



# The Binocular Sky

March  
2017



# Newsletter

## Introduction

Welcome, especially to new readers, to March's **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 binocular observers (although I know that many small-scope observers use it as well) in the UK, but should have some usefulness for observers anywhere north of Latitude 30°N and possibly even further south.

The charts are "clicky" and will take you to a higher resolution chart.

Highlights this month include a nice easy-to-find Asteroid Vesta (p5), Comet 41P, a spectacular dance of the planets in the evening and a grazing lunar occultation for south-western England and Eire.

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 will take you to finder charts and more information about the object.)*

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.

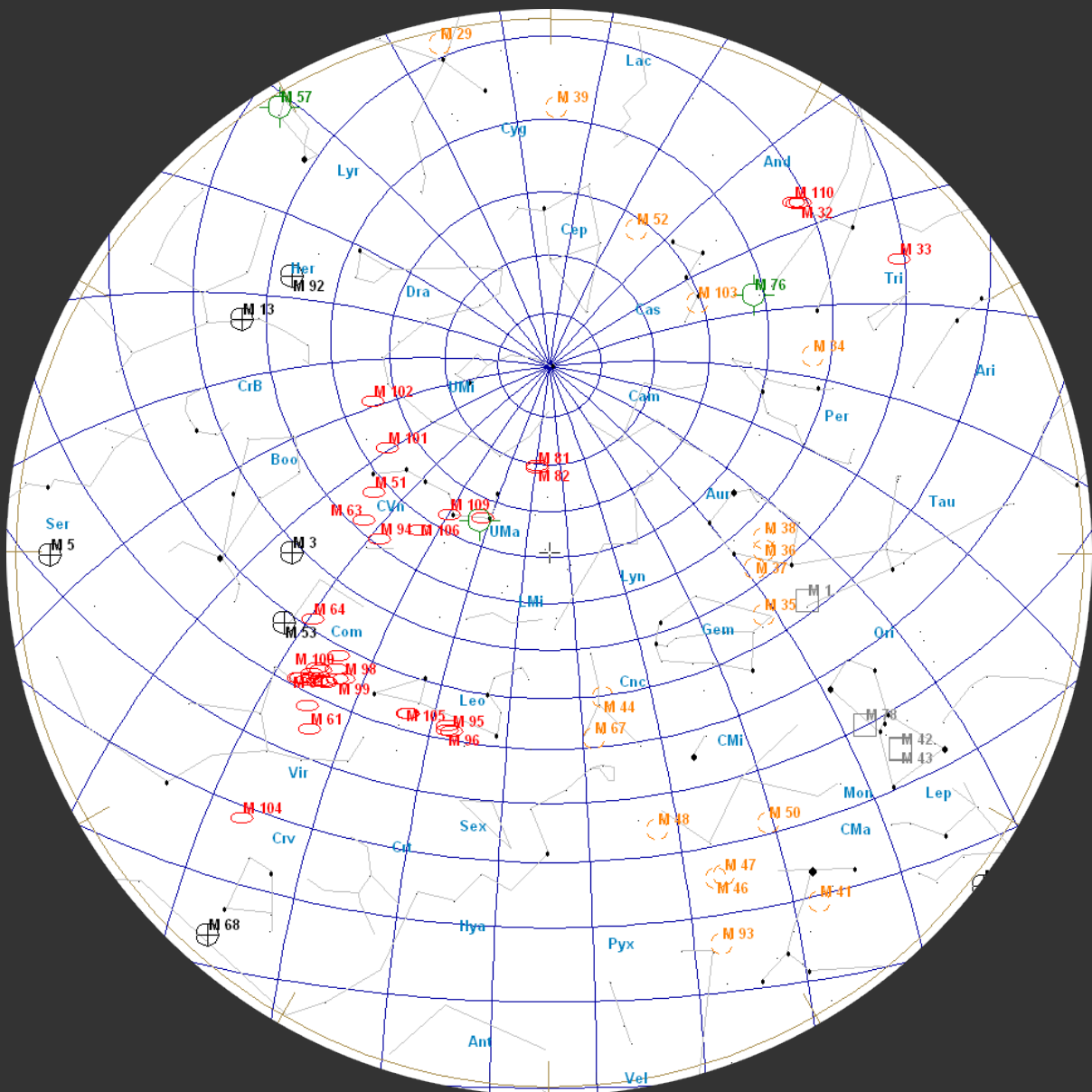
51°N

March 01, 23:00 UT

March 15, 22:00 UT

March 31, 21:00 UT

(chart is "clicky")



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.

One of the best objects in small binoculars is Melotte 111, the cluster that gives *Coma Berenices* its name. In mythology, it is the hair of Queen Berenice. In early March it is suitably placed from about midnight.

*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. 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.

*Galaxies are gravitationally bound "island universes" of hundreds of billions of stars at enormous distances. The light that we see from M31, for example, left that galaxy around the time our ancestors were still Australopithecines!*

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.*

## Variable Stars

<b>Selection of binocular variables (mag &lt; +7.5)</b>			
<b>Star</b>	<b>Mag Range</b>	<b>Period</b>	<b>Type</b>
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

<b>Binocular Double Stars for March</b>			
<b>Star</b>	<b>Magnitudes</b>	<b>Spectral Types</b>	<b>Separation (arcsec)</b>
$\alpha$ Leo	1.4, 8.1	B8, G	176
7 Leo	6.3, 9.3	A0, F8	41
$\tau$ Leo	5.0, 7.4	K0, G5	89
$\delta$ Cep	4.1, 6.1	F5, A0	41
62 Eri	5.4, 8.9	B9, B8	67
$\tau$ Tau	4.3, 7.0	B5, A0	63
$\nu$ Gem	4.1, 8.0	B5, A0	113
$\zeta$ Gem	4.0, 7.6	G0, G	101
$\iota$ Cnc	4.0, 6.0	G5, A5	31
65 Uma	6.7, 7.0	A3, B9	63
$\alpha$ Cvn	2.9, 5.5	A0, F0	17.5
$\pi$ -1 Umi	6.6, 7.2	G5, G5	31

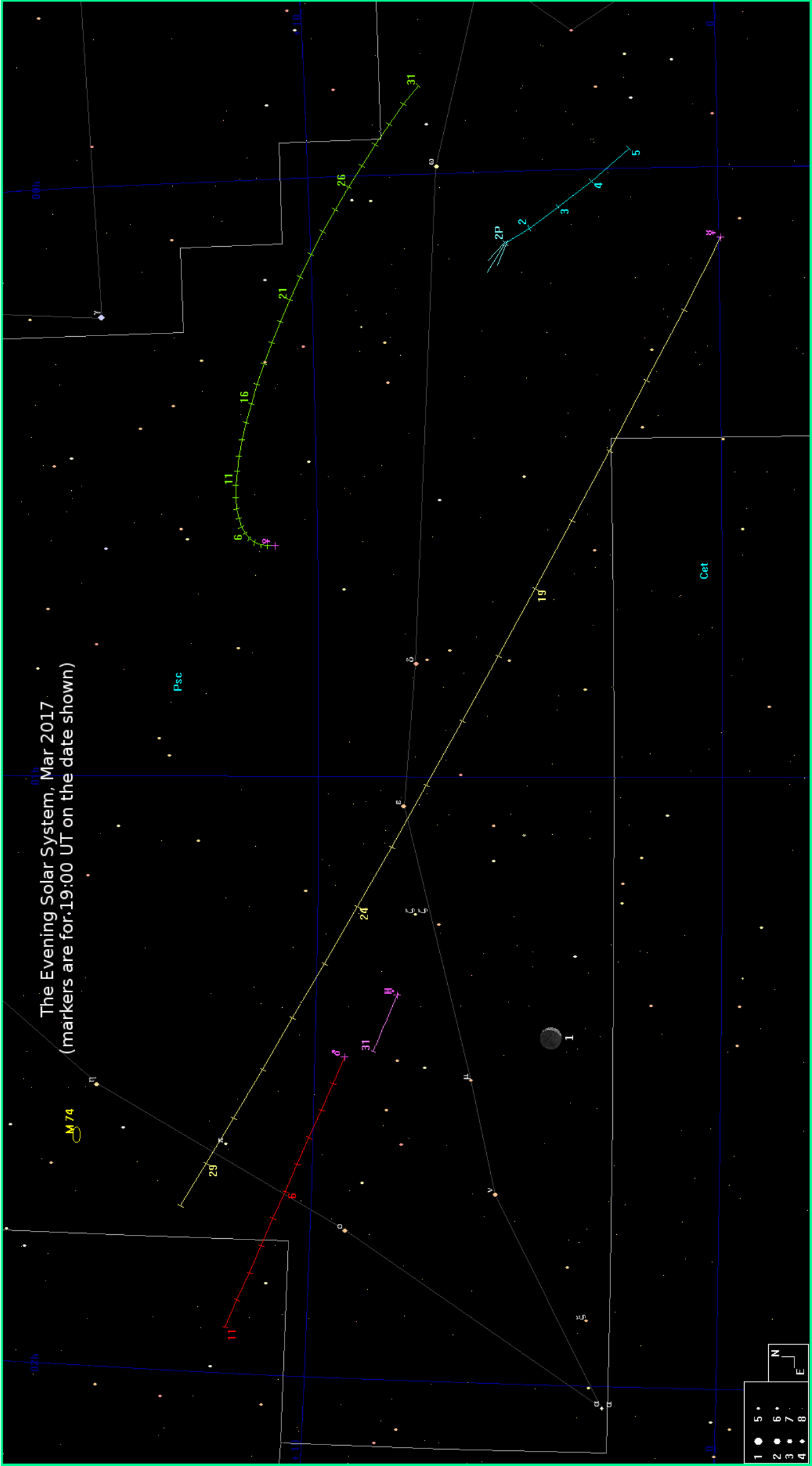
## The Solar System

### Planets, minor planets and comets

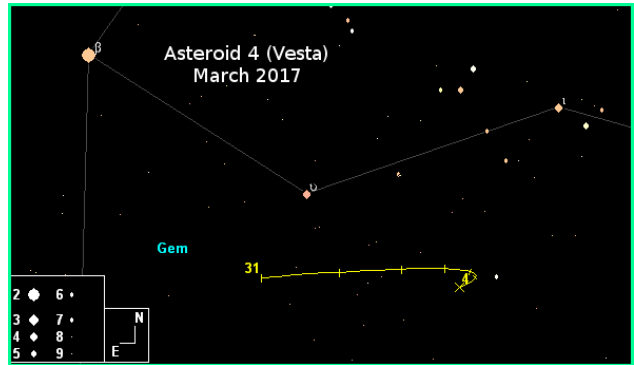
The greatest interest is the evening twilight sky. **Comet 2P (Encke)** is very low, but should be visible in 70mm or larger glasses for the first few days of March. **Venus** is showing a nice crescent phase which, by mid month, will be nearly an arcminute across. It dives sunward to inferior conjunction on the 25<sup>th</sup>, then reappears a few days later in the morning sky. **Mercury** is observable from about the 14<sup>th</sup> and benefits from the steep ecliptic. The scene includes **Mars** and an attractive 3-day crescent **Moon** on the 1<sup>st</sup>. **Uranus** is low in the western sky as twilight ends, shining at mag. +5.9, 2.7° northwest of  $\mu$  Psc. It becomes increasingly difficult to observe and, by the end of the month, it sets during nautical twilight.

(The chart on the next page is "clicky" and will take you to a higher resolution chart)

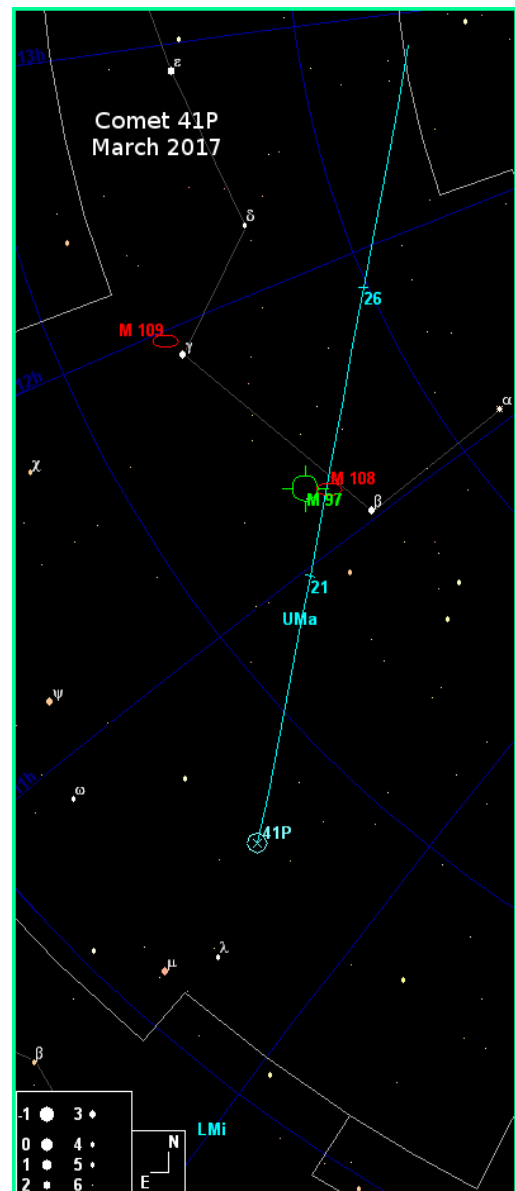
The Evening Solar System, Mar 2017  
(markers are for 19:00 UT on the date shown)



**Asteroid 4 (Vesta)** fades from mag. +7.1 to +7.6 during the month as it moves less than  $2^\circ$ , passing about half a degree S of  $\nu$  Gem.



**Comet 41P (Tuttle–Giacobini–Kresák)** expected to become visible in binoculars by mid month and to brighten to at least 7<sup>th</sup> magnitude by month end, when it will be circumpolar.



### Meteor Showers

There are no major showers for northern observers, although southern observers may be able to enjoy the typically bright Alpha Centaurids, which peak on the 8<sup>th</sup>.

### Asteroid Occultations

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

### Lunar Occultations

There are several occultations of stars brighter than mag +7.0 visible from the UK this month. Data are for my location and may vary by several minutes for other UK

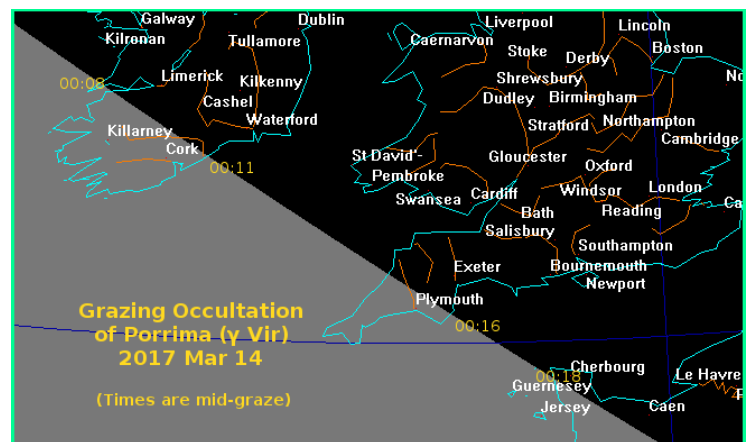
locations. The types are **(D)**isappearance, **(R)**eappearance and **(Gr)**aze; they are all dark-limb events unless followed by a (B). The highlight is the graze of Porrima ( $\gamma$  Vir) on the 14<sup>th</sup>.

## Lunar Occultations, Mar 2017, 50.9°N, 1.8°W

Date	Time	Phase	Star	Spectrum	Magnitude	Cusp Angle	Position Angle
Mar 03	21:46:10	D	HIP 15850	K0	6.0	74S	94
Mar 03	23:07:58	D	HIP 16905	A0	6.3	67S	101
Mar 04	18:34:30	D	48 Tau	F5	6.3	84N	75
Mar 04	20:46:19	D	$\gamma$ Tau	G8	3.7	73N	65
Mar 04	21:48:44	R(B)	$\gamma$ Tau	G8	3.7	-71N	280
Mar 04	23:42:29	D	70 Tau	F7	6.6	30N	22
Mar 04	23:43:47	D	71 Tau	F0	4.5	66S	106
Mar 05	00:41:23	D	$\theta$ -2 Tau	A7	3.4	70N	62
Mar 05	00:46:33	D	$\theta$ -1 Tau	G7	3.8	45N	37
Mar 05	23:29:43	D	111 Tau	F8	5.0	53S	123
Mar 06	19:08:49	D	HIP 29731	K2	6.6	87S	93
Mar 08	19:01:59	D	HIP 40231	G8	6.0	78S	111
Mar 08	22:44:19	D	HIP 40754	A0	7.0	52S	138
Mar 09	00:24:31	D	HIP 41040	K0	6.7	74N	84
Mar 10	02:13:04	D	HIP 45879	F8	6.7	53S	142
Mar 14	00:18:59	Gr	Porrima ( $\gamma$ Vir)	F0	3.5	11.7N	
Mar 14	22:01:49	R	66 Vir	F3	5.8	70N	305
Mar 15	03:14:41	R	74 Vir	M3	4.7	56S	252
Mar 18	04:42:15	R	HIP 78120	M1	6.5	70S	259
Mar 19	01:43:24	R	HIP 81724	G8	4.9	83S	269
Mar 31	22:34:52	D	HIP 19261	F3	6.0	49N	43

### The Moon

March 05 First Quarter  
 March 12 Full Moon  
 March 20 Last Quarter  
 March 28 New Moon



## Public Outreach & Talks

During March I will be at the following events, where I would be delighted to meet any readers of this newsletter who attend:

- 3<sup>rd</sup>: Talk: *Pseudoastronomy: Planet X, Zetans and Lost Civilisations*, 7:30pm at Maidenhead AS.
- 4<sup>th</sup>: Talk: *Binocular Observation of the Deep Sky*, at the [BAA Deep Sky Section](#) meeting.

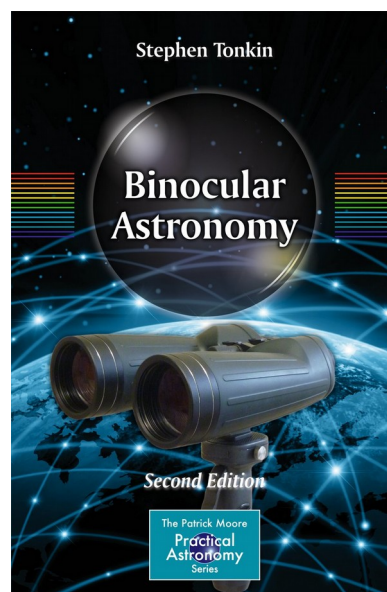
7<sup>th</sup>: Talk: *And Yet it Moves*, 7:30pm at Wiltshire AS.

11<sup>th</sup>: *Young Explorers Astronomy*, 10:30am at the Bournemouth Natural Science Society.

24<sup>th</sup>: *Astronomy Workshop*, 4pm – 10pm at the Kincombe Centre.

The **Binocular Sky Newsletter** will always be free to anyone who wants it, but if you would like to support it, there are a number of options:

- Purchase my book, Binocular Astronomy:  
Click on the image for more information
- Make a purchase via the affiliate links in the Binocular Sky shopfront
- Make a small PayPal donation to [newsletter@binocularsky.com](mailto:newsletter@binocularsky.com)



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>

or Stellarium under GNU Public License, incorporating Milky Way panorama © Axel

Mellinger

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

Occultation data derived with Dave Herald's *Occult*

**Disclosure:** Links to *Amazon* or *The Binocular Shop* may be affiliate links

© 2016 Stephen Tonkin under a Creative Commons BY-NC-SA License

