

M83, Barred Spiral Galaxy, Hydra

Continuing a series of photograph's of the Messier Objects



By CTIO/NOIRLab/DOE/NSF/AURA Image processing: T.A. Rector (University of Alaska Anchorage/NSF NOIRLab), D. de Martin (NSF NOIRLab) & M. Zamani (NSF NOIRLab) - The Outskirts of the Southern Pinwheel Galaxy, CC BY 4.0, <https://commons.wikimedia.org/w/index.php?curid=156389522>

Rugby & District Astronomical Society

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Monthly Sky Notes

No. 187, July 2025, by Chris Longthorn



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

Sky Events for July 2025

02 19:30 FIRST QUARTER MOON
04 04:00 Mercury at Greatest Elong: 25.9°E
06 00:13 ISS, -3.2, 34°, SSE
08 00:12 ISS, -3.8, 56°, SSE
08 23:23 ISS, -3.5, 43°, SSE
09 22:34 ISS, -3.1, 32°, SSE
10 00:10 ISS, -3.9, 75°, S
10 20:37 FULL MOON
10 23:21 ISS, -3.9, 65°, SSE
11 22:32 ISS, -3.6, 53°, SSE
12 00:09 ISS, -3.9, 81°, S
12 23:20 ISS, -3.9, 80°, S
13 22:31 ISS, -3.8, 73°, S
14 00:07 ISS, -3.9, 69°, S
14 23:18 ISS, -3.9, 78°, S
15 22:29 ISS, -3.8, 81°, S
16 00:06 ISS, -3.5, 48°, SSW
16 10:19 Saturn 3.8°S of Moon
16 23:17 ISS, -3.7, 61°, SSW
17 22:28 ISS, -3.8, 72°, S
18 00:38 LAST QUARTER MOON
18 23:15 ISS, -3.1, 39°, SSW
19 22:26 ISS, -3.5, 51°, SSW
20 10:27 Pleiades 0.7°S of Moon
23 04:20 Jupiter 4.9°S of Moon
24 19:11 NEW MOON
28 04:00 Delta-Aquarid Meteor Shower
28 19:30 R&DAS Monthly Meeting
28 19:45 Mars 1.3°N of Moon

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

This is M13, the Great Globular Cluster in Hercules. It was captured with a broadband filter and color camera by amateur astronomer Chuck Ayoub. Target: M13 Imaging Telescope: Celestron RASA (400 focal length) Focuser: Celestron Electronic Focuser Mount: Sky-Watcher EQ6-R Pro Imaging Camera: ZWO ASI533MC Color Total Exposure Time: 2 hours

June Image of the Month

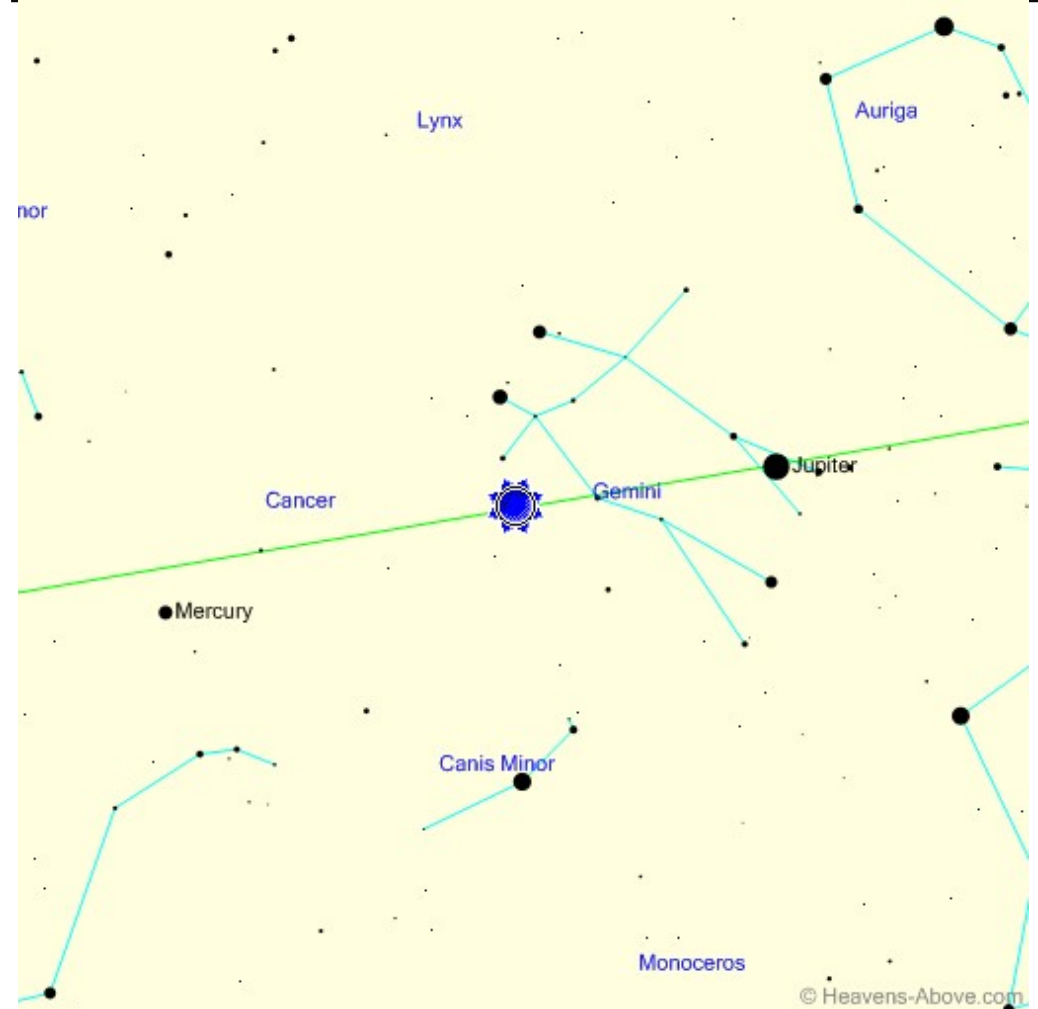


Image taken by David Williams, taken with an Askar 120 APO refractor with a ZWO 2600MC camera, sitting on a ZWO AM5 mount., 58 x 180s images with an Antlia Triband Filter.

NGC 2264 is the designation number of the New General Catalogue that identifies two astronomical objects as a single object: the Cone Nebula, and the Christmas Tree Cluster. Two other objects are within this designation but not officially included, the Snowflake Cluster, and the Fox Fur Nebula. All of the objects are located in the Monoceros constellation and are located about 720 parsecs or 2,300 light-years from Earth. Due to its relative proximity and large size, it is extremely well-studied. NGC 2264 is sometimes referred to as the Christmas Tree Cluster and the Cone Nebula. However, the designation of NGC 2264 in the New General Catalogue refers to both objects and not the cluster alone.

NGC 2264, The Christmas Tree Cluster

The Sun, mid-July



Event	Time	Altitude	Azimuth
Minimum altitude:	01:11	-16.1°	360°
Nautical twilight begins:	03:06	-12.0°	27°
Civil twilight begins:	04:15	-6.0°	42°
Sunrise:	05:02	-0.8°	52°
Maximum altitude:	13:11	59.1°	180°
Sunset:	21:20	-0.8°	308°
Civil twilight ends:	22:06	-6.0°	317°
Nautical twilight ends:	23:14	-12.0°	332°

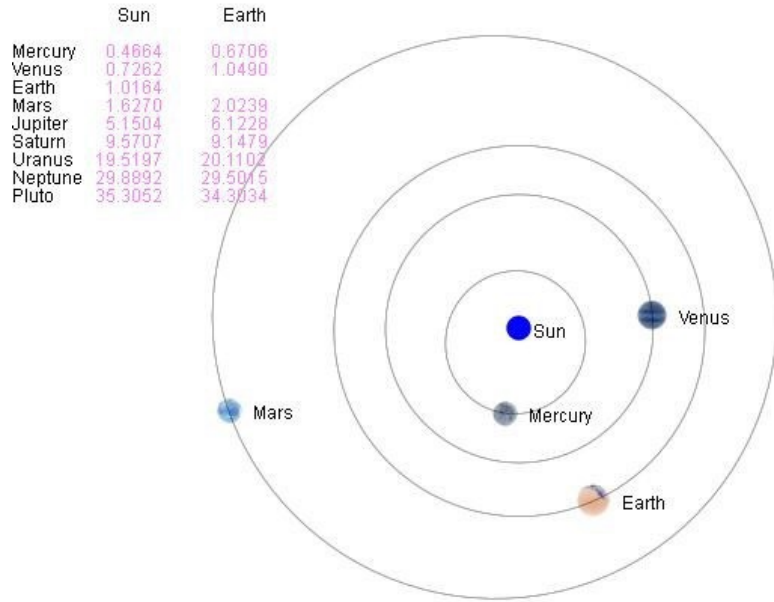
All data courtesy of Heavens-Above (www.heavens-above.com)

The Planets, mid July, 2025

Inner Solar System

2025-07-15 (BST)

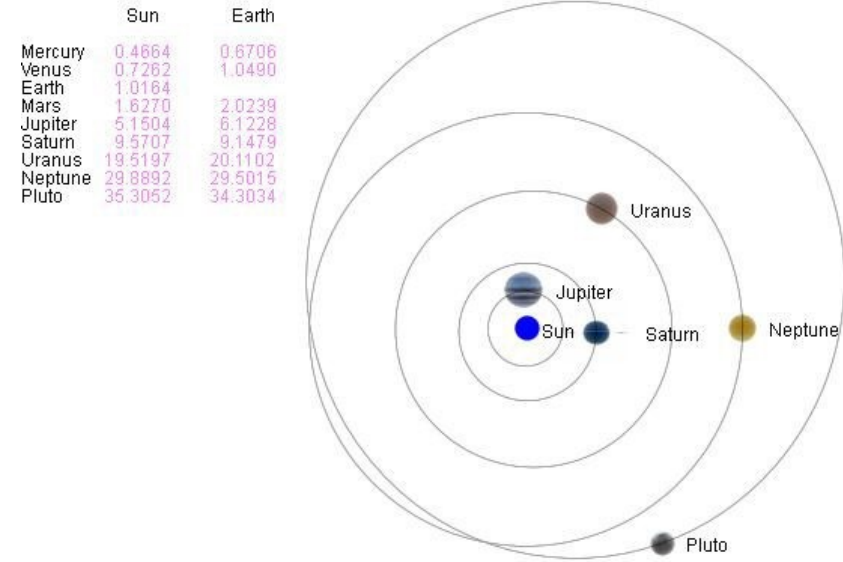
23h00m



Outer Solar System

2025-07-15 (BST)

23h00m



	Mercury	Venus	Mars	Jupiter	Saturn	Uranus	Neptune
Right ascension	7h 16m 18.4s	2h 42m 38.8s	10h 11m 13.5s	6h 7m 2.8s	0h 7m 24.3s	3h 46m 10.8s	0h 8m 29.9s
Declination	24° 14' 29"	12° 58' 7"	12° 28' 35"	23° 16' 36"	-1° 34' 28"	19° 40' 5"	-0° 30' 38"
Range (AU)	1.098	0.839	1.834	6.153	9.594	20.412	29.954
Elongation from Sun	20.3°	45.0°	63.1°	4.4°	86.1°	28.5°	85.4°
Brightness	-0.3	-4.1	1.4	-1.7	1.1	5.8	7.9
Equatorial Diameter	6.12"	19.89"	5.11"	32.04"	17.32"	3.45"	2.28"
Phase Angle	67.6°	80.5°	33.4°	0.9°	6.1°	1.4°	1.9°
Constellation	Gemini	Aries	Leo	Gemini	Pisces	Taurus	Pisces
Meridian transit	14:33	10:00	17:28	13:24	07:26	11:04	07:27
Rises	06:09	02:51	10:22	05:10	01:35	03:15	01:30
Sets	22:57	17:09	00:37	21:39	13:16	18:53	13:23
Altitude	60.1°	31.2°	29.7°	60.8°	-3.7°	45.4°	-2.7°
Azimuth	155.2°	249.2°	109.5°	187.6°	272.2°	238.1°	272.6°