





The Binocular Sky

June
2013

Newsletter

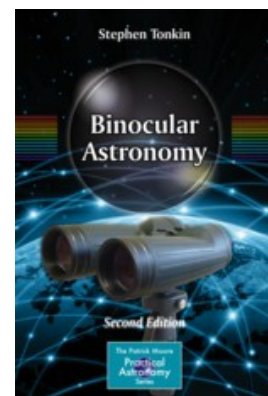
Introduction

Welcome to the ***Binocular Sky*** Newsletter of June 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 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 .

Announcement

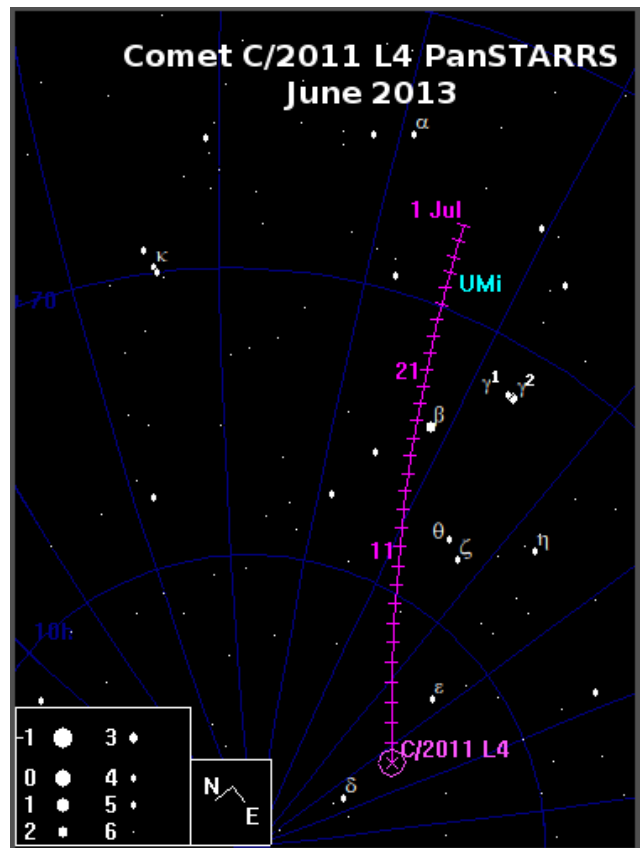
I am proud to announce that a 2nd Edition of my book ***Binocular Astronomy*** will be published later this year. If you are interested, you can see the pre-publication blurb [here](#). It will also be available as an electronic edition, and I understand that Springer intends to make individual chapters available electronically as well.



Transient Objects

Comet C/2011 L4 (PanSTARRS) was just below 9th magnitude near the end of May. It continues to be a tricky object for big binoculars, but observing PanSTARRS as late as possible into June will provide good practice for finding **Comet C/2012 S1 (ISON)** early in its apparition later this year.

PanSTARRS is now circumpolar (in fact, from our latitude it will never set again!), so can be observed all night.



The Deep Sky

Visible low in the North are [NGC 457 \(The Owl Cluster\)](#) and [NGC 633](#) in Cassiopeia and the [Perseus Double Cluster](#). The finest and best-placed open cluster available this month is April's "object of the month", [Melotte 111](#), the cluster that gives Coma its name. More open Clusters are becoming visible in the south-eastern sky as Ophiuchus rises. These include [Melotte186](#), [NGC 6633](#) and [IC4665](#), all of which are easily visible in 50mm 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.

The Deep Sky (contd)

While you are in the region of Ophiuchus, see if you can find Barnard's Star. This has the largest known proper motion of any star. Although it is visible in 50mm binoculars from a dark site, it is considerably easier in larger glasses and I recommend a minimum of 70mm.

In June, we are able to look out of the plane of the Galaxy during the evening. This makes more globular clusters and galaxies available for observation. Look out for the two galaxy trios in Leo (M95/96/105 and M65/66/NGC3628) which are now moving into the western sky, and Markarian's Chain in Coma Berenices, which is very well placed as we enter astronomical twilight. If you have a big binocular, also observe the edge-on NGC4565 (Berenice's Hair Clip), which is next to Melotte 111. Also very well placed this month are M81 (Bode's Nebula) and M82 (The Cigar Galaxy), both of which are easy in a 50mm binocular. These can be used as a good demonstration of averted vision: if you have them both in the same field of view, you may see that the core of M81 becomes more apparent if you look at M82. If you have good skies, try M51 (The Whirlpool) and M101 which, although it is a large object, is very difficult owing to its low surface brightness.

The Canes Venatici globular cluster M3, is a good one to start with during an June evening's observing. Later in the evening, the two Hercules globulars, M92 and the very impressive, and very easy to find, M13 are at a better altitude for observation. Although M13 is clearly larger than M3, it is easier to resolve the outer stars of the latter one, which is why I one reason that I have nominated it as object of the month. Also visible this month is M5 in Serpens, which is one of the largest globular clusters known, being 165 light years in diameter. It's apparent size is nearly as large as a Full Moon.

The Deep Sky (contd.)

Globular clusters are tightly-bound, and hence approximately spherical, clusters of tens, or even hundreds, of thousands of stars that orbit in a halo around almost all large galaxies that have been observed. They are important for two reasons: Firstly, they contain some of the oldest stars in the galaxy, so studying them helps us understand the evolution of stars. Secondly, they are useful as "standard candles" in establishing a distance scale of the Universe, based on the assumption that the brightest stars in any globular cluster will be approximately the same brightness and that the brightest globulars in a galaxy will be approximately the same brightness.

If you have binoculars of at least 100mm aperture, see if you can find and identify NGC 6572, a planetary nebula in Ophiuchus. Even in large glasses it looks stellar, but it has the distinction of being possibly the greenest object in the sky.

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.

For interactive maps of Deep Sky Objects visible from 51°N, please visit: http://binocularsky.com/map_select.php

The Solar System

Minor Planets

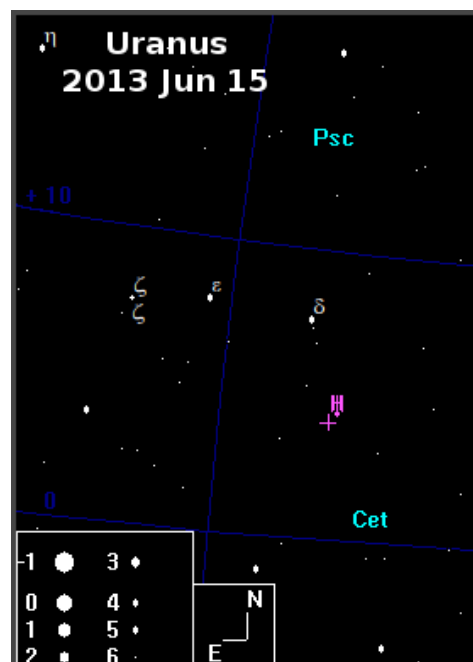
The brighter asteroids are not available this month.

Planets

Mercury will be a binocular object in the bright dusk twilight until about the 20th.

Solar System (contd.)

Although it is too low at the beginning of the month, by the last week, **Uranus** will be at an observable altitude in the morning sky before the end of nautical twilight. It is at magnitude +5.8 and about 3.5° south of δ Psc. It moves less than a degree during the month.



Lunar Occultations

There are two occultations of bright stars visible from the UK this month, both in the early hours of the 27th. 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.

Date	Star	Disappearance			Reappearance		
		Limb	PA	Time (UT)	Limb	PA	Time (UT)
2013 Jun 27	46 Cap	B	055	00:28	D	261	01:35
	47 Cap	B	125	01:10	D	191	01:49

Asteroid Occultations

There are no asteroid occultations of stars visible from the UK and suitable for binoculars this month.

Meteor Showers

The only meteor shower this month is the June Boötids, which ranges from the 22nd until July 2nd, peaking on the 27th . This is

Solar System (contd.)

usually a very weak shower, with only one or two meteors visible every hour, but there have been outbursts with Zenithal Hourly Rates of 100 or more. However, along with all-night twilight, the Moon also interferes this year. These relatively slow meteors are dust particles from the tail of Comet Pons-Winnecke. As these particles enter the atmosphere, they compress and heat the air in front of them. This heat causes the surface of the particle to ablate and ionise. Binoculars are useful for observing the persistence of these ionisation trains that form the streak in the sky which is what we observe as a "shooting star".

The Moon

Jun 08 New Moon
Jun 16 First Quarter
Jun 23 Full Moon
Jun 30 Last Quarter

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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