



The Binocular Sky

January
2013

Newsletter

Introduction

Welcome to the first *Binocular Sky* Newsletter of 2013. The intention of this monthly offering is to highlight some of the binocular targets for the coming month. It is primarily targeted at observers in the UK, but should have some usefulness for observers anywhere north of Latitude 30°N. For this Newsletter to be a useful tool, it needs to have the information that YOU want in it; therefore please do not be shy about making requests – if I can accommodate your wishes, I shall do so. There is a printer-friendly version: <http://binocularsky.com/newsletter/201301p.pdf>

The Deep Sky (Yellow text is hyperlinked to charts and more information.)

The *Pleiades* (M45) and the *Great Orion Nebula* (M42) culminate in the early evening, as do the *trio of open clusters* in Auriga and M35 in Gemini. While you are looking at M35, also see if you can identify two smaller open clusters, NGC 2158, which is half a degree to the SE, and the slightly more difficult IC 2157, which is a degree to the ESE. Making a return are M44 (*Praesepe*) and M67, two fine open clusters in Cancer. Lower in the southern sky are more open clusters M46 & M47 and, near Sirius, M41.

The Deep Sky (contd)

While you are observing in the region, take the time to study **R Leporis** (*Hind's Crimson Star*), which is a candidate for the reddest star in the heavens. To the north of that, just to the SE of Alnitak (ζ Ori) is the multiple star **σ Orionis**.

The rather indistinct open cluster, NGC1502, is brought to prominence by an asterism, that is named **Kemble's Cascade**, in honour of Fr. Lucian Kemble, a Canadian amateur astronomer and Franciscan friar, who discovered it with a 7x35 binocular. He described as “*a beautiful cascade of faint stars tumbling from the northwest down to the open cluster NGC 1502.*” It is one of the most pleasing objects in small and medium binoculars.

Two clusters that are frequently ignored because they are closer to “more famous” objects are **NGC 752** and **M34**. Both are fine clusters and are worth spending some time on.

Open (also called 'Galactic') Clusters are loosely packed groups of stars that are gravitationally bound together; they may contain from a few dozen to a few thousand stars which recently formed in the galactic disk.

Two galaxies worth observing this month are **The Great Andromeda Galaxy, M31** and **M33 (The Pinwheel)**, both of which are close to the plane of the Milky Way. M31 in particular is very easily visible this month and is a naked eye object in moderately dark skies. It is large and bright enough to be able to withstand quite a lot of light pollution (making it available to urban observers). M33 has a low surface-brightness and benefits from

The Deep Sky (contd)

lower magnification. This generally makes it easier to see in, say, a 10x50 binocular than in many “starter” telescopes.

Galaxies are gravitationally bound “island universes” of hundreds of billions of stars at enormous distances. The light that we see from M31, for example, left that galaxy around the time our ancestors of the genus Homo were just evolving!

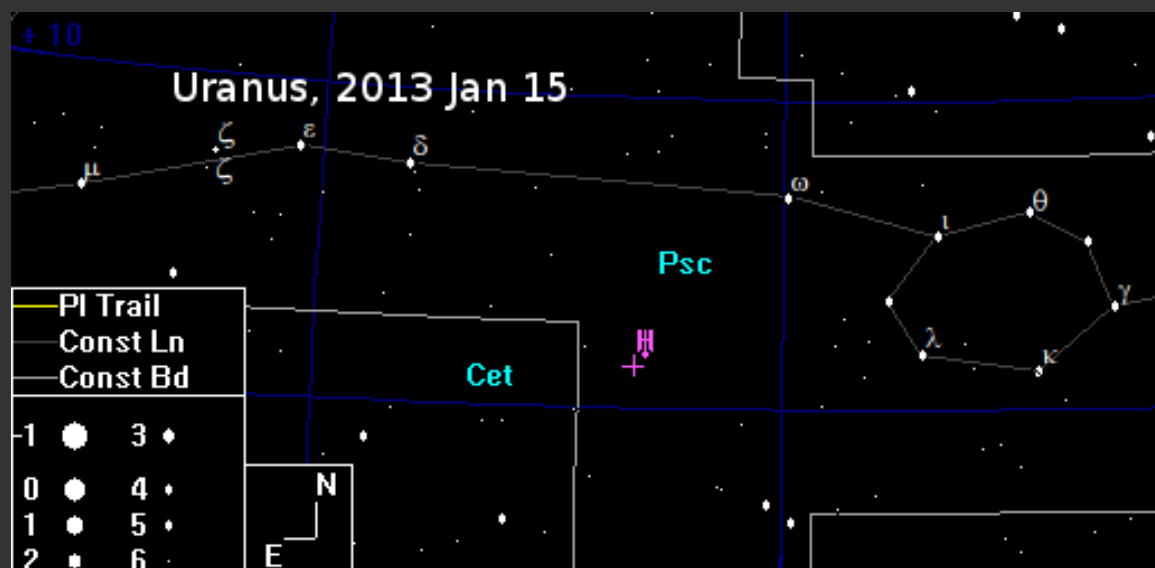
For an interactive maps of Deep Sky Objects visible from 51°N, please visit:

http://binocularsky.com/map_select.php

The Solar System

Planets

Uranus is slightly brighter than 6th magnitude and is theoretically a naked eye object, but will be low in the sky after dusk, east of the southern ringlet of Pisces, so binoculars will be essential.

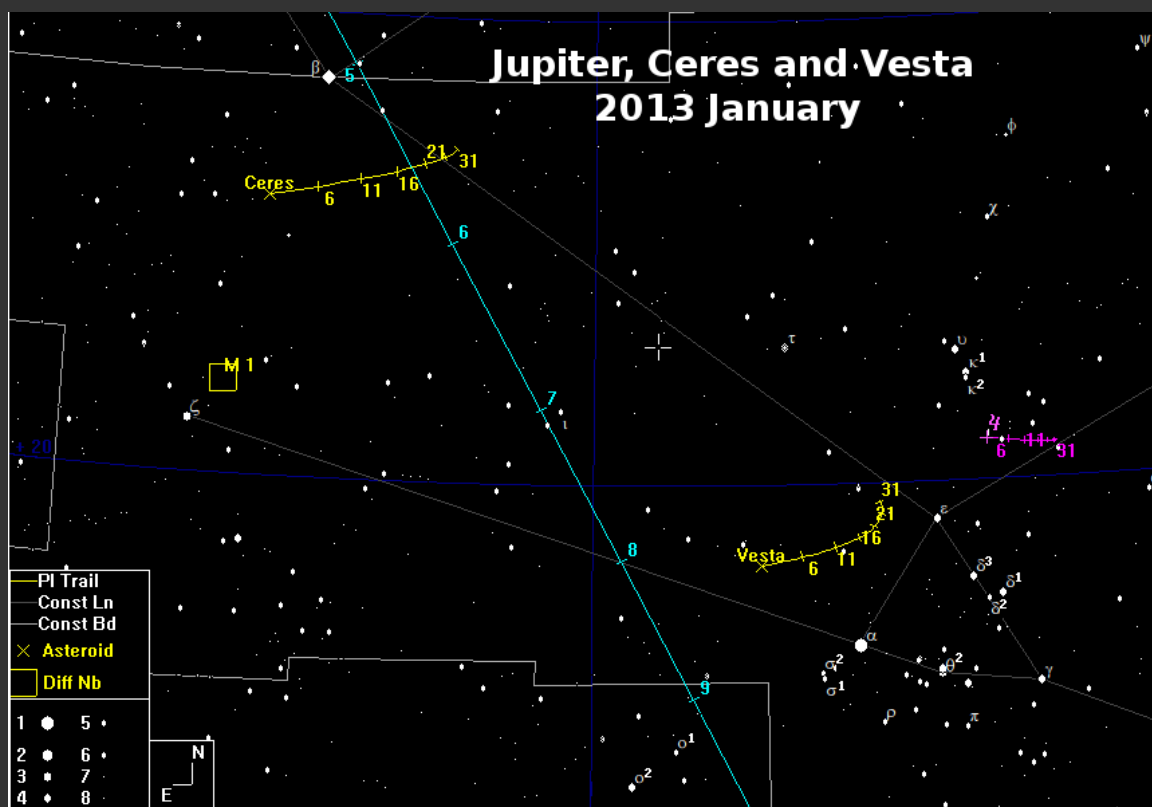


Planets (contd)

Neptune is 8th magnitude, near the border of *Aquarius* and *Capricornus*, but is very difficult, being only about 10° high as evening twilight ends .

Asteroids

Asteroids **Ceres** and **Vesta** are high in Taurus. They both start the month around magnitude 7 and fade by over half a magnitude by month end.



Meteor Showers

The Quadrantids are active from the 1st to the 5th and peak during the day of the 3rd. Unfortunately, a waning gibbous Moon will interfere with observations this year. The shower is named for the ancient constellation, *Quadrans Muralis*, which is now part of Boötes. You can use binoculars to examine the persistence of any ionisation trails.

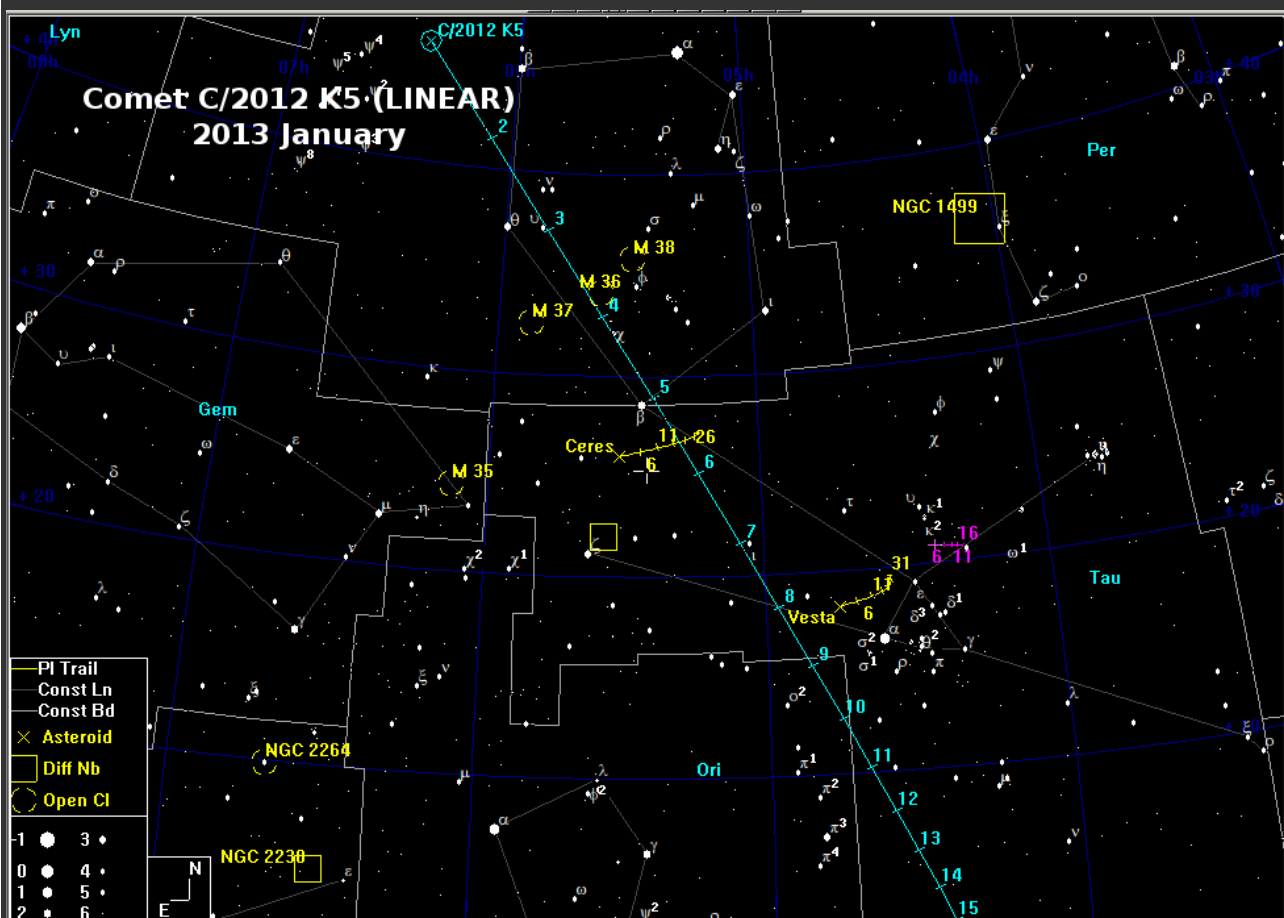
The Moon

Jan 05	Last Quarter
Jan 11	New Moon
Jan 18	First Quarter
Jan 27	Full Moon

Transient Objects

The only transient object of note this month is Comet C/2012 K5 (LINEAR), which is making its way through Auriga and Taurus, and fading rapidly as it does so; by mid-month it will be out of reach of 70mm binoculars. A dusk ends on the 3rd, it passes about half a degree east of M36.

Date	RA	Declination	Magnitude
2013 Jan 01	06h25m10.06s	+45 44' 40.4"	10.3
2013 Jan 06	05h13m38.13s	+25 07' 12.9"	10.8
2013 Jan 11	04h40m14.89s	+10 16' 38.1"	11.4
2013 Jan 16	04h22m48.72s	-10 35' 33.0"	12.1



Stargazing Live

Lastly, this month is *Stargazing Live* month in the UK. I expect to be at the following events with astronomical binoculars, and would be very pleased to meet readers of this newsletter, so please do come and introduce yourself if you are there. (The **yellow text** is hyperlinked to more information)

15th: [Hyde Common](#)

16th: [Badbury Rings](#)

18th: [Durlston Country Park](#)

19th: [Moors Valley Country Park](#)

Wishing you Clear Dark Skies,

Steve Tonkin for *The Binocular Sky*

Acknowledgments:

The charts in this newsletter were prepared with Guide v9.0 from <http://projectpluto.com>

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