M77, The Squid Galaxy, Cetus

Continuing a series of photograph's of the Messier Objects

By NASA, ESA & A. van der Hoeven - http://www.spacetelescope.org/news/heic1305/, Public Domain, https://commons.wikimedia.org/w/index.php?curid=25328266

Rugby & District Astronomical Society **www.rugbyastro.org.uk**

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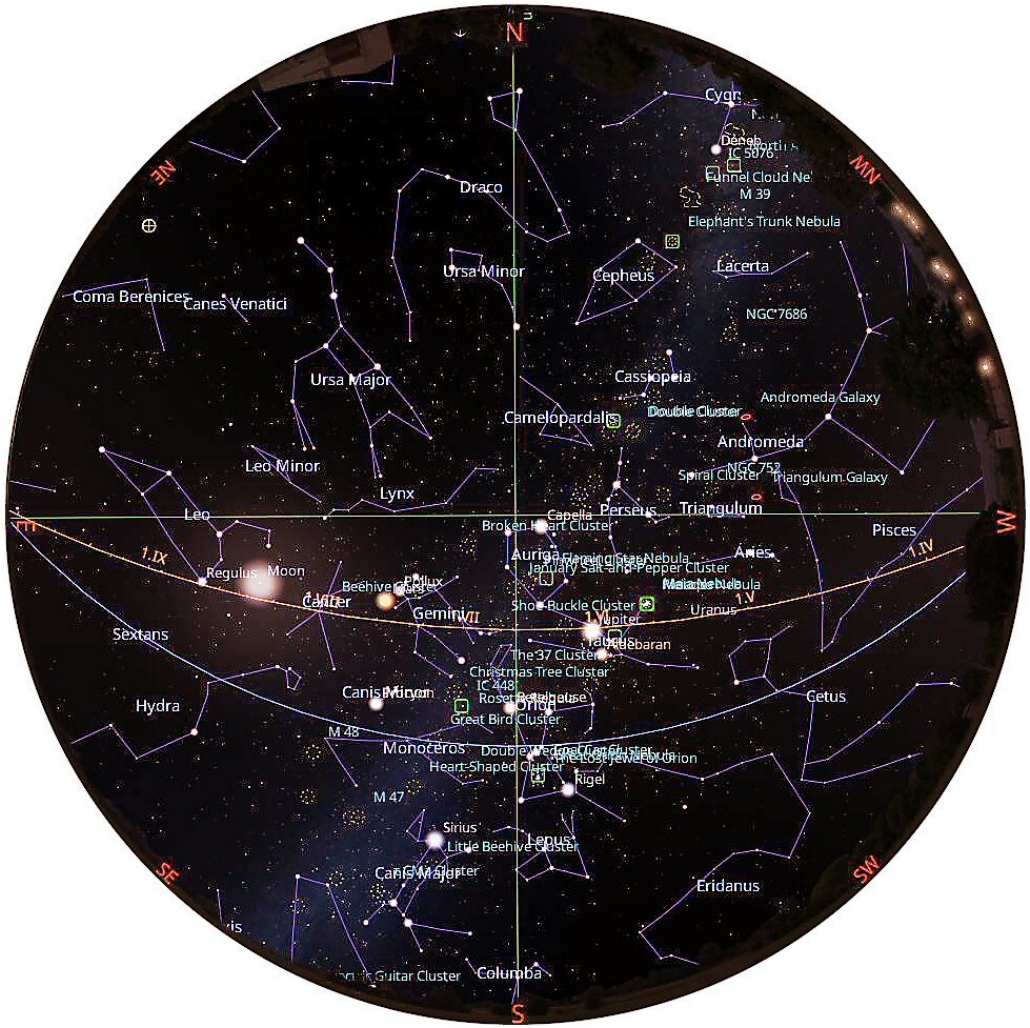
Rugby & District Astronomical Society

Monthly Sky Notes

No. 181, January 2025, by Chris Longthorn



The night sky at 23:00 U.T.C., Jan 15th, 2025

Sky Events for Jan 2025

03 15:00 Quadrantid Meteor Shower
03 15:24 Venus 1.4°N of Moon
03 19:30 Observing, Barby
04 14:00 Earth at Perihelion: 0.98333 AU
04 17:18 Saturn 0.7°S of Moon: Occn?
04 19:30 Observing, Barby
06 23:56 FIRST QUARTER MOON
10 01:01 Pleiades 0.3°S of Moon
10 04:00 Venus at Greatest Elong: 47.2°E
13 22:27 FULL MOON
14 03:42 Mars 0.2°S of Moon: Occn?
16 01:00 Mars at Opposition
17 18:17 ISS, -2.9, 36°, SSE
17 19:50 ISS, -0.4, 12°, W
18 16:00 Venus 2.2°N of Saturn
19 14:00 Mercury at Aphelion
19 18:13 ISS, -3.5, 56°, SSE
20 17:23 ISS, -3, 43°, SSE
20 18:59 ISS, -3.2, 55°, WSW
21 18:10 ISS, -3.8, 75°, S
21 20:31 LAST QUARTER MOON
22 17:19 ISS, -3.5, 65°, SSE
22 18:56 ISS, -3.5, 67°, WSW
23 18:06 ISS, -3.8, 81°, S
24 17:16 ISS, -3.7, 79°, S
24 18:52 ISS, -3.5, 59°, SSW
25 18:02 ISS, -3.6, 71°, S
26 18:48 ISS, -2.6, 38°, SSW
26 19:30 R&DAS Monthly Meeting
27 17:58 ISS, -3.1, 51°, SSW
29 12:36 NEW MOON

Sky Events Calendar by AstroPixels.com with edits by author.
ISS Data courtesy of Heavens-Above (www.heavens-above.com

December 2024 Image of the Month

Jupiter, taken on the evening of 27th November 2024 at 22:00:29 with my 200mm RC Cassegrain, a 2x Teleconverter and a ZWO ASI224MC camera. A 1000 frame video was taken of which the 168 best frames were stacked using AstroSurface. AstroSurface wavelets were used for initial processing and it was finished with Photoshop CS3 and Topaz Denoise AI.

The two moons are Io (left) and Ganymede.

By the Author

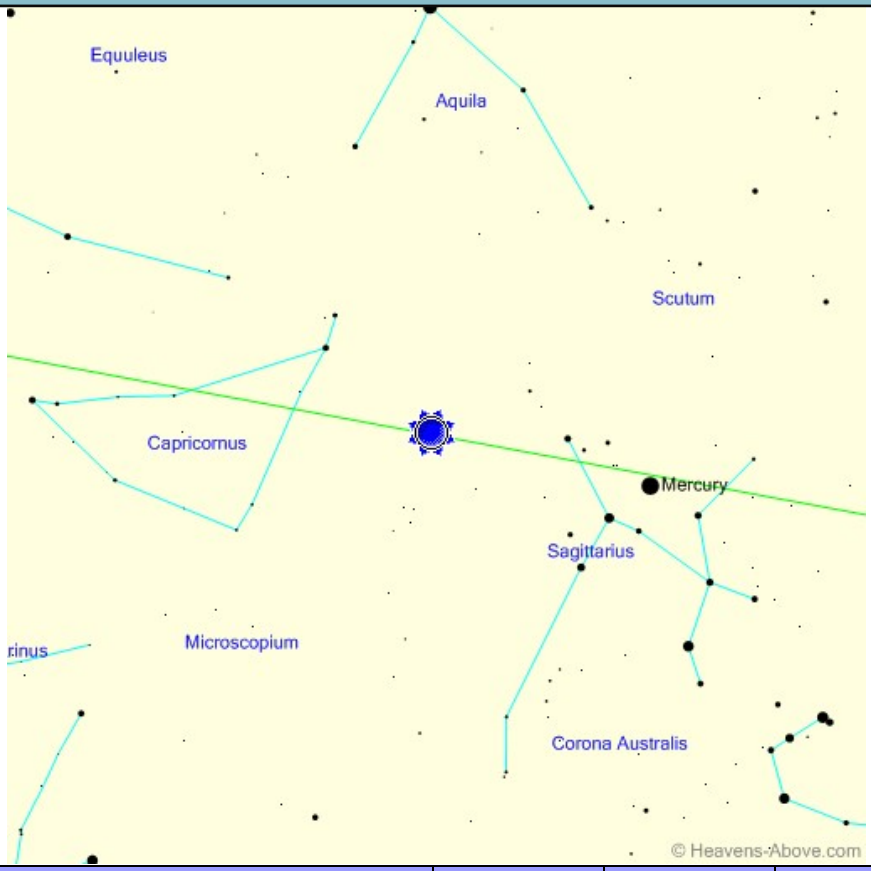
Object of the Month for January

The Crab Nebula (catalogue designations M1, NGC 1952, Taurus A) is a supernova remnant and pulsar wind nebula in the constellation of Taurus. The common name comes from a drawing that somewhat resembled a crab with arms produced by William Parsons, 3rd Earl of Rosse, in 1842 or 1843 using a 910 mm telescope. The nebula was discovered by English astronomer John Bevis in 1731. It corresponds with a bright supernova observed in 1054 C.E. by Native American, Japanese, and Arabic stargazers .

At an apparent magnitude of 8.4, comparable to that of Saturn's moon Titan, it is not visible to the naked eye but can be made out using binoculars under favourable conditions.

M1, The Crab Nebula

The Sun, mid-January



Event	Time	Altitude	Azimuth
Minimum altitude:	00:14	-58.8°	360°
Astronomical twilight begins:	06:05	-18.0°	101°
Nautical twilight begins:	06:46	-12.0°	109°
Civil twilight begins:	07:28	-6.0°	117°
Sunrise:	08:08	-0.8°	125°
Maximum altitude:	12:15	16.6°	180°
Sunset:	16:22	-0.8°	235°
Civil twilight ends:	17:02	-6.0°	243°
Nautical twilight ends:	17:44	-12.0°	251°
Astronomical twilight ends:	18:25	-18.0°	259°

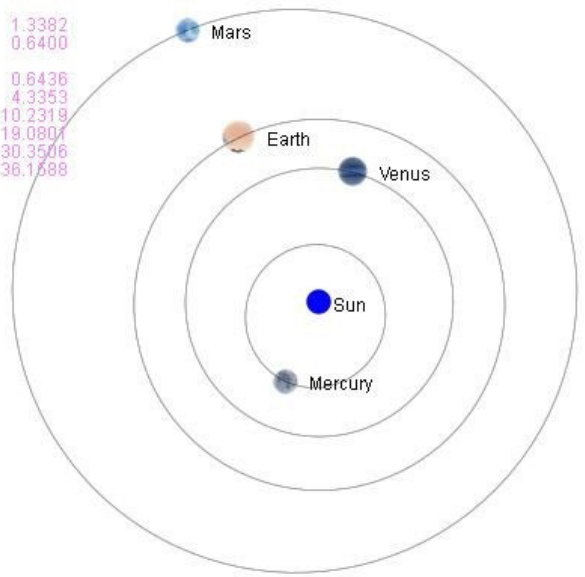
All data courtesy of Heavens-Above (www.heavens-above.com)

The Planets, mid January, 2025

Inner Solar System

2025-01-15 (UTC) 23h00m

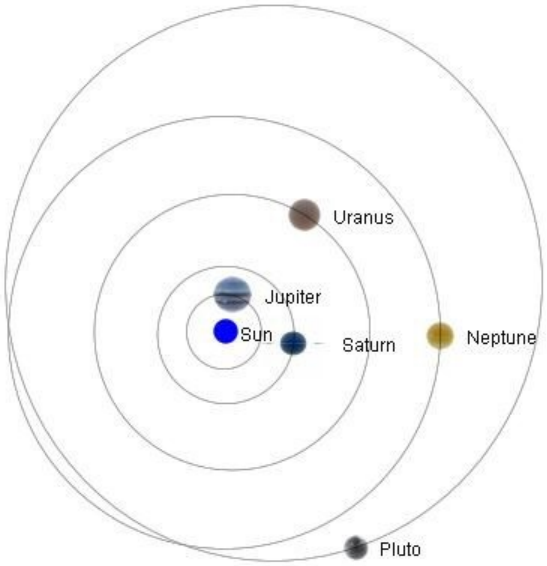
	Sun	Earth
Mercury	0.4649	1.3382
Venus	0.7206	0.6400
Earth	0.9837	
Mars	1.6261	0.6436
Jupiter	5.0875	4.3353
Saturn	9.6259	10.2319
Uranus	19.5507	19.0801
Neptune	29.8939	30.3506
Pluto	35.1814	36.1588



Outer Solar System

2025-01-15 (UTC) 23h00m

	Sun	Earth
Mercury	0.4649	1.3382
Venus	0.7206	0.6400
Earth	0.9837	
Mars	1.6261	0.6436
Jupiter	5.0875	4.3353
Saturn	9.6259	10.2319
Uranus	19.5507	19.0801
Neptune	29.8939	30.3506
Pluto	35.1814	36.1588



	Mercury	Venus	Mars	Jupiter	Saturn	Uranus	Neptune
Right ascension	18h 46m 41.5s	22h 56m 34.5s	7h 55m 8.5s	4h 40m 27.4s	23h 9m 27.4s	3h 22m 41.5s	23h 51m 48.8s
Declination	-23° 48' 9"	-6° 51' 22"	25° 10' 10"	21° 37' 22"	-7° 31' 50"	18° 16' 52"	-2° 16' 44"
Range (AU)	1.338	0.64	0.644	4.335	10.232	19.08	30.351
Elongation from Sun	15.1°	47.0°	175.7°	135.9°	49.8°	117.3°	61.5°
Brightness	-0.4	-4.4	-1.4	-2.5	1.1	5.7	7.9
Equatorial Diameter	5.03"	26.07"	14.55"	45.47"	16.24"	3.69"	2.25"
Phase Angle	33.3°	92.4°	2.6°	7.7°	4.5°	2.6°	1.7°
Constellation	Sagittarius	Aquarius	Gemini	Taurus	Aquarius	Aries	Pisces
Meridian transit	11:08	15:20	00:23	21:03	15:33	19:46	16:15
Rises	07:27	09:57	15:50	13:01	10:14	12:06	10:28
Sets	14:49	20:43	08:51	05:10	20:53	03:30	22:03
Altitude	-61.4°	-20.7°	59.1°	51.9°	-19.3°	39.1°	-8.8°
Azimuth	355.6°	286.3°	144.1°	227.4°	283.1°	246.9°	277.7°