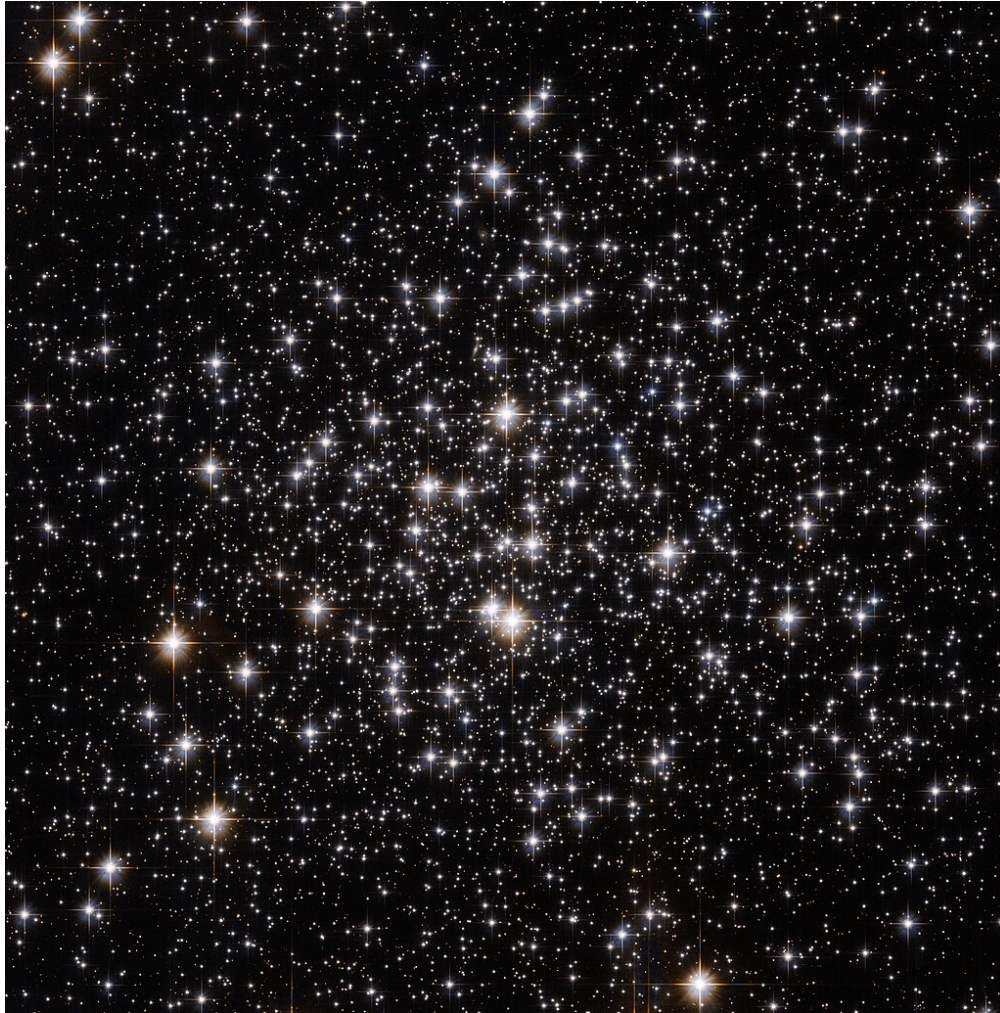


M71, Globular Cluster, Sagitta

Continuing a series of photograph's of the Messier Objects



By ESA/Hubble and NASA - <http://spacetelescope.org/images/potw1018a/>, CC BY 3.0, <https://commons.wikimedia.org/w/index.php?curid=11335437>

Rugby & District Astronomical Society

www.rugbyastro.org.uk

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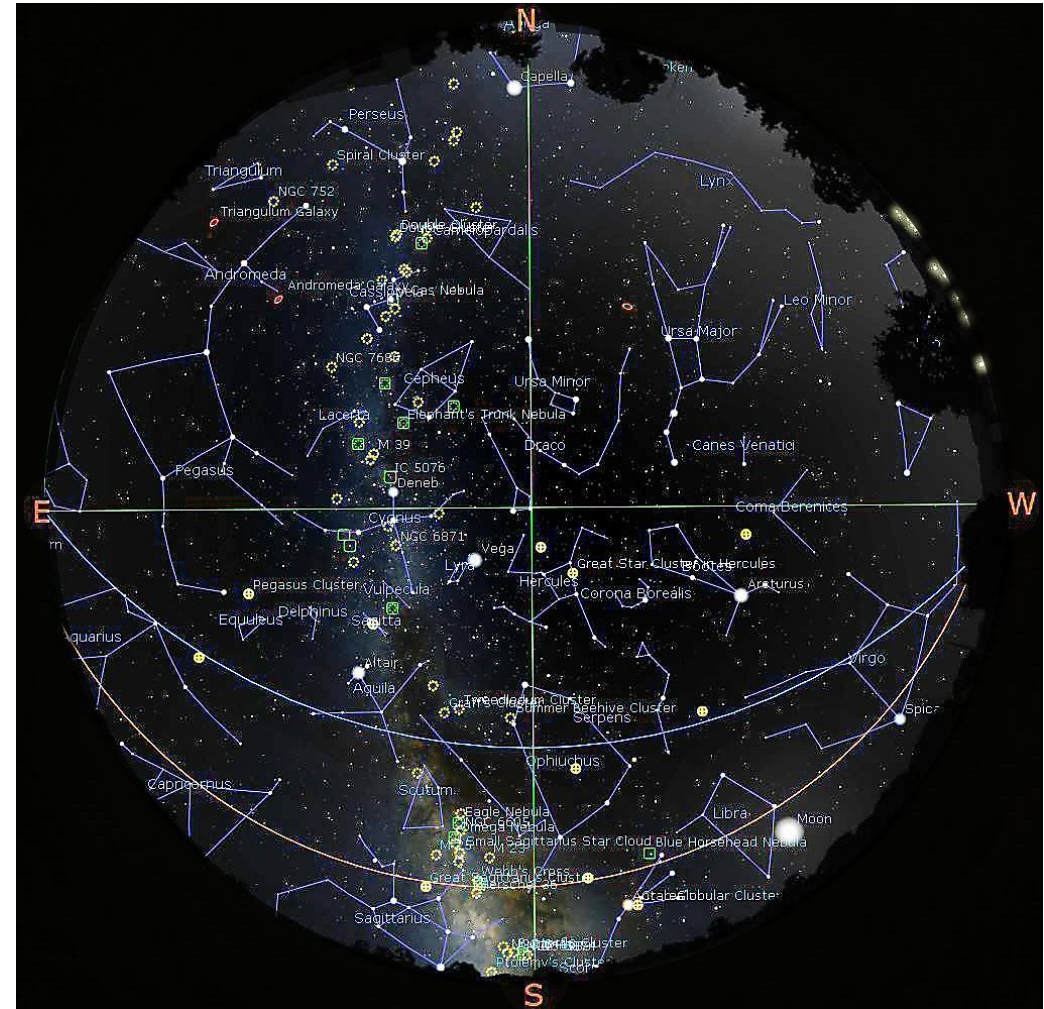
E-Mail: rugby-astro@hotmail.co.uk

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Rugby & District Astronomical Society

Monthly Sky Notes

No. 175, July 2024, by Chris Longthorn

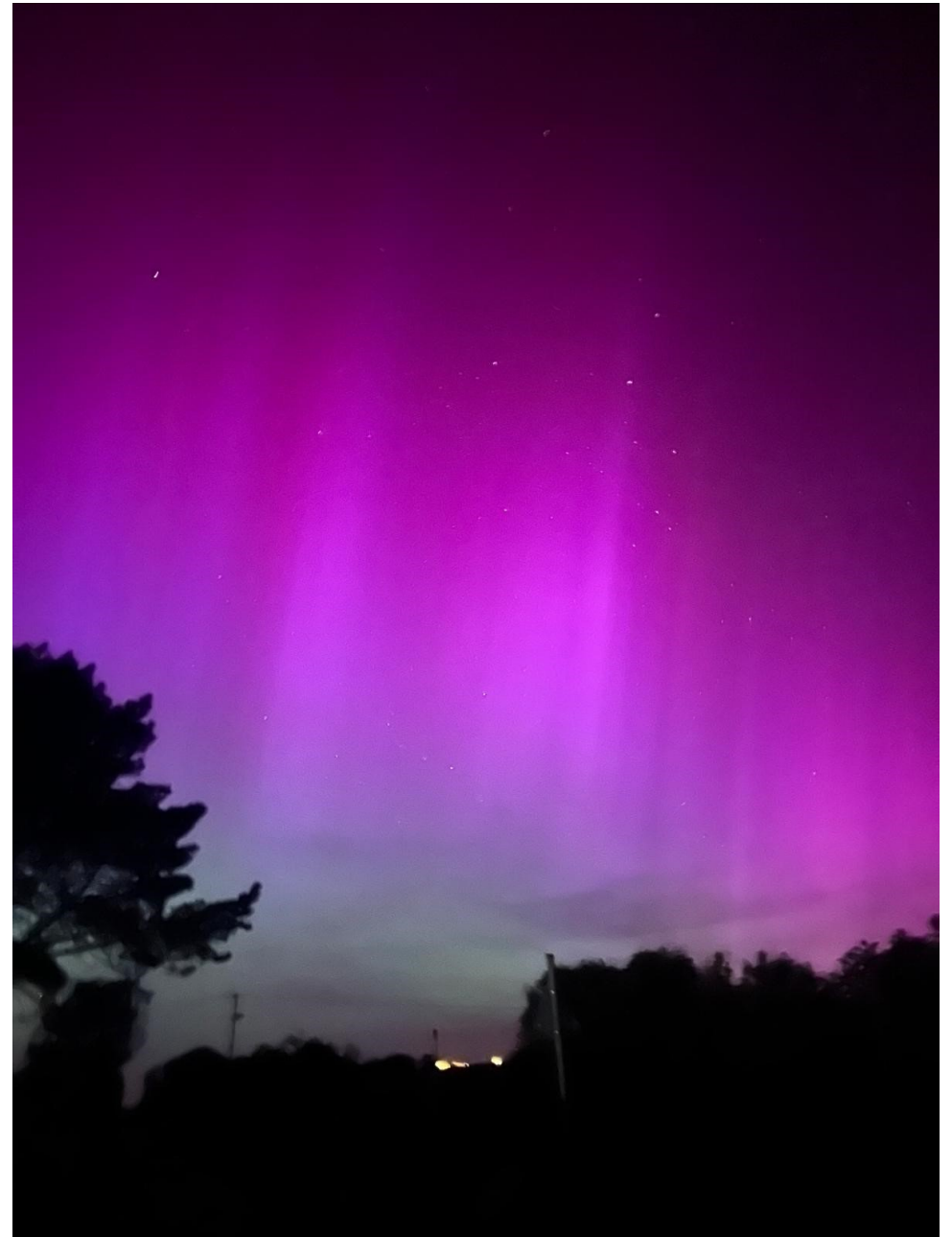


The night sky at 23:00 U.T.C., July 15th, 2024

Sky Events for July 2024

- 01 18:27 Mars 4.1°S of Moon
- 02 15:30 Pleiades 0.3°N of Moon
- 05 22:57 NEW MOON
- 07 18:33 Mercury 3.2°S of Moon
- 08 22:45 ISS, 18°, SE
- 09 23:31 ISS, 43°, SSE
- 10 22:40 ISS, 32°, SSE
- 11 23:26 ISS, 64°, SSE
- 12 22:35 ISS, 51°, SSE
- 13 22:49 FIRST QUARTER MOON
- 13 23:21 ISS, 78°, S
- 14 22:31 ISS, 70°, S
- 15 23:16 ISS, 79°, S
- 16 00:02 ISS, 52°, SSW
- 16 22:26 ISS, 80°, S
- 17 23:11 ISS, 66°, SSW
- 18 22:20 ISS, 76°, S
- 18 23:57 ISS, 33°, SSW
- 19 23:06 ISS, 45°, SSW
- 20 19:40 Mars 4.7°S of Pleiades
- 20 22:10 ISS, 39°, SSW
- 20 22:15 ISS, 59°, SSW
- 21 10:17 FULL MOON
- 21 19:30 R&DAS Monthly Meeting
- 22 07:00 Mercury at Greatest Elong: 26.9°E
- 24 20:38 Saturn 0.4°S of Moon: (Occn?)
- 27 22:00 Delta-Aquarid Meteor Shower
- 28 02:51 LAST QUARTER MOON
- 29 21:13 Pleiades 0.1°N of Moon

June Image of the Month



Taken by Pete Larkin, while on holiday in Weymouth

Object of the Month for July

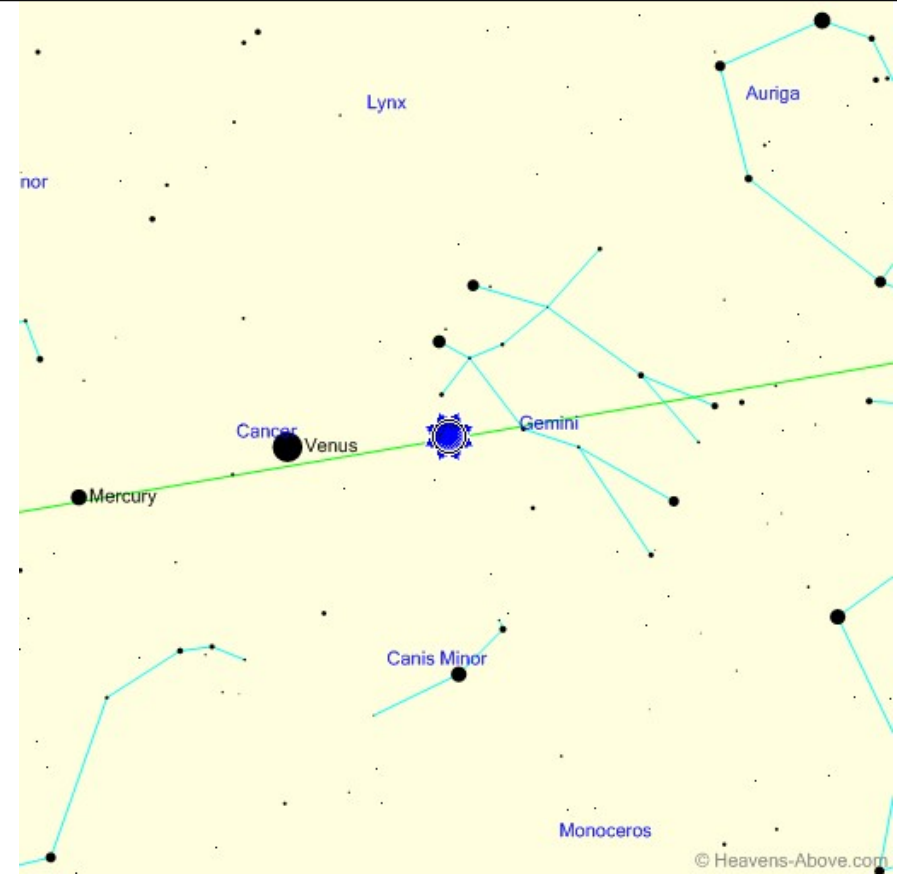


Messier 13 was discovered by Edmond Halley in 1714, and catalogued by Charles Messier on June 1, 1764, into his list of objects not to mistake for comets; Messier's list, including Messier 13, eventually became known as the Messier catalogue. It is located at right ascension 16h 41.7m, declination +36° 28'. Messier 13 is often described by astronomers as the most magnificent globular cluster visible to northern observers.

About one third of the way from Vega to Arcturus, four bright stars in Hercules form the Keystone asterism, the broad torso of the hero. M13 can be seen in this asterism 2/3 of the way north (by west) from Zeta to Eta Herculis. With an apparent magnitude of 5.8, Messier 13 may be visible to the naked eye with averted vision on dark nights. Messier 13 is prominent in traditional binoculars as a bright, round patch of light. Its diameter is about 23 arcminutes and it is readily viewable in small telescopes. At least four inches of telescope aperture resolves stars in Messier 13's outer extent as small pinpoints of light. However, only larger telescopes resolve stars further into the centre of the cluster. The cluster is visible throughout the year from latitudes greater than 36 degrees north, with the longest visibility during Northern Hemisphere spring and summer. [Wikipedia]

M13, The Great Globular Cluster in Hercules

The Sun, mid-July



| Event | Time | Altitude | Azimuth |
|---------------------------|-------|----------|---------|
| Minimum altitude: | 01:11 | -16.2° | 360° |
| Nautical twilight begins: | 03:07 | -12.0° | 27° |
| Civil twilight begins: | 04:15 | -6.0° | 42° |
| Sunrise: | 05:02 | -0.8° | 52° |
| Maximum altitude: | 13:11 | 59.0° | 180° |
| Sunset: | 21:20 | -0.8° | 308° |
| Civil twilight ends: | 22:06 | -6.0° | 317° |
| Nautical twilight ends: | 23:14 | -12.0° | 332° |
| Civil twilight ends: | 21:38 | -6.0° | 313° |
| Nautical twilight ends: | 22:38 | -12.0° | 326° |

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

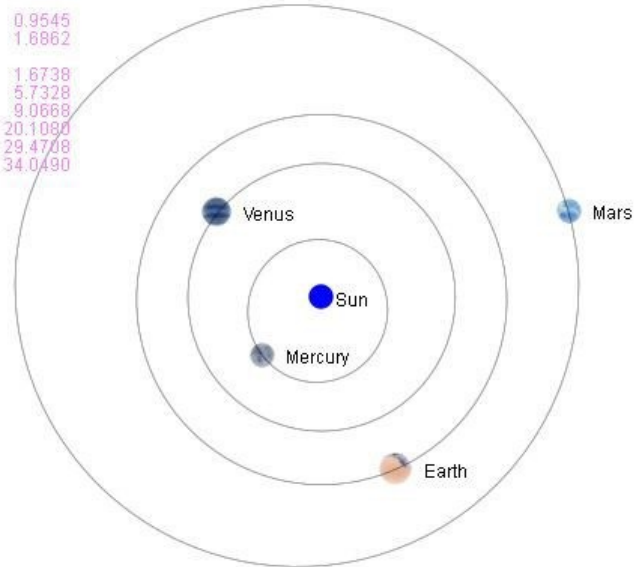
The Planets, mid July, 2024

Inner Solar System

2024-07-15 (BST)

23h00m

| | Sun | Earth |
|---------|---------|---------|
| Mercury | 0.4478 | 0.9545 |
| Venus | 0.7185 | 1.6862 |
| Earth | 1.0164 | |
| Mars | 1.4136 | 1.6738 |
| Jupiter | 5.0312 | 5.7328 |
| Saturn | 9.6809 | 9.0668 |
| Uranus | 19.5815 | 20.1080 |
| Neptune | 29.8987 | 29.4708 |
| Pluto | 35.0562 | 34.0490 |

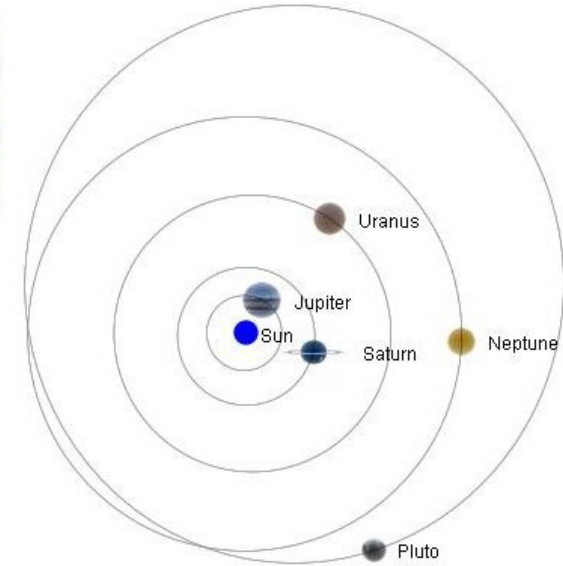


Outer Solar System

2024-07-15 (BST)

23h00m

| | Sun | Earth |
|---------|---------|---------|
| Mercury | 0.4478 | 0.9545 |
| Venus | 0.7185 | 1.6862 |
| Earth | 1.0164 | |
| Mars | 1.4136 | 1.6738 |
| Jupiter | 5.0312 | 5.7328 |
| Saturn | 9.6809 | 9.0668 |
| Uranus | 19.5815 | 20.1080 |
| Neptune | 29.8987 | 29.4708 |
| Pluto | 35.0562 | 34.0490 |



| | Mercury | Venus | Mars | Jupiter | Saturn | Uranus | Neptune |
|---------------------|--------------|--------------|--------------|-------------|---------------|--------------|-------------|
| Right ascension | 9h 28m 14.1s | 8h 30m 12.2s | 3h 36m 23.2s | 4h 38m 8.3s | 23h 22m 17.1s | 3h 34m 57.7s | 0h 0m 21.7s |
| Declination | 15° 10' 0" | 20° 18' 42" | 18° 31' 59" | 21° 24' 17" | -6° 17' 7" | 18° 59' 52" | -1° 22' 7" |
| Range (AU) | 0.955 | 1.686 | 1.674 | 5.733 | 9.067 | 20.108 | 29.471 |
| Elongation from Sun | 26.0° | 11.4° | 57.3° | 42.6° | 124.7° | 57.6° | 114.0° |
| Brightness | 0.3 | -3.8 | 0.9 | -1.9 | 1 | 5.8 | 7.9 |
| Equatorial Diameter | 7.05" | 9.90" | 5.60" | 34.39" | 18.33" | 3.51" | 2.32" |
| Phase Angle | 84.7° | 16.2° | 37.3° | 7.9° | 5.0° | 2.5° | 1.8° |
| Constellation | Leo | Cancer | Taurus | Taurus | Aquarius | Taurus | Pisces |
| Meridian transit | 14:56 | 13:58 | 09:05 | 10:08 | 04:53 | 09:05 | 05:31 |
| Rises | 07:31 | 06:01 | 01:23 | 02:07 | 23:23 | 01:20 | 23:35 |
| Sets | 22:19 | 21:53 | 16:48 | 18:09 | 10:20 | 16:50 | 11:23 |
| Altitude | -5.5° | -7.6° | -14.8° | -15.3° | -3.5° | -14.2° | -5.4° |
| Azimuth | 303.7° | 318.4° | 28.3° | 13.0° | 95.7° | 28.5° | 85.2° |