



# The Binocular Sky

March  
2014

# Newsletter

## Introduction

Welcome to the ***Binocular Sky*** Newsletter of March 2014. 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 and possibly even further south. 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.

If you would like me to email this newsletter to you each month, please complete and submit the [subscription form](#). You can get “between the newsletters” alerts, etc. via  and .

## The Deep Sky *(Hyperlinks take you to charts and more information)*

The *Pleiades* (M45) and the *Great Orion Nebula* (M42) culminate before Civil Twilight ends, 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. Also high 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 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.

*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.*

If you are up around midnight (or later) it is worth looking out for the galaxy trios in Leo (M95/96/105 and M65/66/NGC3628) and Markarian's Chain in Coma Berenices. If you have a big binocular, also observe the edge-on NGC4565 (Berenice's Hair Clip), which is next to Melotte 111, the cluster that gives Coma its name. A galaxy in this region that is often ignored, owing to the lack of nearby bright stars, is NGC 3521, which is bright enough to be sometimes visible with averted vision in a 10x50, although I suggest a minimum of 70mm for ease of observation. It is considerably larger than any of the M95/96/105 trio and is as bright as M96.

If you have binoculars of 70mm aperture or (preferably) greater, see if you can find and identify The Ghost of Jupiter (NGC 3242), a planetary nebula in Hydra. It is a difficult object because it is low in the sky, even from southern Britain.

*Planetary Nebulae are short-lived (a few tens of thousands of years) masses of gas and plasma that result from the death of some stars. They have nothing to do with planets, but get their name from the fact that, in early telescopes, they had the appearance of giant planets.*

## Variable Stars

Mira-type stars near predicted maximum (mag < +8.5)		
Star	Mag Range	Period (days)
R And	6.9-14.3	409
R Aqr	6.5-10.3	387

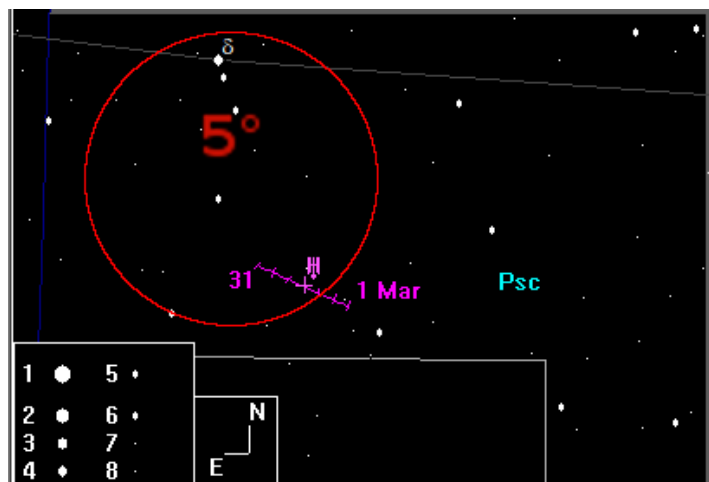
Selection of binocular variables (mag < +8.5)			
Star	Mag Range	Period	Type
RU Cam	8.1-9.8	22.06d	Cepheid
AA Cam	7.5-8.8	Irreg	Irregular
RX Lep	5.4-7.4	Irreg	Irregular
U Cep	6.8-9.2	2.5d (increasing)	Eclipsing binary
EK Cep	8.2-9.5	4.3d	Eclipsing binary
T Cep	6.0-10.3	388d	Mira
SS Cep	6.7-7.8	ca. 190d	Semi-regular
RZ Cas	6.2-7.7	1.195d	Eclipsing binary

## The Solar System

### Binocular Planets

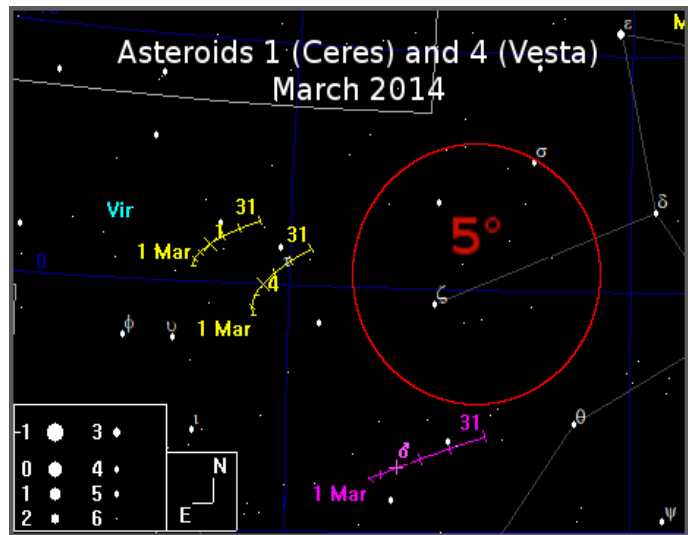
**Uranus** shines at magnitude +5.9 just over  $5^\circ$  south-southwest of  $\delta$  Psc. It is only observable in the first two weeks of the month before it descends into the evening twilight glare.

**Neptune** is lost in the morning Sun's glare.

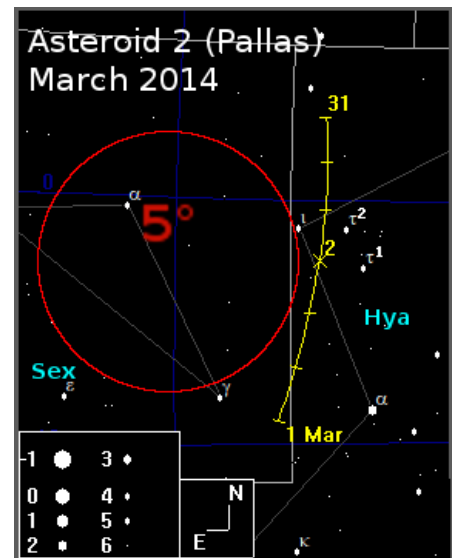


## Minor Planets

**Asteroids 1 (Ceres) and 4 (Vesta)** rise before midnight near Mars in Virgo and are both brightening, to +7.2 and +5.9 respectively by the end of the month.



**Asteroid 2 (Pallas)** starts the month at magnitude +6.9 and is observable all night low down in Hydra as it fades to mag. 7.6.



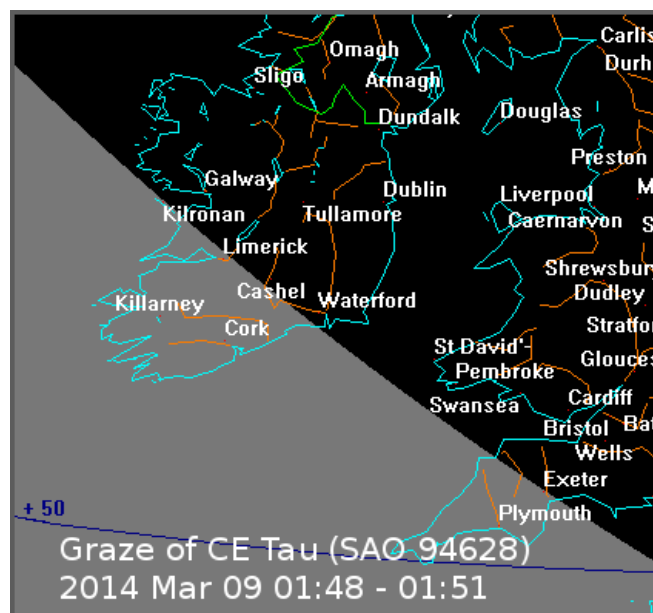
## The Moon

Mar 01	New Moon
Mar 08	First Quarter
Mar 16	Full Moon
Mar 24	Last Quarter
Mar 30	New Moon

## Lunar Occultations

There are several occultations of stars brighter than mag +8.5 visible from the UK this month. Times and Position Angles are for my location (approx: 50.9N, 1.8W) and will vary by up to several minutes for other UK locations. The types are **(D)**isappearance, **(R)**eappearance and **(Gr)**aze; they are all dark-limb events unless there is a **(B)**.

Lunar Occultations, Feb 2014, 50.9°N, 1.8°W					
Date	Time	Type	SAO	Mag	PA (°)
Mar 03	19:00:40	D	109533	7.4	058
Mar 03	20:12:02	D	109563	6.7	109
Mar 04	20:11:35	D	92659	5.9	027
Mar 04	20:16:57	D	92669	7.4	108
Mar 06	21:00:42	D	93536	6.2	093
Mar 07	19:40:00	D	93963	6.9	122
Mar 07	21:57:02	D	94002(D)	7.0	090
Mar 07	21:57:05	D	94002(D)	6.2	090
Mar 08	20:55:17	D	94510	7.3	082
Mar 09	00:05:54	D	94586	6.7	108
Mar 09	01:14:22	D	94617	6.8	124
Mar 09	01:51:29	Gr	94628	4.3	
Mar 09	18:43:42	D	95337	6.4	135
Mar 09	21:41:56	D	95456	6.6	061
Mar 10	00:59:09	D	95572	6.3	132
Mar 10	18:38:11	D	96371	7.1	159
Mar 11	02:18:26	D	96652	7.3	068
Mar 13	00:27:13	D	98117	5.9	059
Mar 15	23:12:55	D	118655	7.0	118
Mar 20	00:32:03	R	158546	7.3	279
Mar 22	02:46:32	R	159849	7.1	315



## Meteor Showers

There are no major meteor showers this month.

## National Astronomy Week 2014

Lastly, [National Astronomy Week 2014](#) is from the 1st to the 8th of March. 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.

Mar 01: [Hyde Common](#)

Mar 06: [Badbury Rings](#)

Mar 08: [Durlston Country Park](#)

Wishing you Clear Dark Skies,

***Steve Tonkin for The Binocular Sky***



### Acknowledgments:

Charts and occultation tracks prepared with Guide v9.0 from <http://projectpluto.com>

Lunar occultation data produced with David Herald's [Occult v4.1.0](#)

Variable star data from David Levy's [Observing Variable Stars](#)

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