



# The Binocular Sky

February  
2013

# Newsletter

## Introduction

Welcome to the February 2013 *Binocular Sky* Newsletter . 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/201302p.pdf>

The potential highlight of this month's observing is the close approach of **Asteroid 2012 DA14**. There is a finder chart and ephemeris on page 4 , and more detailed material on the web site.

## 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. 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 Deep Sky (contd)

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 ( $\zeta$ Ori) is the multiple star  **$\sigma$ Orionis**.

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.

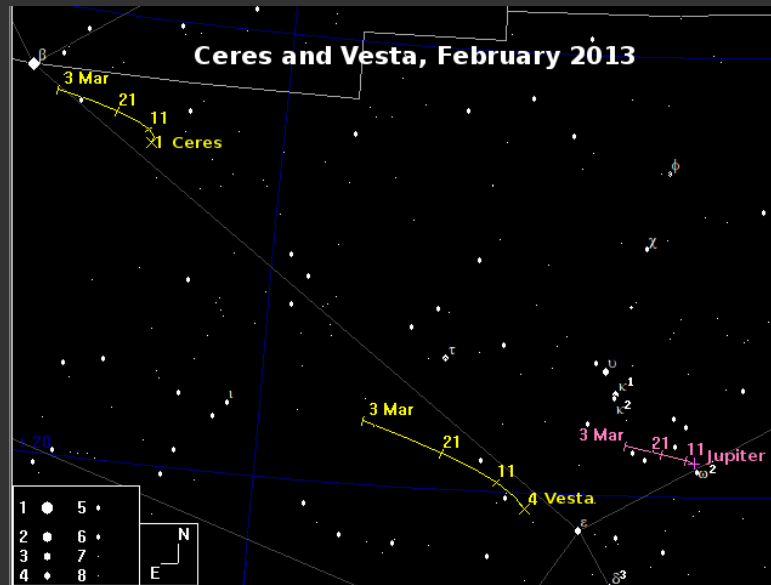
For interactive maps of Deep Sky Objects visible from 51°N, please visit:

[http://binocularsky.com/map\\_select.php](http://binocularsky.com/map_select.php)

# The Solar System

## Ceres and Vesta

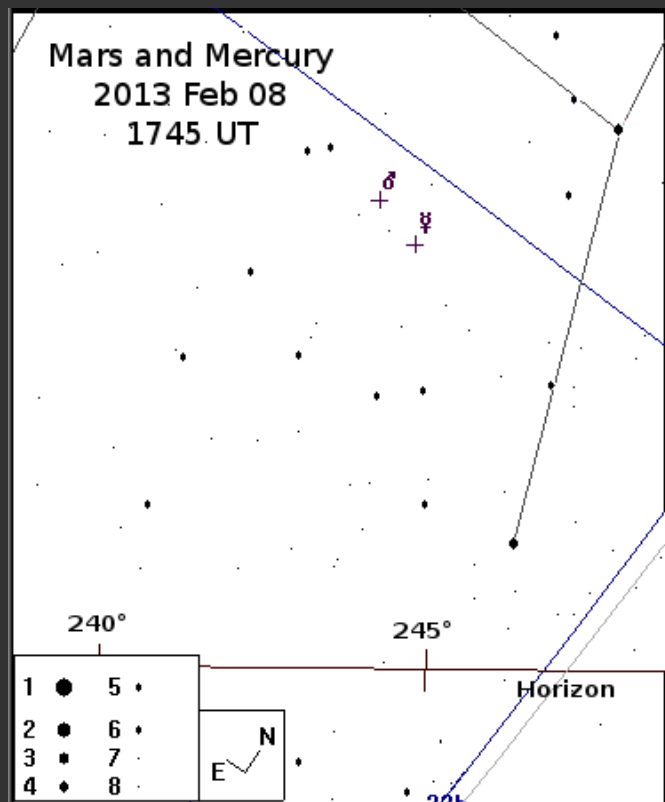
Asteroids 1 Ceres and 4 Vesta are binocular objects for the whole of February, starting the month at magnitude 7.8 and 7.5 respectively, and fading by about half a magnitude during the month.



## Conjunction of Mars and Mercury

There will be a close (15 arcmin) conjunction (of Mars and Mercury at 16:32 UT, three quarters of an hour before sunset. The chart shows the situation at the end of Civil Twilight at 51°N 1.8°W, when the planets are already separating but still within 16 arcmin of each other. They are at an altitude of 7°.

This will be a very challenging observation; you will need a very good south-western horizon.

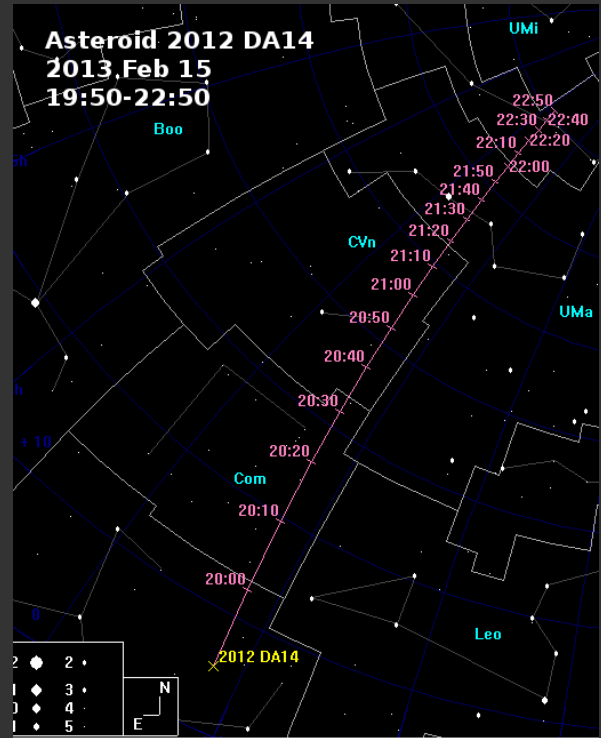


## The Solar System (contd.)

### Asteroid 2012 DA14

Asteroid 2012 DA14 makes a close pass to Earth (within the orbit of geosynchronous satellites) on the 15th. The Ephemeris and finder charts are location-dependent owing to the large parallax that exists for such close approaches. These should be suitable for southern England. There are higher resolution charts at the [Binocular Sky Transient Phenomena](#) web page.

The asteroid should be observable in binoculars for about 3 hours after it rises.



### Ephemeris 2012 DA14 2013 Feb 15 50.9°N 1.8°W

Time (UT)	RA	Dec	Distance (km)	Mag	Alt	Az
19:50	12h09m57.58s	+05°23'08.7"	35471.9	7.6	-2.72	78.13
20:00	12h12m00.72s	+12°41'15.0"	36196.5	7.7	4.22	75.14
20:10	12h14m05.55s	+19°35'35.8"	37379.6	7.8	10.79	72.24
20:20	12h16m12.16s	+25°59'11.7"	38976.9	7.9	16.85	69.42
20:30	12h18m20.53s	+31°48'29.0"	40936.5	8.1	22.33	66.66
20:40	12h20m30.65s	+37°02'47.8"	43205.5	8.3	27.23	63.94
20:50	12h22m42.49s	+41°43'30.2"	45734.2	8.5	31.56	61.25
21:00	12h24m56.05s	+45°53'09.9"	48478.5	8.7	35.35	58.59
21:10	12h27m11.32s	+49°34'52.4"	51400.6	8.9	38.65	55.95
21:20	12h29m28.34s	+52°51'49.8"	54469.1	9.1	41.53	53.34
21:30	12h31m47.13s	+55°47'05.2"	57658.2	9.2	44.02	50.76
21:40	12h34m07.75s	+58°23'25.0"	60946.5	9.4	46.18	48.21
21:50	12h36m30.26s	+60°43'17.0"	64316.9	9.6	48.04	45.70
22:00	12h38m54.74s	+62°48'49.6"	67755.5	9.7	49.64	43.24
22:10	12h41m21.26s	+64°41'53.6"	71250.9	9.9	51.02	40.83
22:20	12h43m49.92s	+66°24'04.0"	74793.7	10.0	52.19	38.48
22:30	12h46m20.82s	+67°56'41.9"	78376.3	10.2	53.20	36.20
22:40	12h48m54.08s	+69°20'56.9"	81992.5	10.3	54.05	33.99
22:50	12h51m29.81s	+70°37'48.3"	85637.1	10.4	54.77	31.86
23:00	12h54m08.13s	+71°48'07.2"	89305.8	10.6	55.37	29.82
23:10	12h56m49.20s	+72°52'37.3"	92994.9	10.7	55.87	27.86
23:20	12h59m33.14s	+73°51'56.5"	96701.5	10.8	56.28	25.99
23:30	13h02m20.10s	+74°46'37.5"	100423.0	10.9	56.61	24.21
23:40	13h05m10.26s	+75°37'08.5"	104157.0	11.0	56.87	22.52
23:50	13h08m03.77s	+76°23'54.5"	107902.0	11.1	57.07	20.93

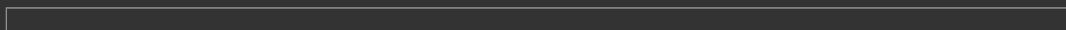
**Neptune** is 8th magnitude, near the border of Aquarius and Capricornus, but is very difficult, being only about 1° high as evening twilight ends. On the 4th, it will be a quarter of a degree above Mercury, which may act as a guide to binocular or telescopic observation.

### The Moon

Feb 03	Last Quarter
Feb 10	New Moon
Feb 17	First Quarter
Feb 25	Full Moon

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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