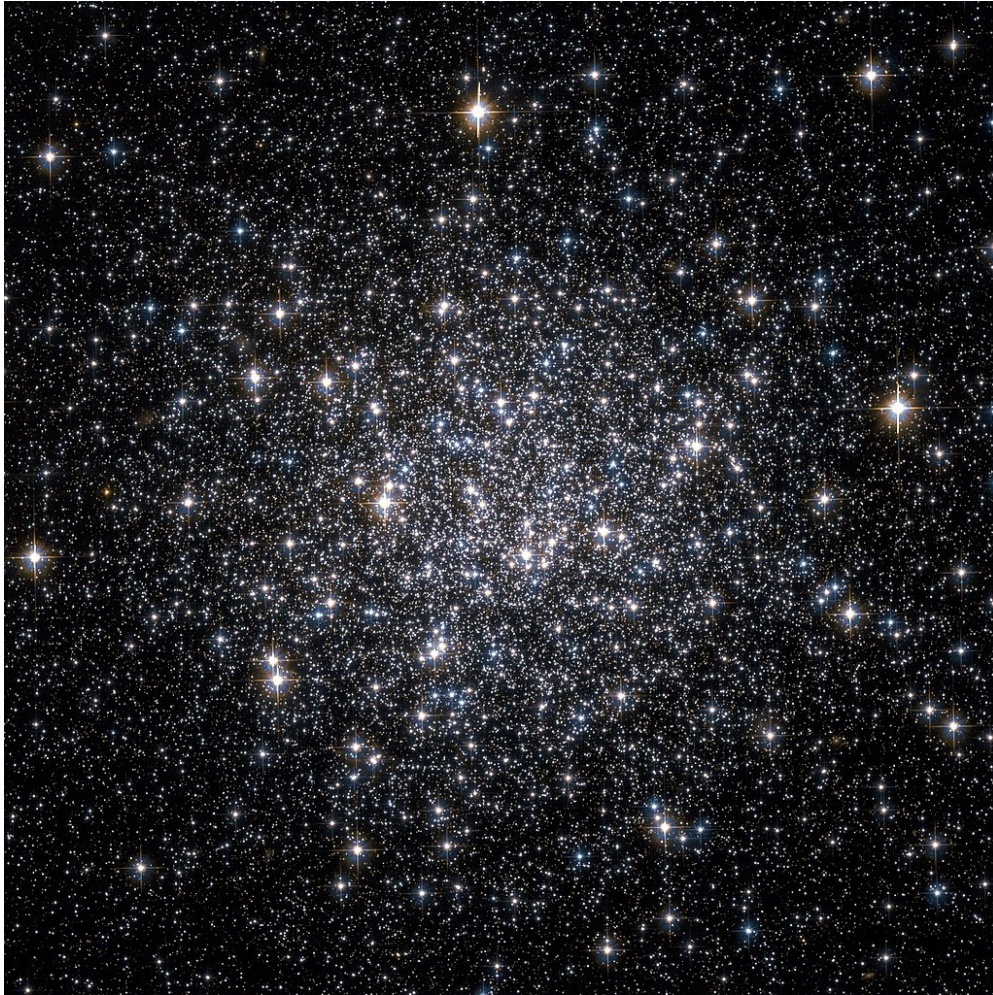


# M68, Globular Cluster, Hydra

Continuing a series of photograph's of the Messier Objects



By en:NASA, en:STScI, en:WikiSky - en:WikiSky&#039;s snapshot tool - [1], Public Domain, <https://commons.wikimedia.org/w/index.php?curid=4490763>

**Rugby & District Astronomical Society**

[www.rugbyastro.org.uk](http://www.rugbyastro.org.uk)

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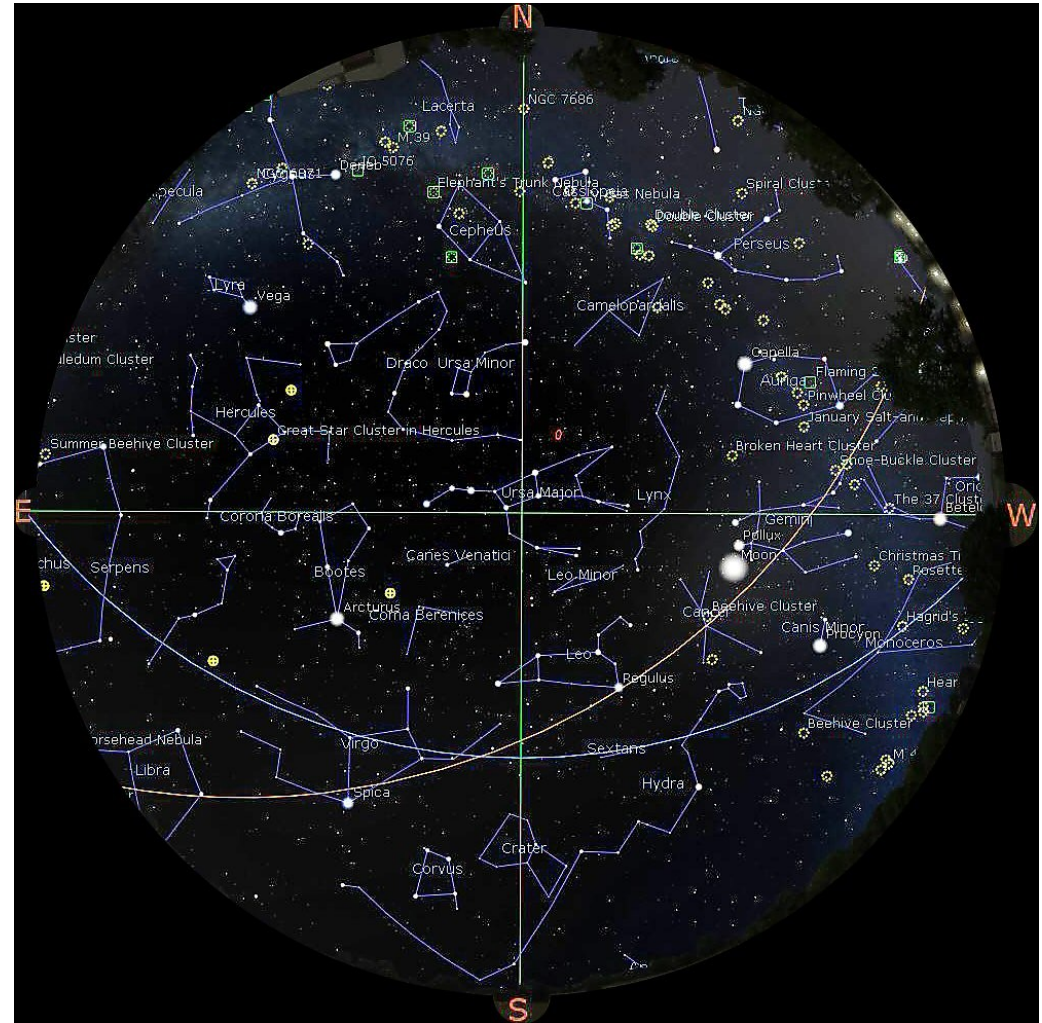
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# Rugby & District Astronomical Society

## Monthly Sky Notes

No. 172, April 2024, by Chris Longthorn



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

## Sky Events for April 2024

02 03:15 LAST QUARTER MOON  
06 03:51 Mars 2.0°N of Moon  
06 09:20 Saturn 1.2°N of Moon: Occn.  
07 16:39 Venus 0.4°S of Moon: Occn.  
08 18:17 Total Solar Eclipse; mag=1.057  
08 18:21 NEW MOON  
10 19:00 Mars 0.4°N of Saturn  
10 21:08 Jupiter 4.0°S of Moon  
11 12:38 Pleiades 0.4°N of Moon  
11 23:00 Mercury at Inferior Conjunction  
15 19:13 FIRST QUARTER MOON  
21 19:30 R&DAS Monthly Meeting, Church Lawford  
22 07:00 Lyrid Meteor Shower  
23 23:49 FULL MOON  
29 04:48 ISS, 67°, SSE  
30 03:59 ISS, 55°, SSE

## March Image of the Month



Taken with, ASI2600MC camera on an AT65EDQ refractor, sitting on an AM5 mount.

The Virgo Cluster is a large cluster of galaxies whose centre is  $53.8 \pm 0.3$  Mly ( $16.5 \pm 0.1$  Mpc)[2] away in the constellation Virgo. Comprising approximately 1,300 (and possibly up to 2,000) member galaxies, the cluster forms the heart of the larger Virgo Supercluster, of which the Local Group (containing our Milky Way galaxy) is a member. The Local Group actually experiences the mass of the Virgo Supercluster as the Virgocentric flow. It is estimated that the Virgo Cluster's mass is  $1.2 \times 10^{15} M_{\odot}$  out to 8 degrees of the cluster's centre or a radius of about 2.2 Mpc.

Many of the brighter galaxies in this cluster, including the giant elliptical galaxy Messier 87, were discovered in the late 1770s and early 1780s and subsequently included in Charles Messier's catalogue of non-cometary fuzzy objects. Described by Messier as nebulae without stars, their true nature was not recognized until the 1920s.

The cluster subtends a maximum arc of approximately 8 degrees centred in the constellation Virgo. Although some of the cluster's most prominent members can be seen with smaller instruments, a 6-inch telescope will reveal about 160 of the cluster's galaxies on a clear night.—Wikipedia

## Object of the Month for April



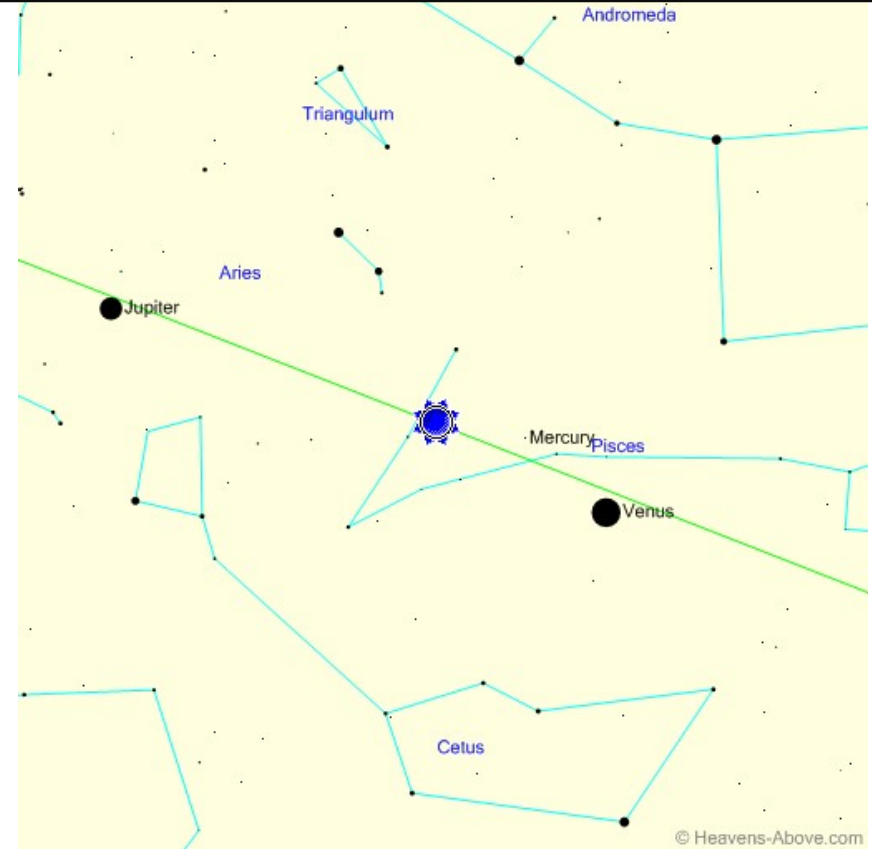
M81 and M82 are two of the easier galaxies for beginning astronomers to find through small telescopes. The galaxies appear close together in our sky, and they're near the famous Big Dipper asterism, in the constellation Ursa Major, the Greater Bear. Here, several veteran astrophotographers across three continents – Europe, North America and Oceania – have done something more. They combined data to create the beautiful image you see here. With more than 219 hours of exposures and 4,019 subframes – plus more than 62 hours of processing by William Ostling – the resulting images are breathtaking.

On the left is M81, nicknamed Bode's Galaxy. The smaller galaxy on the right is called M82, aka the Cigar Galaxy. M82 is what's known as a starburst galaxy. It has a rapid rate of star formation, thought to be driven by a close encounter with the larger galaxy. And M82 also has a superwind, a huge outflow of material likely driven by its rapidly forming stars. At the top corner of the image is another small starburst galaxy, known as NGC 3077. These three galaxies are all approximately 12 million light-years away.

Courtesy: M81 and M82 as never seen before (earthsky.org)

Galaxies M81 and M82

## The Sun, mid-April



Event	Time	Altitude	Azimuth
Minimum altitude:	01:05	-27.8°	360°
Astronomical twilight begins:	03:54	-18.0°	44°
Nautical twilight begins:	04:45	-12.0°	56°
Civil twilight begins:	05:31	-6.0°	65°
Sunrise:	06:07	-0.8°	72°
Maximum altitude:	13:05	47.7°	180°
Sunset:	20:04	-0.8°	288°
Civil twilight ends:	20:41	-6.0°	295°
Nautical twilight ends:	21:26	-12.0°	305°
Astronomical twilight ends:	22:18	-18.0°	317°

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

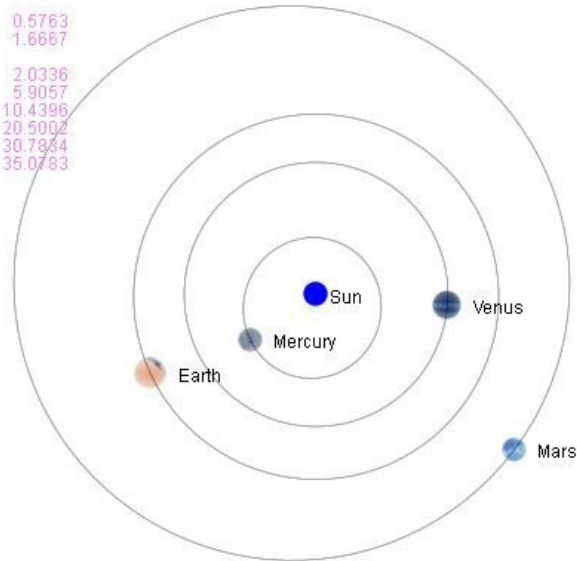
# The Planets, mid April, 2024

## Inner Solar System

2024-04-15 (BST)

23h00m

	Sun	Earth
Mercury	0.4370	0.5763
Venus	0.7269	1.6667
Earth	1.0035	
Mars	1.3852	2.0336
Jupiter	5.0077	5.9057
Saturn	9.7075	10.4396
Uranus	19.5964	20.5002
Neptune	29.9011	30.7834
Pluto	34.9945	35.0783

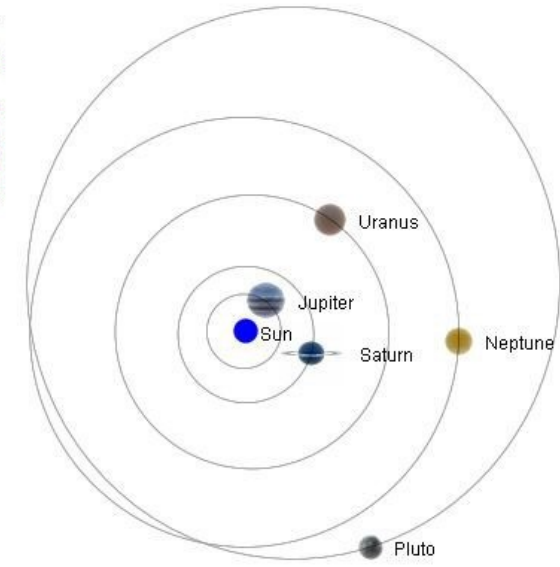


## Outer Solar System

2024-04-15 (BST)

23h00m

	Sun	Earth
Mercury	0.4370	0.5763
Venus	0.7269	1.6667
Earth	1.0035	
Mars	1.3852	2.0336
Jupiter	5.0077	5.9057
Saturn	9.7075	10.4396
Uranus	19.5964	20.5002
Neptune	29.9011	30.7834
Pluto	34.9945	35.0783



	Mercury	Venus	Mars	Jupiter	Saturn	Uranus	Neptune
Right ascension	23h 55m 12.9s	21h 57m 9.1s	21h 27m 55.2s	2h 41m 20.1s	22h 50m 57.3s	3h 8m 34.7s	23h 49m 55.3s
Declination	-1° 12' 34"	-13° 33' 19"	-16° 7' 32"	14° 44' 35"	-9° 5' 33"	17° 20' 18"	-2° 25' 2"
Range (AU)	1.264	1.54	2.177	5.527	10.699	20.074	30.886
Elongation from Sun	9.3°	22.4°	29.9°	53.4°	8.6°	60.4°	7.7°
Brightness	-1.3	-3.8	1.2	-2	1	5.8	8
Equatorial Diameter	5.32"	10.84"	4.30"	35.67"	15.53"	3.51"	2.21"
Phase Angle	29.6°	31.3°	20.6°	9.2°	0.9°	2.5°	0.3°
Constellation	Pisces	Capricornus	Capricornus	Aries	Aquarius	Aries	Pisces
Meridian transit	12:50	10:52	10:23	15:35	11:45	16:02	12:44
Rises	06:56	06:05	05:51	08:16	06:34	08:28	06:58
Sets	18:45	15:39	14:54	22:54	16:57	23:37	18:31
Altitude	36.3°	20.6°	16.0°	37.7°	27.7°	36.0°	35.1°
Azimuth	174.4°	206.1°	212.3°	118.4°	192.9°	109.9°	176.1°