

M63, The Sunflower Galaxy (Canes Venatici)

Continuing a series of photograph's of the Messier Objects.



By myself.

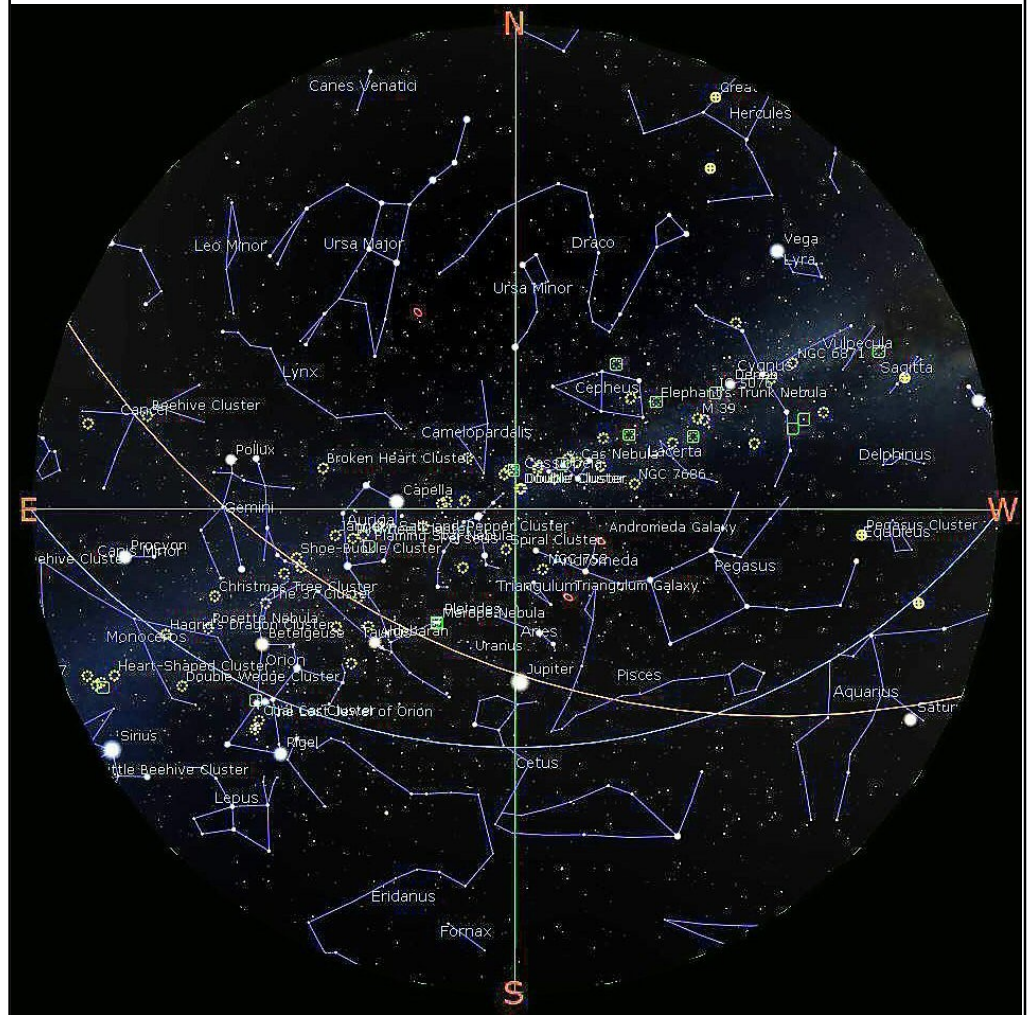
Rugby & District Astronomical Society		www.rugbyastro.org.uk	
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Rugby & District Astronomical Society

Sky Notes

by Chris Longthorn

November 2023, no 167



The night sky at 23:00 U.T.C., November 15th 2023

Sky Events for November 2023

03 04:00 Jupiter at Opposition
05 08:37 LAST QUARTER MOON
06 00:00 S Taurid Meteor Shower
09 09:28 Venus 1.0°S of Moon: Occn.
11 19:30 Observing at Barby
13 00:00 N Taurid Meteor Shower
13 09:27 NEW MOON
13 18:00 Uranus at Opposition
17 19:30 Observing at Barby—Leonids
18 05:00 Mars in Conjunction with Sun
18 06:00 Leonid Meteor Shower
18 19:30 Observing at Barby—Leonids
19 19:30 R&DAS Monthly Meeting
20 10:50 FIRST QUARTER MOON
20 14:02 Saturn 2.7°N of Moon
21 18:07 ISS, -3.3, 44°, SSE
23 18:03 ISS, -3.7, 65°, SSE
24 17:13 ISS, -3.3, 52°, SSE
25 11:10 Jupiter 2.8°S of Moon
25 17:59 ISS, -3.9, 79°, S
26 17:09 ISS, -3.7, 72°, S
27 00:02 Pleiades 1.1°N of Moon
27 09:16 FULL MOON
27 17:55 ISS, -3.8, 78°, S
28 17:05 ISS, -3.8, 81°, S
29 17:51 ISS, -3.5, 63°, SSW
30 17:01 ISS, -3.7, 74°, S

October Image of the Month

M16 The Eagle Nebula in Serpens

Taken by Richard Heath with his Evscope. Sent in to me on 22nd September.

Richard commented :-

This is 28 minutes of integration taken from my back garden and at Barby. This was stacked and processed in Affinity Photo. There is a hint of more nebulosity in the photo but I was not able to gather anymore data as it is so low in the southern skies. I will have to wait until next August for it to attain its peak high of 24° on August 11th to obtain any more data.

Well done Richard, a really good image taken in difficult circumstances.



Object of the Month for November



Jupiter is very prominent in November's skies and is visible all night.

The graphic shows the position of the moons as seen in binoculars, (on 15th at 23:00 UTC) a telescope view will be inverted.

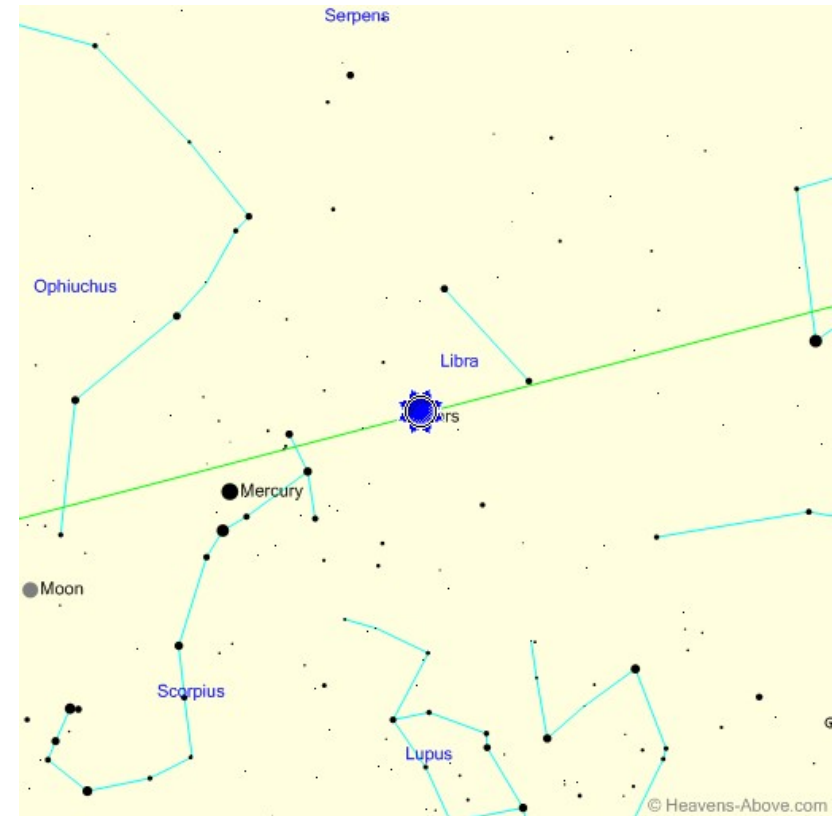
Jupiter is at opposition on 3rd November.

Altitude	: 50°
Azimuth	: 28° [SSW]
Jupiter rise	: 14 h 42 min UT
culmin.	: 21 h 49 min UT
set	: 5 h 0 min UT
Sun rise	: 6 h 12 min UT
set	: 15 h 16 min UT
Elongation	: 165.4° [E]
Light-time	: 33.4 min
Diameter	
(phase corrected)	: 49.1" equat.
Position angle	: 340.35° equat.
	: 322.3° horiz.
Equ. phase angle	: -2.9° f. limb
Visual magnitude	: -2.9 mag

Note, this data applies to 15th November at 23:00 UTC.

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

The Sun, mid November



Event	Time	Altitude	Azimuth
Astronomical twilight begins:	05:26	-18.0°	97°
Nautical twilight begins:	06:06	-12.0°	105°
Civil twilight begins:	06:48	-6.0°	113°
Sunrise:	07:26	-0.8°	120°
Maximum altitude:	11:49	19.1°	180°
Sunset:	16:13	-0.8°	240°
Civil twilight ends:	16:51	-6.0°	247°
Nautical twilight ends:	17:32	-12.0°	255°
Astronomical twilight ends:	18:12	-18.0°	263°
Minimum altitude:	23:50	-56.2°	0°

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

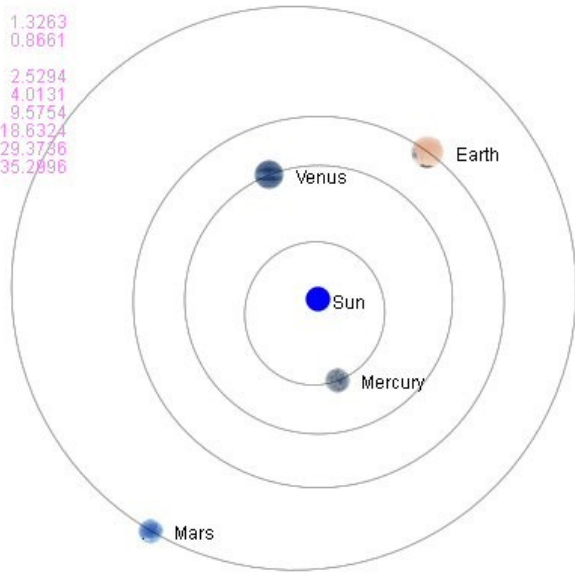
The Planets, mid November

Inner Solar System

2023-11-15 (UTC)

23h00m

	Sun	Earth
Mercury	0.4549	1.3263
Venus	0.7187	0.8661
Earth	0.9891	
Mars	1.5403	2.5294
Jupiter	4.9766	4.0131
Saturn	9.7508	9.5754
Uranus	19.6208	18.6324
Neptune	29.9049	29.3736
Pluto	34.8918	35.2996

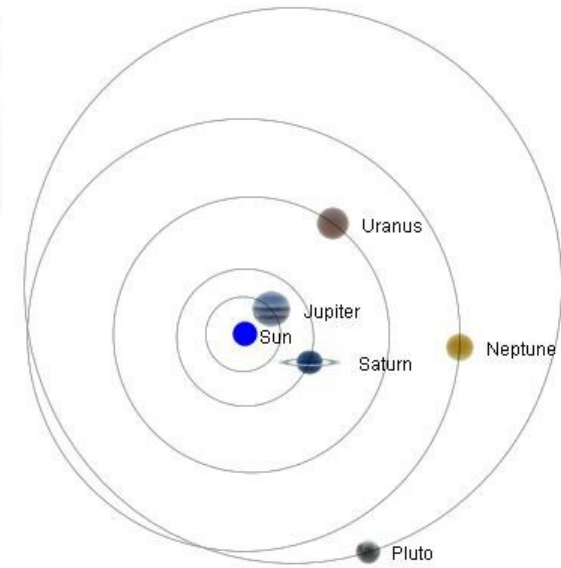


Outer Solar System

2023-11-15 (UTC)

23h00m

	Sun	Earth
Mercury	0.4549	1.3263
Venus	0.7187	0.8661
Earth	0.9891	
Mars	1.5403	2.5294
Jupiter	4.9766	4.0131
Saturn	9.7508	9.5754
Uranus	19.6208	18.6324
Neptune	29.9049	29.3736
Pluto	34.8918	35.2996



	Mercury	Venus	Mars	Jupiter	Saturn	Uranus	Neptune
Right ascension	11h 51m 27.7s	9h 45m 45.3s	13h 28m 31.0s	2h 47m 27.8s	22h 14m 50.0s	3h 19m 40.1s	23h 45m 43.0s
Declination	3° 0' 2"	10° 40' 56"	-8° 54' 51"	14° 39' 57"	-12° 46' 37"	18° 1' 1"	-2° 56' 16"
Range (AU)	1.224	0.54	2.544	4.111	8.961	18.88	28.934
Elongation from Sun	12.9°	44.6°	14.2°	145.7°	141.4°	137.3°	165.9°
Brightness	-1	-4.4	1.7	-2.7	0.6	5.7	7.8
Equatorial Diameter	5.49"	30.89"	3.68"	47.95"	18.55"	3.73"	2.36"
Constellation	Virgo	Leo	Virgo	Aries	Aquarius	Aries	Pisces
Meridian transit	12:09:00	10:03:00	13:46:00	03:07:00	22:30:00	03:39:00	00:05:00
Rises	05:53:00	03:07:00	08:33:00	19:44:00	17:40:00	19:56:00	18:17:00
Sets	18:24:00	17:00:00	18:58:00	10:25:00	03:25:00	11:17:00	05:49:00
Altitude	34.9°	48.3°	13.5°	1.9°	-50.2°	9.2°	-35.4°
Azimuth	143.2°	182.9°	125.0°	291.9°	351.9°	287.7°	324.8°