

## [Astronomy Things To See During April 2017 \(For UK Observers\)](#)

### **Moon:**

First Quarter:	3 <sup>rd</sup> April 7:39pm
Full:	11 <sup>th</sup> April 7:08am
Last Quarter:	19 <sup>th</sup> April 10:57am
New:	26 <sup>th</sup> April 1:16pm

The Lunar “X” and “V” are visible at around 22:00 UT (23:00 BST) on 3<sup>rd</sup> April, about 4 hours before the Moon sets. Look along the shadow terminator with binoculars or a telescope and you will see the shapes of the V and X illuminated just on the shadow side, caused by sunlight reflecting off the rims of craters.

### **Lunar conjunctions & occultations:**

**Note:** When the Moon is waxing it is visible in the western sky after sunset. When near Full Moon it is visible most of the night. When it is waning, it is visible in the eastern sky before sunrise

1 <sup>st</sup> April	Waxing Crescent Moon lies near Aldebaran
6 <sup>th</sup> April	Waxing Gibbous Moon lies near to Regulus
9 <sup>th</sup> April	Waxing Gibbous Moon lies close to Eta Virginis
10 <sup>th</sup> April	Waxing Gibbous Moon lies near to Jupiter and Spica
11 <sup>th</sup> April	Full Moon lies near to Spica
14 <sup>th</sup> April	Waning Gibbous Moon occults Gamma Librae (reappearance at 02:00 BST on 14 <sup>th</sup> April)
15 <sup>th</sup> April	Waning Gibbous Moon lies near to Antares
16 <sup>th</sup> & 17 <sup>th</sup> April	Waning Gibbous Moon lies near to Saturn & Antares
18 <sup>th</sup> April	Waning Gibbous Moon lies near to The Teaspoon asterism & Pluto
21 <sup>st</sup> April	Waning Crescent Moon lies near to Delta & Gamma Capricorni
23 <sup>rd</sup> April	Waning Crescent Moon lies near to Venus in morning twilight
28 <sup>th</sup> April	Waxing Crescent Moon lies near to Aldebaran & Mars, with daylight occultation of Aldebaran (see below)
30 <sup>th</sup> April	Waxing Crescent Moon lies near to Alhena

### **Planetary Observations:**

**Mercury** – reaching greatest eastern elongation on 1<sup>st</sup> April, look for Mercury low in the west after sunset, where it sets about 2 hours after the Sun. It begins the month at mag 0, but will fade quickly during the month

**Venus** – rising about an hour before the Sun, look for splendid Venus in the east. At mag -4.3 (peak magnitude of -4.6 is reached on 30<sup>th</sup> April) it will easily be the brightest thing in the eastern sky before dawn. On 23<sup>rd</sup> April, Venus lies close to the Waning Crescent Moon, making a lovely photo opportunity

**Mars** – moving from Aries into Taurus this month, look for the mag +1.5 red planet Mars in the west after sunset, where it sets at around 11pm. On 21<sup>st</sup> April, Mars is close to The Pleiades cluster and on 28<sup>th</sup> April it lies close to the Waxing Crescent Moon

**Jupiter** – reaching opposition on 7<sup>th</sup> April, Jupiter is visible all night long this month. Located in Virgo, it will be easy to spot at mag -2.3. Being visible all night, it provides lots of opportunity to view the movement of the 4 Galilean Moons, whose positions are constantly changing. On 5<sup>th</sup> April, Jupiter lies close to Theta Virginis. On 10<sup>th</sup> April, it lies close to the Waxing Gibbous Moon

**Saturn** – located in Sagittarius, mag +0.4 Saturn now rises at around 1am. On 16<sup>th</sup> & 17<sup>th</sup> April, Saturn lies close to the Waning Gibbous Moon

**Neptune** – is not observable this month

**Uranus** – is not observable this month

**Pluto** – located in Sagittarius, Pluto rises at around 3:30am and is visible until it is lost in the predawn twilight. On 18<sup>th</sup> & 19<sup>th</sup> April the Last Quarter Moon lies close to Pluto. However, at mag +14.2, you will need a large telescope to spot it

**Ceres** – located in Taurus, you may catch a glimpse of Ceres below Mars, low in the west after sunset. It sets at around 10:30pm. At mag +8.6 you will need binoculars or a small telescope to spot it

**Vesta** – located in Gemini this month, Vesta is visible from sunset until it sets at around 3am. On the night of 7<sup>th</sup>/8<sup>th</sup> April, Vesta is in very close conjunction with the mag +5.3 star, 76 Geminorum. Vesta is mag +6.9 you will need binoculars or a telescope to spot it

### Other Observations:

**Lyrids Meteor Shower** – this shower is active from 16<sup>th</sup> – 25<sup>th</sup> April. The peak this year takes place between dawn and 4pm BST on 22<sup>nd</sup> April, so from the UK our best chance of observing meteors is overnight on 21<sup>st</sup>/22<sup>nd</sup> April. The hourly rate for this shower is around 18 per hour. The radiant is quite close to Vega and it will get higher through the night until it is almost at the zenith before dawn. With New Moon on 26<sup>th</sup> April, the Waning Crescent Moon shouldn't interfere too much with observation this year

**Daylight Occultation of Aldebaran** – if we have transparent skies on 28<sup>th</sup> April, then see if you can spot Aldebaran disappear behind the Waxing Crescent Moon. Aldebaran will vanish behind the shadow side of the Moon at 7:09pm BST and will reappear from behind the illuminated side at 8:03pm BST. The exact times of this event will vary depending on your location so make sure you start observing 15 – 20 minutes early to ensure that you don't miss it

**Binocular Tour** – This month's Sky at Night Binocular Tour by Stephen Tonkin is focused on the sky around Hercules and Corona Borealis. First is probably the most famous object in Hercules, the gorgeous globular cluster M13. This mag 5.8 cluster is naked visible from a dark sky site, but is stunning through 10x 50 binoculars. If you have 15 x 70 binoculars, look for its less famous neighbour M92, which is a mag +6.4 globular cluster. There are 3 more stellar objects to find with 10 x 50 binoculars, the first being 30 Herculis, a semi-regular variable star which is at the end of its life. Next is the Tau Coronae Borealis Group, which is a long chain of stars of differing colours. The central star is a mag +7.4 triple star which should resolve easily with 10 x 50s. Next is the naked eye optical double star Nu Corona Borealis. Both stars are very similar in colour and magnitude. The final target is for 15 x 70 binoculars, and is HV 38. This is a mag +6.4 white star with a mag +9.7 companion just 30-60 arcseconds away. For full details on how to find these objects, look at this month's edition of Sky at Night Magazine

**Deep Sky Tour** – This month's Sky at Night Deep Sky Tour is centred on the area around Hydra and Corvus. There are 3 objects to look for with a small telescope. First is NGC 3242 The Eye Nebula, at mag +8.6 planetary nebula, which is located 1.8 degrees south of Mu Hdræ. Next is NGC 3585, a mag +10 elliptical galaxy. With a 6" telescope it will look oval and uniform, but a 10" telescope will reveal a star-like core. Finally for small telescopes is M68, a mag +8.2 globular cluster. A 6" telescope will reveal a fuzzy circular glow; a 6" telescope will begin to resolve some of the outer stars and a 10" telescope will resolve it fully. If you have a large telescope, look for NGC 3923, another mag +10 elliptical galaxy. Professional images of this galaxy show that it is surrounded by in excess of 40 shells! Next look for NGC 4038/4039 The Antennae Galaxies, which is a pair of interacting galaxies. In small telescopes they appear as a triangular shaped smudge, but a 10" telescope will begin to show lobe-like cores. A 12" will reveal the object fully, showing them as shrimp-like. The final object for large telescopes is NGC 4361 a mag +10 planetary nebula. A 6" telescope will show a hazy round patch but a 10" telescope will resolve the central star. For full details of where to find these objects and how best to see them, pick up the current issue of Sky at Night magazine

**M64 The Black Eye Galaxy** – Astronomy Now's object of the month is The Black Eye Galaxy, a mag +8.5 spiral galaxy located in Coma Berenices. In binoculars it appears as a faint fuzzy patch, but in order to see the dark patch that gives this galaxy its name, you will need a telescope. Under ideal conditions you may just see the dark patch with a 4" telescope but a 6" or 8" telescope is better and these will also reveal some of the structure in the spiral arms. To image this object, best results will come from LRGB imaging with a mono CCD camera, but colour CCD or DSLR cameras can also give good results under good sky conditions. For more information on how to observe, image or sketch this object, take a look at the current edition of Astronomy Now magazine

**Constellations Corvus, Crater & Sextans** – Astronomy Now's constellation of the month is actually 3 constellations which form a band underneath Virgo and Leo. They don't contain a large number of objects but the ones they do contain are quite interesting. Firstly, located within Corvus see if you can spot NGC 4361 a mag +10.5 planetary nebula. It is a challenge to spot visually! Also in Corvus are several galaxies, including NGC 4039 The Antennae Galaxies (see above Deep Sky Tour for more info about this object). Another object which may also be interacting with The Antennae Galaxies is NGC4027, a mag +11.1 galaxy which has a non-symmetrical spiral arm. Another pair of interacting galaxies is NGC 4782 and 4783. At mag +11.2 you will need high magnification to split them. Crater is also full of galaxies, although many of them are very faint. Moving into Sextans, the

stand out object is NGC 3115 The Spindle Galaxy, a mag +10 edge-on galaxy. A second spindle like galaxy in Sextans is NGC 3044, although at mag +12 it is much fainter. There are many faint deep sky challenges in this part of the sky; for more information about all of these objects, take a look at the current edition of Astronomy Now magazine

**Solar Observations** – the lengthening days this month give us more opportunity to observe the Sun. A white light filter will show sunspots, faculae and maybe some granulation. A specialist hydrogen-alpha telescope will show filaments, prominences and if you are lucky you may catch a solar flare in action. Also, if there is a lot of high level cirrus cloud around, keep a look out for solar optical phenomena such as parhelia (sundogs), 22 degree haloes and the various arcs associated with ice haloes

**SAFETY WARNING: Never attempt to observe or photograph the Sun without the correct equipment. Failure to do so will result in permanent damage to your eyes or even blindness!**

**International Space Station** – There are 2 nice evening passes of the ISS most nights for the first half of April. For the exact timings of the passes from your location, visit [www.heavens-above.com](http://www.heavens-above.com) where you can also check the Iridium flare times for your location

### Comets Visible This Month:

**Comet C/2015 ER61 (PanSTARRS)** – at mag +7.3 and brightening, ER61 begins April in Capricornus and moves into Aquarius. You may catch a glimpse of this comet very low in the south east before dawn. On 22<sup>nd</sup> April the Waning Crescent Moon lies close, and on the last couple of days of the month it lies close to Neptune.

Click here to view the finder chart: <http://bit.ly/2kL122C>

**Comet C/2015 V2 Johnson** – located in Hercules and mag +8.3 and brightening, this comet becomes visible after sunset in the north east, then it climbs ever higher until it is lost in the morning twilight. On 15<sup>th</sup>, 16<sup>th</sup> and 17<sup>th</sup> April it lies very close to the mag +3.9 star 22 Her. Click here to view the finder chart: <http://bit.ly/2kcgAN3>

**Comet 41P/Tuttle-Giacobini-Kresak** – at mag +8 and brightening, this comet begins April in Ursa Major, then rapidly moves through Draco. It is circumpolar so will be visible all night long, and it is predicted to reach peak brightness on 4<sup>th</sup> April. On 17<sup>th</sup> April between 00:00 and 03:00 it will pass very close to the mag +2.7 star 14 Dra. During the early hours of the morning of 21<sup>st</sup> April, it passes very close to the mag +6 star HIP 83138. Click here to view the finder chart: <http://bit.ly/2lPvDhP>

There are several other comets in the mag +11 to +15 range. Details of these can be found in the links below.

**For up to date information about the fainter comets which are visible, please visit:**

<https://in-the-sky.org/data/comets.php>, the BAA Comets Section: <https://www.ast.cam.ac.uk/~jds/> or Seiichi Yoshida's home page: <http://www.aerith.net/index.html>

**NB: All of the information in this sky guide is taken from Night Scenes 2017 by Paul L Money, Philips Stargazing 2017 by Heather Couper and Nigel Henbest, Astronomy Now Magazine, Sky at Night Magazine, Stellarium, the BAA Comets Section website <https://www.ast.cam.ac.uk/~jds/>, [www.inthesky.org](http://www.inthesky.org) and [www.heavens-above.com](http://www.heavens-above.com) Information collated by Mary McIntyre. For regular updates about the events happening in the sky this month, follow the Nightscenes Monthly Night Sky Facebook page at [www.facebook.com/AstrospacePublications](http://www.facebook.com/AstrospacePublications)**