




The Binocular Sky

February
2014

Newsletter

Introduction

Welcome to the ***Binocular Sky*** Newsletter of February 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)*

***** SUPERNOVA ALERT***** At the time of writing, there is a supernova in [M82](#), observable in 70mm binoculars from suburban skies.

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. 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.

While you are observing in the region of the Orion Nebula, 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 (ζOri) is the multiple star σOrionis.

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.

Variable Stars

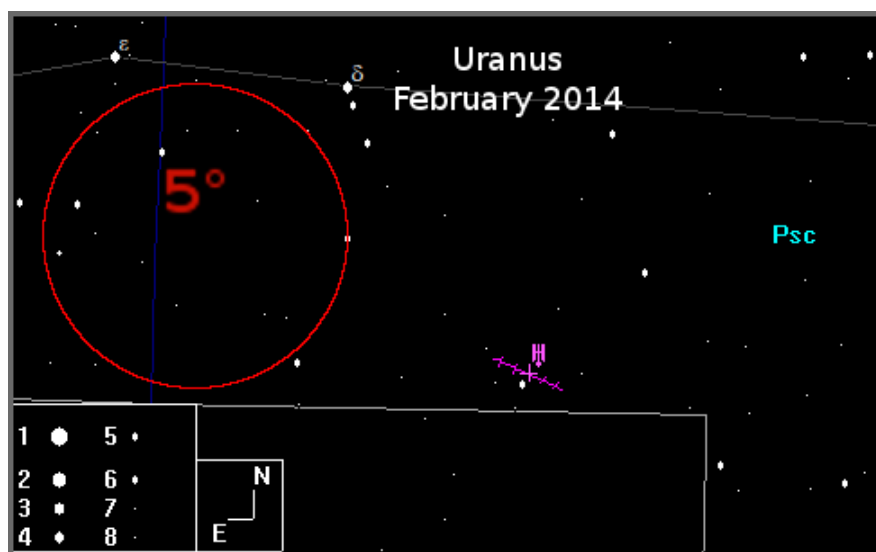
Mira-type stars near predicted maximum (mag < +8.5)		
Star	Mag Range	Period (days)
R And	6.9-14.3	409
R Aqr	6.5-10.3	387

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
TW Peg	7.0-9.2	ca. 90d	Semi-regular
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

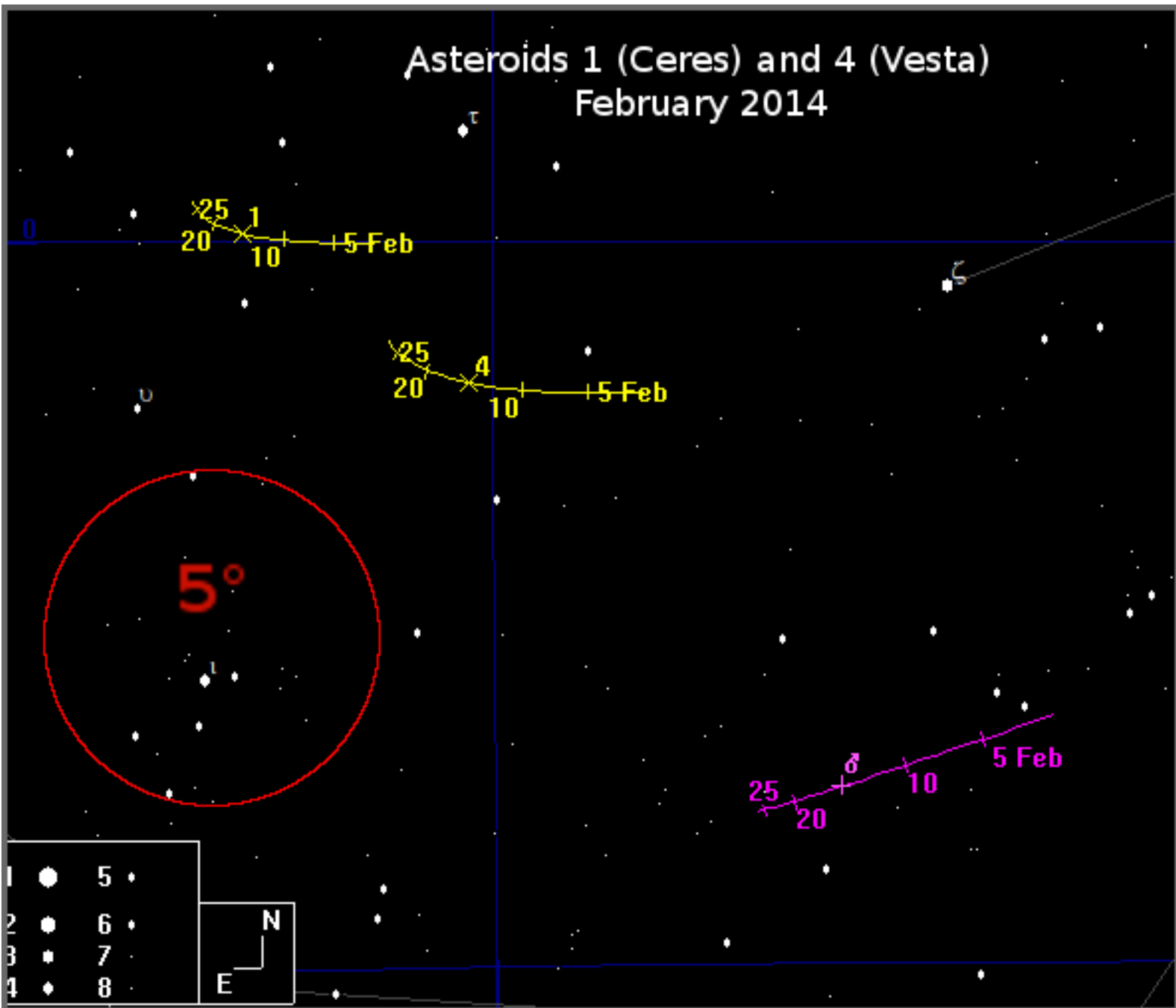
Uranus shines at magnitude +5.9 just over 5° south-southwest of δ Psc. It sets early, so observe it as soon as possible after darkness falls.



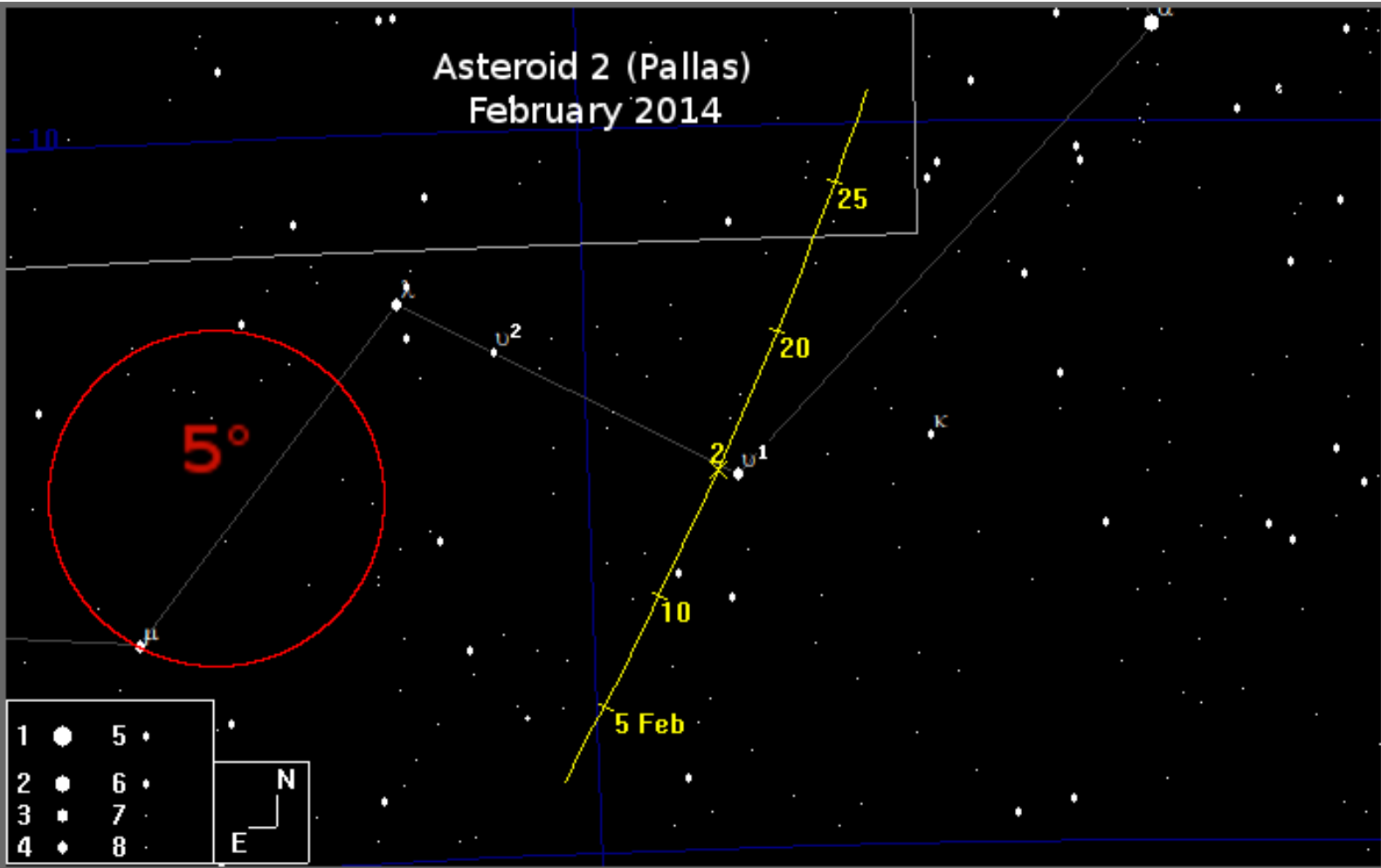
Neptune is lost in the Sun's glare.

Minor Planets

Asteroids 1 (Ceres) and **4 (Vesta)** rise before midnight near Mars in Virgo and are both brightening, to +8.0 and +6.9 respectively.



Asteroid 2 (Pallas) is also at magnitude +6.9 and is observable all night low down in Hydra.



The Moon

Feb 06 First Quarter
Feb 14 Full Moon
Feb 22 Last Quarter

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**)raze; 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 (°)
Feb 03	21:25:37	D	109238	6.5	061
Feb 04	21:49:46	D	109839	7.4	037
Feb 05	23:50:47	D	92882	6.9	021
Feb 06	18:01:01	D	93235	7.3	098
Feb 07	18:25:34	D	93650	6.0	066
Feb 07	23:06:04	D	93716	6.3	124
Feb 08	01:03:10	D	93749	6.6	080
Feb 08	19:48:21	D	94112	6.0	026
Feb 08	21:12:08	D	94136	7.0	046
Feb 10	00:21:32	D	94830	6.7	084
Feb 10	00:48:21	D	94839	7.5	056
Feb 10	19:08:58	D	95703	7.5	093
Feb 11	00:59:01	D	95883	7.3	159
Feb 11	04:00:51	D	96015	5.2	089
Feb 11	20:12:48	D	96746	3.6	176
Feb 11	23:38:09	D	96848	7.1	053
Feb 12	23:55:40	D	97647	6.5	167
Feb 13	20:28:52	D	98235	5.4	127
Feb 14	04:23:25	D	98378	5.2	094
Feb 17	06:00:40	R	138220	7.1	265
Feb 18	00:55:31	R	138602	7.5	225
Feb 21	05:27:36	R	158788	6.3	324
Feb 25	04:22:14	R	161665	7.0	276
Feb 25	04:23:07	R	HD171785	7.5	226

Meteor Showers

There are no major meteor showers this month.

Stargazing Live

Lastly, There are BBC Stargazing Live events in the UK during February. 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.

Feb 07: [Durlston Country Park](#)

Feb 08: [Moors Valley 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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