears, the constellation of Andromeda, which itself is named after the princess who was the wife of Perseus in Greek mythology.

Object of the Month for March


The Leo Triplet (also known as the M66 Group) is a small group of galaxies about 35 million light-years away in the constellation Leo. This galaxy group consists of the spiral galaxies M65, M66, and NGC 3628.

In mid-March at 22:00 U.T. The group is found in the SE (azimuth $140^{\circ}$ ) at an altitude of about $45^{\circ}$, about $2^{\circ}$ below Theta-Leonis (mag 3.33) in the hind quarters of Leo.

The group members are all visible in a small ( $100-200 \mathrm{~mm}$ aperture) telescope. NGC 3628 (top) is mag 9.5, M65 (NGC 3523, bottom right) is magnitude 9.3 and M66 (NGC 3627, bottom left) is magnitude 8.9.

## The Leo Triplet

6

The Sun, mid-March

-
©Heavens-Above.con

| Event | Time | Altitude | Azimuth |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Minimum altitude: | $00: 14$ | $-39.6^{\circ}$ | $360^{\circ}$ |  |  |
| Astronomical twilight begins: | $04: 24$ | $-18.0^{\circ}$ | $69^{\circ}$ |  |  |
| Nautical twilight begins: | $05: 05$ | $-12.0^{\circ}$ | $77^{\circ}$ |  |  |
| Civil twilight begins: | $05: 45$ | $-6.0^{\circ}$ | $85^{\circ}$ |  |  |
| Sunrise: | $06: 18$ | $-0.8^{\circ}$ | $92^{\circ}$ |  |  |
| Maximum altitude: | $12: 14$ | $35.8^{\circ}$ | $180^{\circ}$ |  |  |
| Sunset: | $18: 10$ | $-0.8^{\circ}$ | $268^{\circ}$ |  |  |
| Civil twilight ends: | $18: 44$ | $-6.0^{\circ}$ | $275^{\circ}$ |  |  |
| Nautical twilight ends: | $19: 24$ | $-12.0^{\circ}$ | $283^{\circ}$ |  |  |
| Astronomical twilight ends: | $20: 05$ | $-18.0^{\circ}$ | $292^{\circ}$ |  |  |
| All |  |  |  |  |  |

All data courtesy of Heavens-Above (www.heavens-above.com)

Inner Solar System
2024-03-15 (UTC)


Outer Solar System
2024-03-15 (UTC)
23h00m

|  | Mercury | Venus | Mars | Jupiter | Saturn | Uranus | Neptune |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Right ascension | Oh 37m 17.3s | 22h 27 m 54.5 s | 21h 47m 35.8s | 2h 46m 9.1s | 22h 53m 52.4s | 3h 9m 32.1s | 23h 50m 49.0s |
| Declination | $4^{\circ} 39^{\prime} 42$ " | -1054' $13^{\prime \prime}$ | -14* 32 ' 29 " | $15^{\circ} 7{ }^{\prime} 52$ | -8 $8^{\circ} 48^{\prime} 18^{\prime \prime}$ | 17º 24' 16" | -2 ${ }^{\circ} 19^{\prime} 15^{\prime \prime}$ |
| Range (AU) | 1.134 | 1.566 | 2.152 | 5.608 | 10.678 | 20.166 | 30.896 |
| Elongation from Sun | $14.9{ }^{\circ}$ | $20.9^{\circ}$ | $31.3^{\circ}$ | $48.2^{\circ}$ | $14.2^{\circ}$ | $54.2^{\circ}$ | $1.9{ }^{\circ}$ |
| Brightness | -1 | -3.8 | 1.2 | -2 | 1 | 5.8 | 8 |
| Equatorial Diameter | 5.93" | 10.66" | 4.35" | $35.15{ }^{\prime \prime}$ | 15.56" | 3.50" | 2.21" |
| Phase Angle | $56.0^{\circ}$ | $29.1^{\circ}$ | $21.7^{\circ}$ | $8.5^{\circ}$ | $1.4{ }^{\circ}$ | $2.4{ }^{\circ}$ | $0.1^{\circ}$ |
| Constellation | Pisces | Aquarius | Capricornus | Aries | Aquarius | Aries | Pisces |
| Meridian transit | 13:06 | 10:57 | 10:17 | 15:16 | 11:25 | 15:40 | 12:21 |
| Rises | 06:44 | 05:56 | 05:37 | 07:55 | 06:12 | 08:05 | 06:34 |
| Sets | 19:30 | 15:58 | 14:58 | 22:37 | 16:37 | 23:14 | 18:08 |
| Altitude | -27.0 ${ }^{\circ}$ | $-48.5^{\circ}$ | $-51.2^{\circ}$ | $-3.1{ }^{\circ}$ | $-46.2^{\circ}$ | $1.9^{\circ}$ | $-37.3^{\circ}$ |
| Azimuth | $324.2^{\circ}$ | $1.2^{\circ}$ | $16.9^{\circ}$ | $299.9^{\circ}$ | $351.9^{\circ}$ | $296.5^{\circ}$ | $334.7^{\circ}$ |

