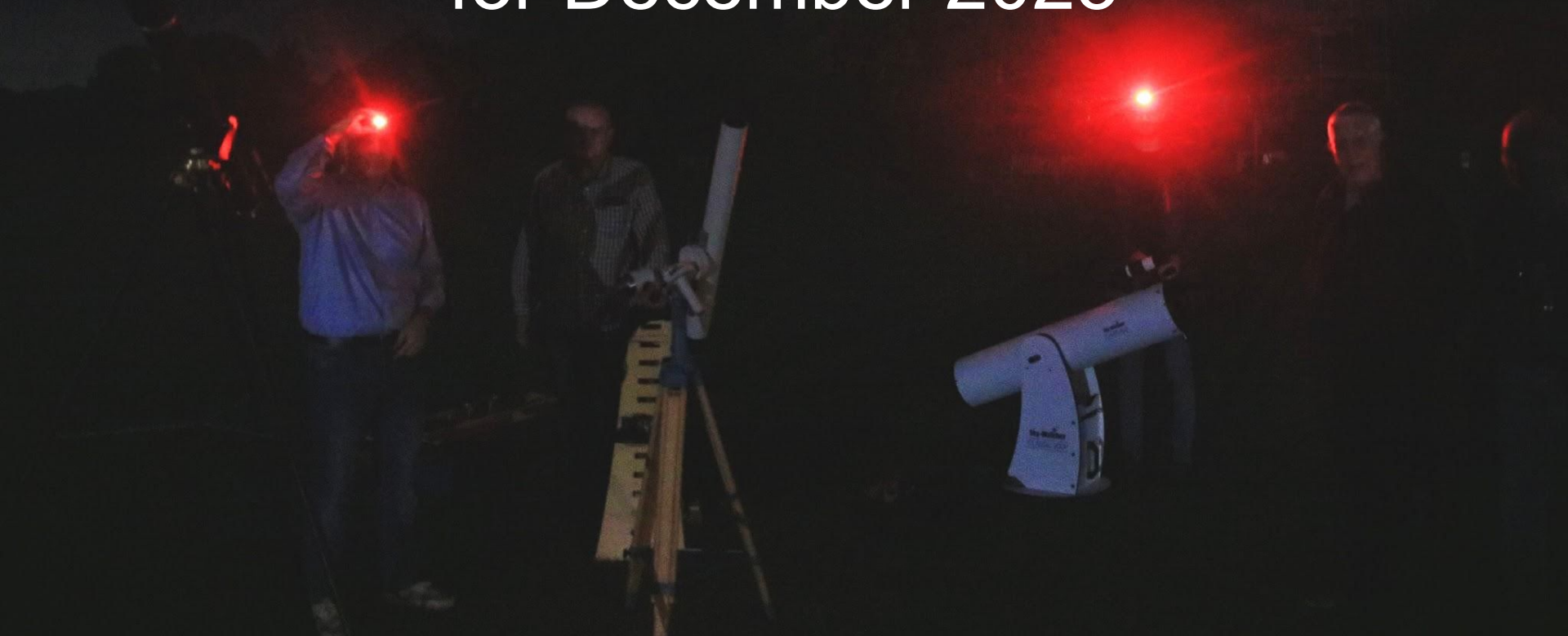




Orpington Astronomical Society

# Observing Officer's report for December 2023



# Sky chart

1/12/2023

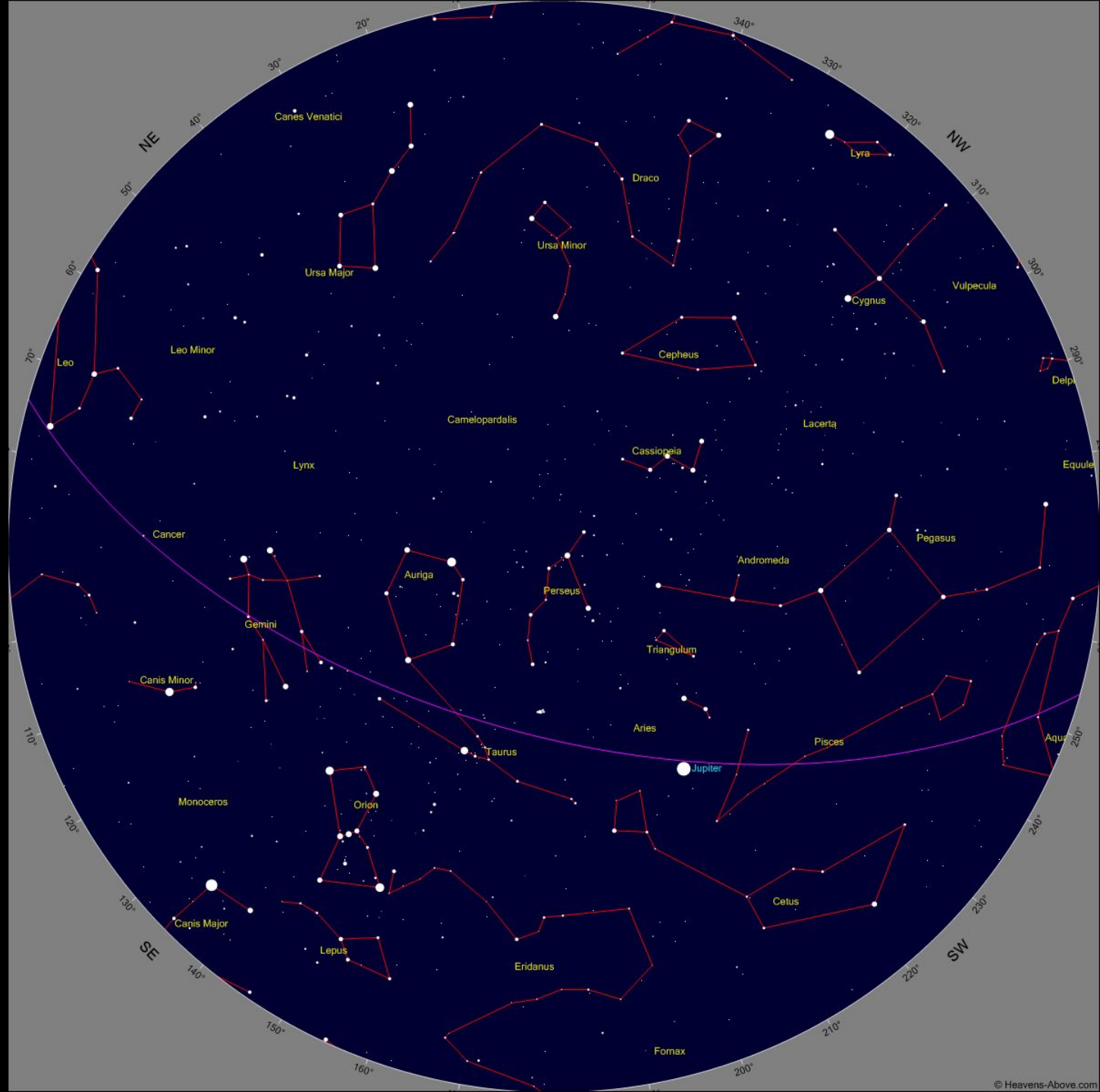
23:00

15/12/2023

22:00

28/12/2023

21:00



# Phases of the Moon

3<sup>rd</sup> quarter



5<sup>th</sup> Dec  
05:49

New Moon



12<sup>th</sup> Dec  
23:32

1<sup>st</sup> quarter



19<sup>th</sup> Dec  
18:39

Full Moon



27<sup>th</sup> Dec  
00:33

# Sun Phenomena in December

Winter solstice - 22th December 03:27

Date	Twilight starts *)	Rise	Set	Twilight ends *)	Day length
1 <sup>st</sup>	5:40	7:43	15:54	17:55	8:13
15 <sup>th</sup>	5:54	7:57	15:51	17:54	7:53
28 <sup>th</sup>	6:01	8:04	15:57	18:03	7:53

\*) Astronomical twilight

# Planets in December

Mercury - average visibility becoming difficult to see

Venus - good visibility @-4.2 - -4.0 mag

Mars - extremely difficult to see

Jupiter - perfect visibility @-2.6 mag

Saturn - average visibility @0.9-1.0 mag

Uranus - average visibility

Neptune - very difficult to see

# 1st December



# 15th December



# 28th December





04 Dec 14 h: Mercury in greatest eastern elongation

Poor visibility due to shallow angle of Ecliptic. 15 min after sunset, Mercury will be already below  $5^\circ$  above the horizon.

22 Dec 03:27 Winter solstice and the shortest day lasting 7 h 49 min in London; shorter than the summer solstice day by 8 h 49 min.

The word 'solstice' comes from the Latin solstitium meaning 'Sun stands still', because the apparent movement of the Sun's path north or south stops before changing direction.

Source: [When is the winter solstice?](#)

22 Dec 18 h: Mercury in inferior conjunction

# Geminids meteor shower

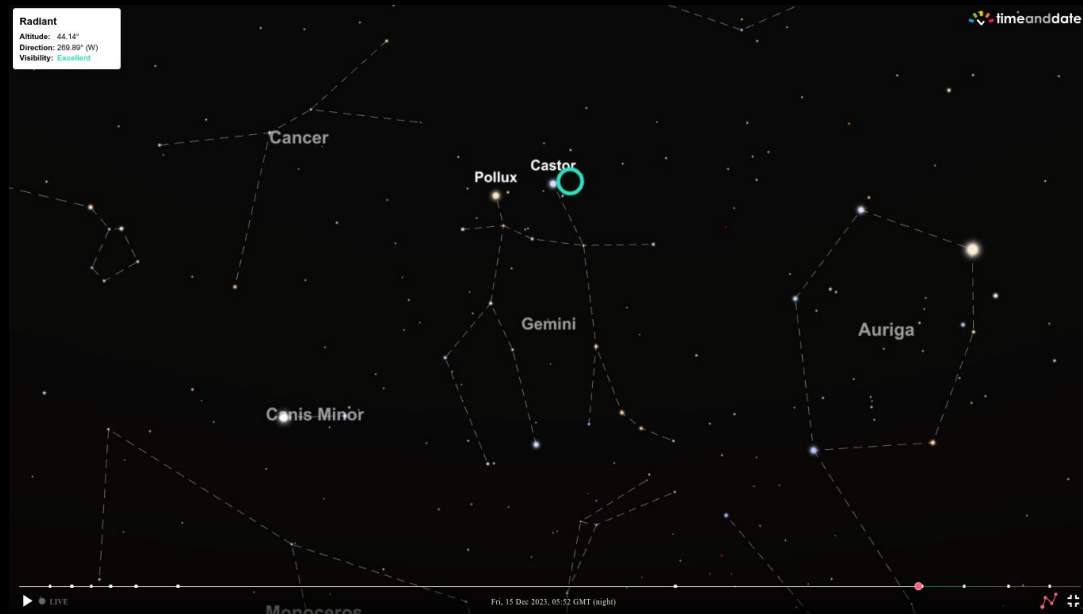
Period: 4 - 20 Dec

Peak: 14–15 Dec

Maximum intensity: 150 meteors per hour

Parent: 3200 Phaethon

The radiant is located right next to Castor. The shower should be visible all night on 14th December.





**The next Observing evening will be held here  
at the OVMH on Thursday 21<sup>st</sup> December  
at 20:00.**

# At the observing evening we will be observing:

- Moon (nearly 8 days old, 72% lit)
- Jupiter in close proximity of the Moon ( $10^\circ$  apart)
- Pleiades, Great Orion Nebula, Andromeda Galaxy, Double Cluster and many other Messier objects will be most likely drowned in Moonlight but we will try to find them

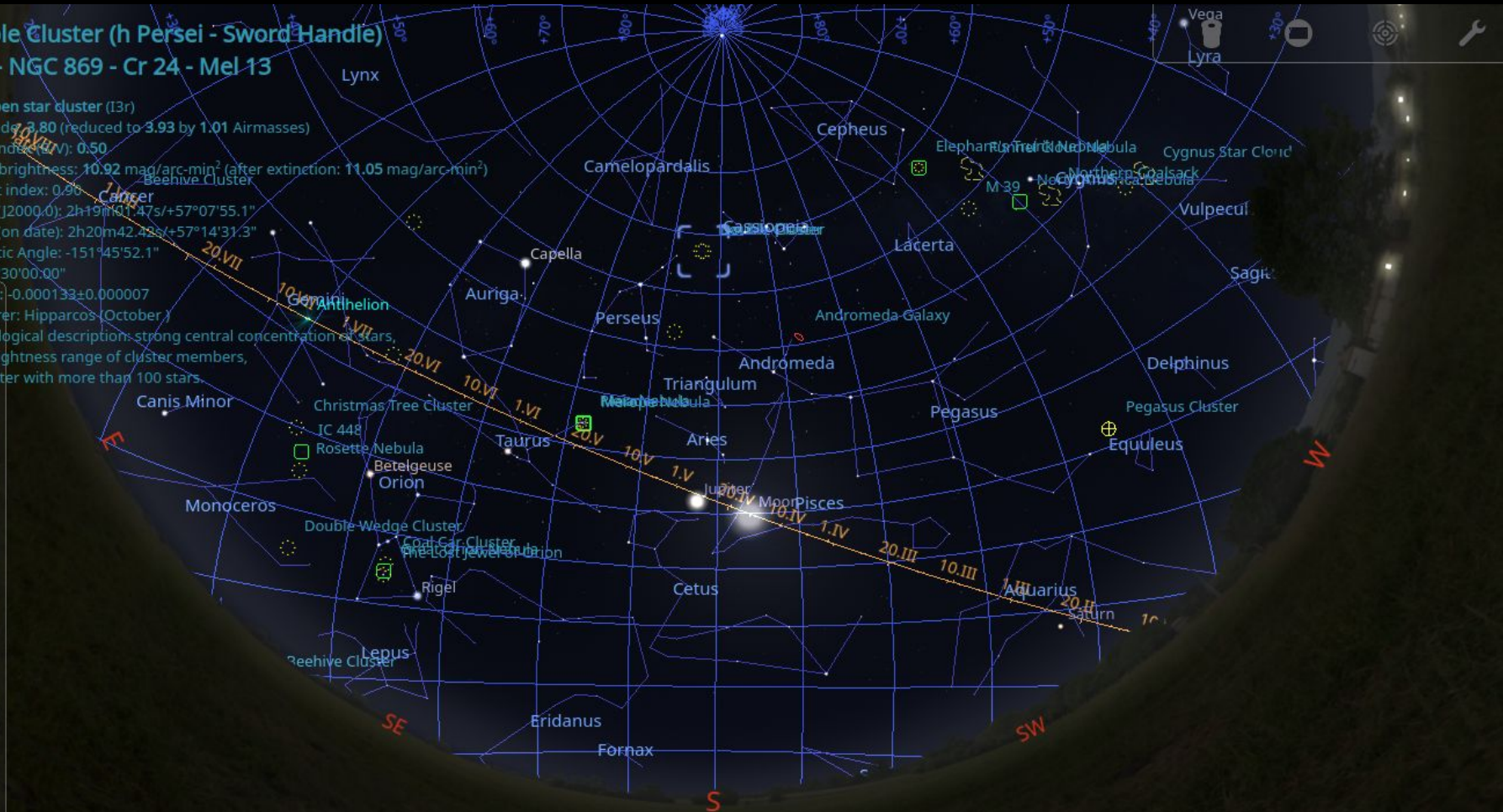
Sunset 15:53

Astronomical twilight: 17:56



# Double Cluster (h Persei - Sword Handle) C 14 - NGC 869 - Cr 24 - Mel 13

Type: open star cluster (I3r)  
Magnitude: 7.80 (reduced to 3.93 by 1.01 Airmasses)  
Colour Index (B-V): 0.50  
Surface brightness: 10.92 mag/arc-min<sup>2</sup> (after extinction: 11.05 mag/arc-min<sup>2</sup>)  
Contrast index: 0.90  
RA/Dec (J2000.0): 2h19m01.47s/+57°07'55.1"  
RA/Dec (on date): 2h20m42.42s/+57°14'31.3"  
Parallactic Angle: -151°45'52.1"  
Size: +0°30'00.00"  
Redshift: -0.000133±0.000007  
Discoverer: Hipparcos (October)  
Morphological description: strong central concentration of stars, large brightness range of cluster members, rich cluster with more than 100 stars.



Earth, Orpington, 62 m      FOV 143°      17.9 FPS      2023-12-21 20:00:00 UTC+00:00



Thank you

