



The Binocular Sky



March
2015

Newsletter

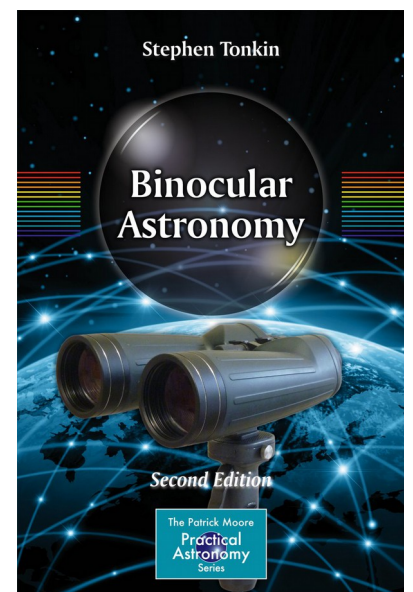
Introduction

Welcome to the ***Binocular Sky*** Newsletter of March 2015. 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.

Solar-system charts are clickable and will take you to a (usually) larger chart that may be more useful as well as being downloadable to your computer or smartphone.

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 .

If you would like to support this Newsletter, the simplest way is to purchase my book, [Binocular Astronomy](#). Please click on the image for more information.



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 nebulous giant planets.

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

http://binocularsky.com/map_select.php

Variable Stars

Mira-type stars near predicted maximum (mag < +7.5)		
Star	Mag Range	Period (days)
U Ori	6.3-12.0	368

Selection of binocular variables (mag < +7.5)			
Star	Mag Range	Period	Type
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

Double Stars

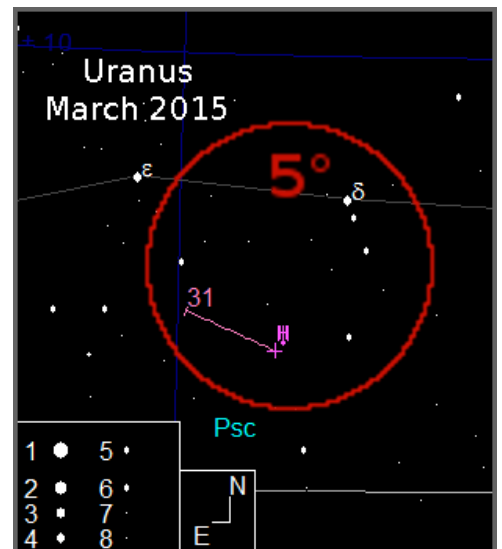
Binocular Double Stars for March			
Star	Magnitudes	Spectral Types	Separation (arcsec)
α Leo	1.4, 8.1	B8, G	176
7 Leo	6.3, 9.3	A0, F8	41
τ Leo	5.0, 7.4	K0, G5	89
δ Cep	4.1, 6.1	F5, A0	41
62 Eri	5.4, 8.9	B9, B8	67
τ Tau	4.3, 7.0	B5, A0	63
ν Gem	4.1, 8.0	B5, A0	113
ζ Gem	4.0, 7.6	G0, G	101
ι Cnc	4.0, 6.0	G5, A5	31
65 Uma	6.7, 7.0	A3, B9	63
α Cvn	2.9, 5.5	A0, F0	17.5
π -1 Umi	6.6, 7.2	G5, G5	31

The Solar System

(The charts in this section are "clicky")

Planets

Of the binocular planets, **Uranus** is becoming less easy to observe during the evening, shining at magnitude +5.9 and just over 3° south δ and ϵ Psc. It starts the month less than 20° high at the end of nautical twilight, and sinks lower as the month progresses. Venus passes about 5 arcminutes to the north on the evening of the 4th.



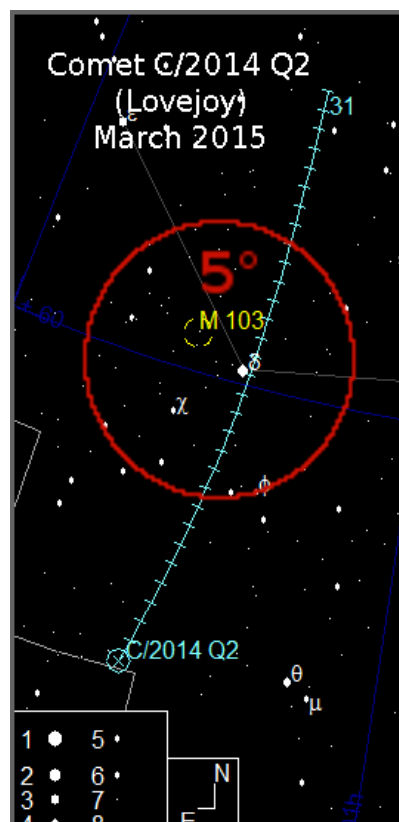
Neptune is very close to the Sun and is not observable in binoculars this month

Comets

Comet C/2014 Q2 (Lovejoy) is now circumpolar and, although it is gradually fading from about magnitude 5.5, it should still be an observable binocular object all month as it moves through Cassiopaea. On the night of the 15th/16th, it moves to within 10 arcminutes of *Ruchbah* (δ Cas).

The Moon

- Mar 05 Full Moon
- Mar 13 Last Quarter
- Mar 20 New Moon
- Mar 27 First Quarter



Lunar Occultations

There are several occultations of stars brighter than mag +7.0 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, (**G**)raze and near (**M**)iss.

Lunar Occultations, February 2015, 50.9°N, 1.8°W					
Date	Time	Type	Star	Mag	PA (°)
Mar 01	02:40	M	λ Gem	3.6	12
Mar 02	21:12	D	FX Cnc	6.7	124
Mar 03	03:33	D	α Cnc	4.3	94
Mar 04	21:30	D	43 Leo	6.1	55
Mar 07	03:47	R	SAO 138533	6.3	307
Mar 15	04:58	R	SAO 161935	6.8	230
Mar 29	20:18	D	SAO 97913	6.3	123
Mar 30	02:06	D	45 Cnc	5.6	85
Mar 31	02:54	D	6 Leo	5.1	88

Stargazing Live 2015

Lastly, there are Stargazing Live astronomy events all month. I expect to be at the following public 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 12: [Blashford Lakes \(Introduction to Stargazing\)](#)

Mar 13: [Blashford Lakes \(Introduction to Stargazing\)](#)

Mar 21: [Hyde Common \(Fordingbridge Astronomers Public Observing\)](#)

Mar 20: [Wellington Academy \(Seeing Stars Live\)](#)

Mar 21: [Hyde Common \(Fordingbridge Astronomers Public Observing\)](#)

Mar 25: [Badbury Rings \(Stargazing Live Public Observing\)](#)

May 28: [Durlston Country Park \(Wessex AS Public Observing\)](#)

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>

Variable star data based on David Levy's *Observing Variable Stars*

Occultation data derived with Dave Herald's *Occult*

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