

M70, Globular Cluster, Sagittarius

Continuing a series of photograph's of the Messier Objects



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Rugby & District Astronomical Society

www.rugbyastro.org.uk

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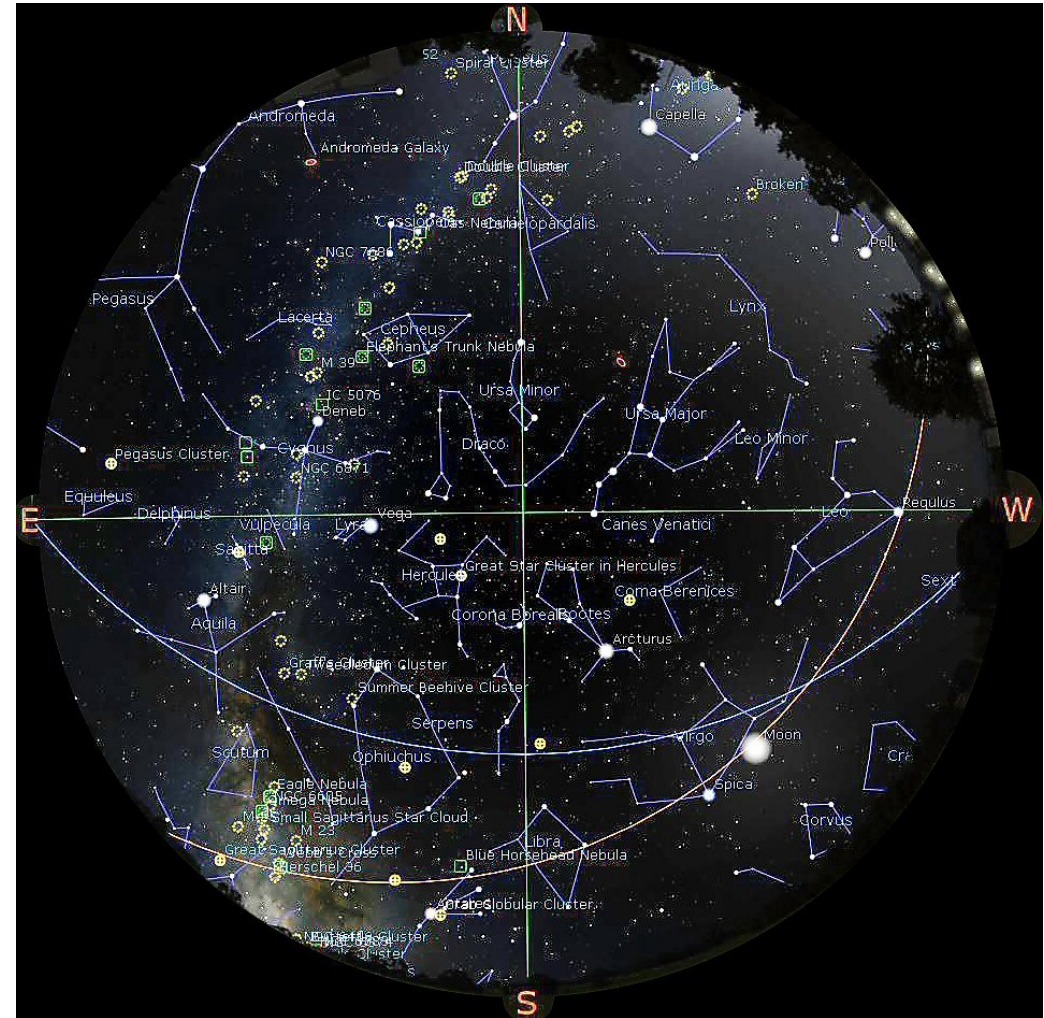
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Rugby & District Astronomical Society

Monthly Sky Notes

No. 174, June 2024, by Chris Longthorn



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

Sky Events for June 2024

- 02 23:37 Mars 2.4°S of Moon
- 04 15:00 Venus at Superior Conjunction
- 05 08:14 Pleiades 0.4°N of Moon
- 06 12:38 NEW MOON
- 14 05:18 FIRST QUARTER MOON
- 14 16:00 Mercury at Superior Conjunction
- 16 19:30 R@DAS Monthly Meeting
- 20 20:51 Summer Solstice
- 22 01:08 FULL MOON
- 25 03:34 ISS, 10°, SE
- 27 03:28 ISS, 19°, SE
- 27 14:52 Saturn 0.1°S of Moon: Occn.
- 28 02:37 ISS, 13°, SE
- 28 21:53 LAST QUARTER MOON
- 29 03:22 ISS, 32°, SSE
- 30 02:32 ISS, 23°, SSE

May Image of the Month



At the time of publication I've not received any images in April/ May so I've chosen this one by BAA member Mazin Younis using his remote telescope in Morocco. Planetary nebulae in M46.

M46 is a rich open star cluster in the southern constellation Puppis. A planetary nebula NGC 2438 is visible inside the cluster (though not part of it). Also visible another very faint planetary nebula with distinct pink colour, PK231+4.1, of magnitude 14.4 .

Constellation—Puppis

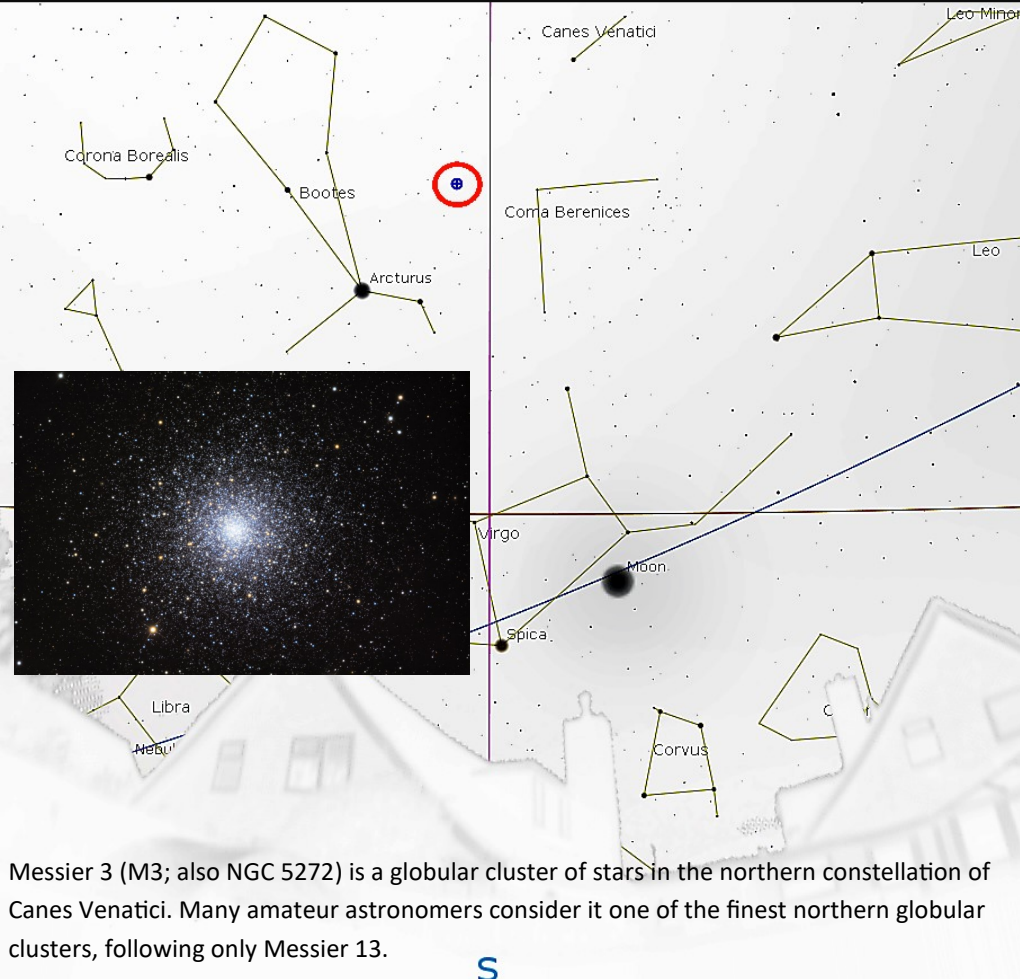
Field centre—RA: 07h41m Dec: -14°48' Position angle: +81°22'

Field size—1°39' × 1°06'

Equipment—Sky-watcher Quattro 8 f/4, ASI 2600MC Duo

Exposure—24 x 300s

Object of the Month for June



Messier 3 (M3; also NGC 5272) is a globular cluster of stars in the northern constellation of Canes Venatici. Many amateur astronomers consider it one of the finest northern globular clusters, following only Messier 13.

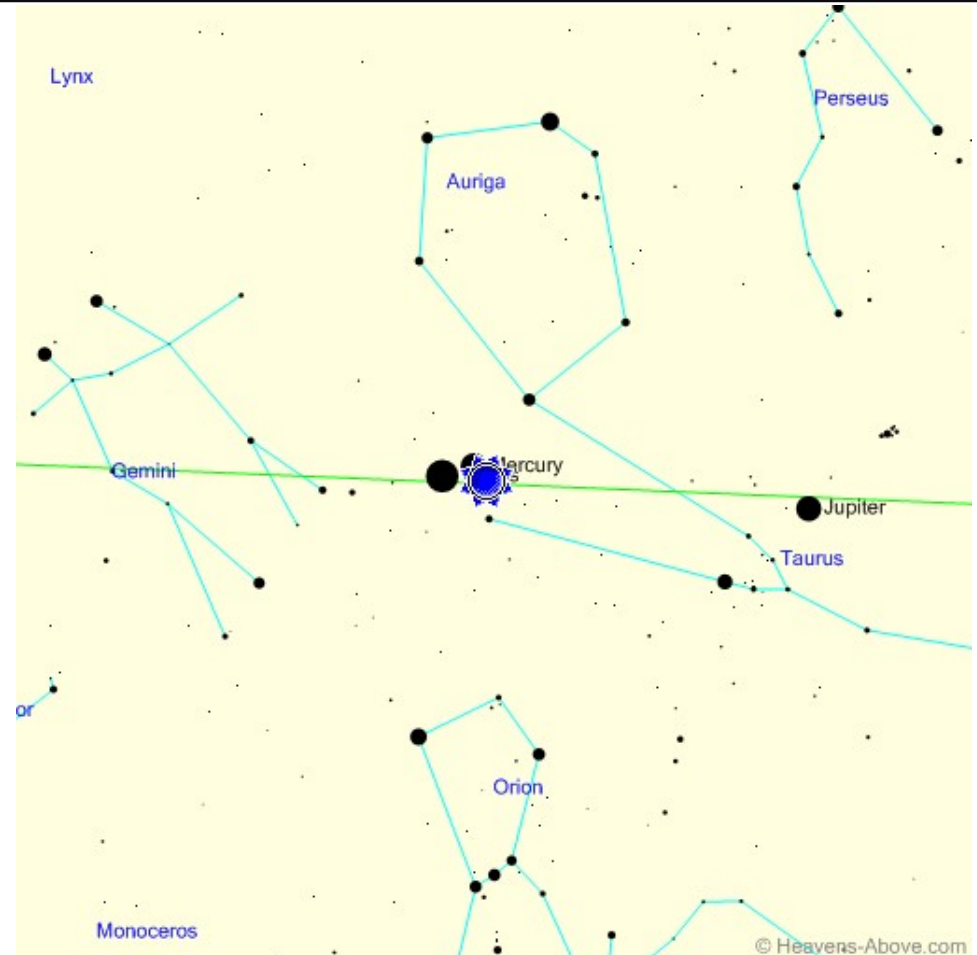
M3 has an apparent magnitude of 6.2, making it a difficult naked eye target even with dark conditions with averted vision. However, with a moderate-sized telescope, the cluster can be seen as a cloudy smudge even in severely light-polluted skies. It was discovered on May 3, 1764, and was the first Messier object to be discovered by Charles Messier himself.

This cluster is one of the largest and brightest, and is made up of around 500,000 stars. It is estimated to be 11.4 billion years old. It is centred at 32,600 light-years (10.0 kpc) away from Earth.

This chart shows M3 at 10:00 p.m. on 15th June 2024. The moon is bright in Virgo and Arcturus can be easily seen in Bootes. M3 is just upper right from Arcturus (can use binoculars).

Globular Cluster M3

The Sun, mid-June



Event	Time	Altitude	Azimuth
Minimum altitude:	01:06	-14.3°	0°
Nautical twilight begins:	02:32	-12.0°	20°
Civil twilight begins:	03:53	-6.0°	38°
Sunrise:	04:42	-0.8°	48°
Maximum altitude:	13:06	61.0°	180°
Sunset:	21:29	-0.8°	312°
Civil twilight ends:	22:19	-6.0°	322°
Nautical twilight ends:	23:40	-12.0°	340°

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

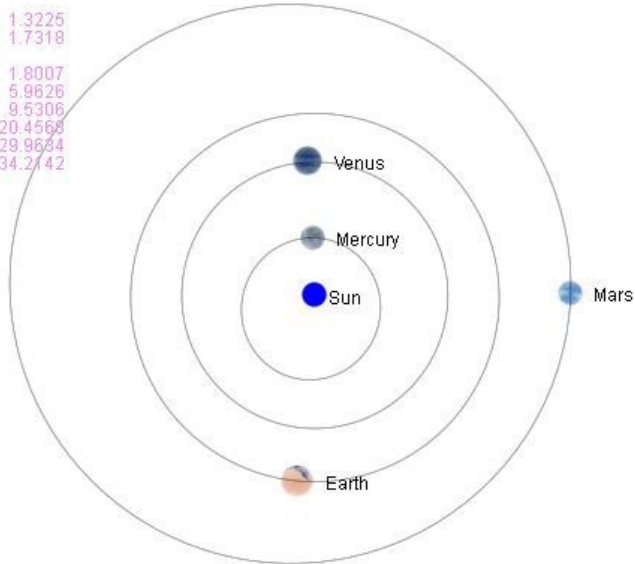
The Planets, mid June, 2024

Inner Solar System

2024-06-15 (BST)

23h00m

	Sun	Earth
Mercury	0.3091	1.3225
Venus	0.7196	1.7318
Earth	1.0158	
Mars	1.3920	1.8007
Jupiter	5.0231	5.9626
Saturn	9.6898	9.5306
Uranus	19.5864	20.4568
Neptune	29.8995	29.9634
Pluto	35.0358	34.2142

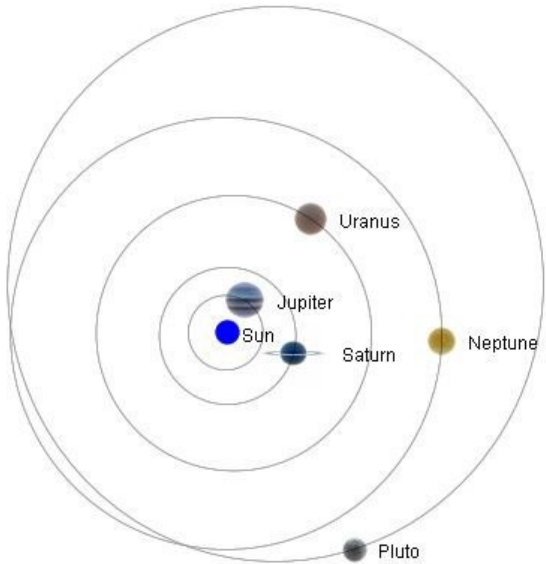


Outer Solar System

2024-06-15 (BST)

23h00m

	Sun	Earth
Mercury	0.3091	1.3225
Venus	0.7196	1.7318
Earth	1.0158	
Mars	1.3920	1.8007
Jupiter	5.0231	5.9626
Saturn	9.6898	9.5306
Uranus	19.5864	20.4568
Neptune	29.8995	29.9634
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	Mercury	Venus	Mars	Jupiter	Saturn	Uranus	Neptune
Right ascension	5h 44m 27.4s	5h 51m 17.9s	2h 10m 57.5s	4h 10m 47.4s	23h 22m 18.2s	3h 29m 25.3s	0h 0m 14.7s
Declination	24° 30' 41"	23° 48' 19"	12° 2' 59"	20° 21' 1"	-6° 8' 49"	18° 40' 31"	-1° 21' 14"
Range (AU)	1.323	1.732	1.801	5.963	9.531	20.457	29.963
Elongation from Sun	1.9°	3.1°	50.3°	20.4°	96.0°	30.3°	85.4°
Brightness	-2.1	-3.8	1	-1.8	1.1	5.8	7.9
Equatorial Diameter	5.09"	9.64"	5.20"	33.06"	17.44"	3.45"	2.28"
Phase Angle	6.3°	4.4°	34.2°	4.0°	6.0°	1.5°	1.9°
Constellation	Taurus	Taurus	Aries	Taurus	Aquarius	Taurus	Pisces
Meridian transit	13:09	13:17	09:38	11:39	06:51	10:58	07:29
Rises	04:43	04:57	02:35	03:45	01:24	03:15	01:37
Sets	21:35	21:37	16:42	19:33	12:18	18:40	13:21
Altitude	-8.0°	-8.1°	-23.2°	-16.8°	-21.2°	-18.9°	-22.5°
Azimuth	330.2°	328.5°	22.1°	350.9°	71.6°	1.1°	60.3°