

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

## **Moon:**

First Quarter:	3 <sup>rd</sup> May, 3:47pm
Full:	10 <sup>th</sup> May, 10:43pm
Last Quarter:	19 <sup>th</sup> May, 1:33am
New:	25 <sup>th</sup> May, 8:44pm

The Lunar "X" and "V" are visible at around 10am UT (11am BST) which is 90 minutes before the Moon rises so we can't observe them from the UK this month

## **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> May	Waxing Crescent Moon lies between Pollux and Procyon
2 <sup>nd</sup> May	Nearly First Quarter Moon lies close to M44 the Beehive Cluster
3 <sup>rd</sup> & 4 <sup>th</sup> May	First Quarter Moon lies close to Regulus
4 <sup>th</sup> / 5 <sup>th</sup> May	Waxing Gibbous Moon occults 49 Leonis (see below)
7 <sup>th</sup> May	Waxing Gibbous Moon lies extremely close to Jupiter
8 <sup>th</sup> May	Waxing Gibbous Moon lies close to Spica
10 <sup>th</sup> May	Full Moon lies close to Alpha & Beta Librae
11 <sup>th</sup> May	Waning Gibbous Moon lies close to Beta Scorpii
12 <sup>th</sup> May	Waning Gibbous Moon lies close to Antares
14 <sup>th</sup> May	Waning Gibbous Moon lies close to Saturn & M23 cluster
16 <sup>th</sup> May	Waning Gibbous Moon lies close to Pluto
17 <sup>th</sup> May	Waning Gibbous Moon forms a line with Alpha & Beta Capricorni
20 <sup>th</sup> May	Thick Waning Crescent Moon forms triangle with Neptune & Lambda Aquarii
22 <sup>nd</sup> May	Waning Crescent Moon lies close to Venus
30 <sup>th</sup> May	Waxing Crescent Moon lies below M44 the Beehive Cluster
31 <sup>st</sup> May	Thick Waxing Crescent Moon lies close to Regulus

## **Planetary Observations:**

**Mercury** – is not observable this month

**Venus** – is a dawn object this month and can be seen in the east before sunrise, rising about 20 minutes before the Sun by the end of the month. Shining at mag -4.4, it will be unmistakable!

**Mars** – is visible low in the west after sunset for the first half of May, when it will be mag +1.6, then it will be lost in the evening twilight. During the first week of May it lies close to the Hyades cluster in Taurus. On 5<sup>th</sup> May, Mars lies just 6 degrees from Aldebaran, and on 27<sup>th</sup> May it lies close to the Waxing Crescent Moon

**Jupiter** – located in Virgo, Jupiter shines brightly at mag -2.2 this month and is visible all night long. On 7<sup>th</sup> May, look for the extremely close conjunction of Jupiter and the Waxing Gibbous Moon, when they will be just 90 arcseconds apart. On 15<sup>th</sup> May, look for the 4 Galilean moons strung out in a line on the same side of Jupiter. With Jupiter so well placed, there are countless transit and shadow transit events involving the 4 Galilean moons during May. However, there is a double shadow transit of Io and Ganymede visible on the night of 27<sup>th</sup> /28<sup>th</sup> May, during which time Europa is occulted and reappears too. This all takes place between 19:13 BST and 03:26 BST

**Saturn** – starting the month in Sagittarius and moving into Ophiuchus, mag +0.2 Saturn rises at around 11pm. On 9<sup>th</sup> May, see if you can spot its two-tone moon, Iapetus. It will have its bright hemisphere pointing towards us meaning that the moon will be 2 magnitudes brighter than usual. At mag +10.2 you need good binoculars or a telescope to spot it

**Neptune** – located in Aquarius, Neptune is not visible at the beginning of May, but by the end of the month it will reappear in the morning sky, when it rises at around 2:30am. At mag +7.9 you will need binoculars or a small telescope to spot it. On 20<sup>th</sup> May Neptune lies close to the Waning Crescent Moon

**Uranus** – is not observable this month

**Pluto** – located in Sagittarius, Pluto rises at around 1:30pm in the south east and remains visible until twilight. At mag +14.2 you will need a large telescope to spot it. On 16<sup>th</sup> May, Pluto lies close to the Waning Gibbous Moon

**Ceres** – located on the edge of Taurus, Ceres moves ever closer to the Sun during the first half of May so it will be very difficult to observe this month

**Vesta** – located in Cancer, Vesta becomes visible after sunset in the western sky, before setting at around 2am in the north west. At mag +7.4, you will need binoculars or a small telescope to spot it

### Other Observations:

**49 Leonis Lunar Occultation** – 49 Leonis is occulted by the 8 day old Gibbous Moon overnight on 4<sup>th</sup> /5<sup>th</sup> May. 49 Leonis is a double star, containing a mag +5.8 star with a +7.9 companion which is 2 arcseconds from its companion. The pair will disappear behind the shadow side of the Moon at 00:20 BST and they re-emerge from the illuminated side around an hour later

**Eta Aquarid Meteor Shower** – caused by passing through the debris stream of 2/P Halley, this shower peaks overnight on 5<sup>th</sup>/6<sup>th</sup> May. The radiant of the shower is close to the “Steering Wheel” asterism within Aquarius. This shower has a zenith hourly rate of around 50 meteors, but unfortunately the Waxing Gibbous Moon will severely hamper observations

**Noctilucent Cloud Season is Here!** – May is the start of the northern hemisphere noctilucent cloud season. Although the peak isn't until June/July, you may start to see NLCs during the last 2 weeks of May. At an altitude of around 8 times higher than other clouds, they are located on the edge of space. They are the edge of polar stratospheric clouds which are believed to be seeded by meteor dust. They can sometimes be seen around 60 – 120 minutes after sunset in the north west or 60 – 120 minutes before sunrise in the north east, but only between the end of May and mid August. They appear to glow a gorgeous white/blue whilst all the other clouds are in shadow, giving them their name “night shining clouds”. They are unpredictable, but if you get a good display, you will agree that they are well worth staying up late or getting up early for!

**Binocular Tour** – This month's Sky at Night Binocular Tour by Stephen Tonkin is focused on the sky around Coma Berenices and Virgo. There are 4 targets for 10x50 binoculars. First is the open cluster Merlotte 111. This misty patch will resolve into around 30 stars with binoculars, and contained within them is the double star 17 Comae Berenices. Next is a semi-regular variable star FS Comae Berenices. Its magnitude varies from +6.1 to +5.3 over a period of about 55 days. Next is the mag +7.7 globular cluster M53. Finally is the double star 32/33 Comae Berenices. There are 2 targets for 15x70 binoculars. First is the mag +8.5 galaxy M64, the Black Eye Galaxy. You will need good seeing conditions and no Moon to view this one. Finally is Markarian's Chain, a chain of galaxies located in Virgo. You should be able to pick out at least 7 galaxies in this galaxy rich region. 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 Cepheus. First is a target for a small telescope and that is Mu Cephei, which is a semi-regular variable red giant star, whose deep orange colour really stands out at low magnification. Its magnitude varies from +3.4 to +5.1. The next target for a small telescope is the mag +7.7 star cluster NGC 7235. This cluster contains about 100 stars, but a 10” telescope will only resolve around 15 of them. The next target is IC 1396, a diffuse nebula which although listed as mag +3.5, it actually has a very low surface brightness, making it appear fainter. A 6” telescope will show part of the edge of the nebula, but a 10” will show more of the eastern region. A UHC filter will help with this challenging target. There are 3 final targets for large telescopes, the first being IC 1396 the Elephant's Trunk Nebula. Only a telescope of 14”+ and dark skies will reveal the bridge of the elephant's nose. Finally there are 2 planetary nebulae to find. NGC 7008 the Foetus Nebula is a mag +12 planetary nebula with a mag +13.2 central star. High magnification will produce a lot of detail. The final target, Preite-Martinex 1-333 is a much more challenging planetary nebula. This was only confirmed as a true planetary nebula in 2009, and at mag +14 you will need at least a 16” telescope to see it. 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

**M5 (NGC 5904)** – Astronomy Now's object of the month is M5, a mag +5.7 globular cluster in Serpens. It is often overlooked in favour of M13, but is a very pretty cluster which is home to between 100,000 – 500,000 stars. From a dark sky site and with no Moon, it is just naked eye visible, however, it is an easy target in binoculars. To image this object you can use DSLRs or CCD cameras with LRGB filters. There is no benefit from using narrowband filters on globular clusters. For more information on how to observe, image or sketch this object, 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** – The ISS returns to UK skies during the 2<sup>nd</sup> week of May for some passes during the early hours of the morning. By the final week of May, there will be some late evening passes as well as the early morning ones. For the exact timings of the passes from your location, visit [www.heavens-above.com](http://www.heavens-above.com) You can also check the Iridium flare times for your location at Heavens Above

### Comets Visible This Month:

**Comet C/2015 ER61 (PanSTARRS)** – Located in Pisces, you may be able to spot this comet very low in the east before dawn as it reaches peak magnitude this month. Last reported visual observation of this comet was mag +6.5. During the 2<sup>nd</sup> week of May, it lies close to Venus. Click here to view the finder chart: <http://bit.ly/2pWdnn4>

**Comet C/2015 V2 Johnson** – moving from Hercules into Boötes, this comet is circumpolar and therefore visible all night long. The last reported observation put it at mag +7.7 but it is predicted to brighten during the month until it reaches peak magnitude at the end of May. Click here to view the finder chart: <http://bit.ly/2oDDBc0>

**Comet C/2017 E4 Lovejoy** – moving through Triangulum during May, this comet rises at around 3am in north east and remains visible until it is lost in the dawn twilight. The last reported visual observation put the comet at mag +7.5.

Click here to view the finder chart: <http://bit.ly/2oY2d2z>

**Comet 41P/Tuttle-Giacobini-Kresak** – moving through Hercules and heading towards Ophiuchus by the end of May, this comet is also circumpolar and visible all night long. The last reported visual observation put the comet at mag +7.5

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

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, 2017 Yearbook of Astronomy by Richard Pearson and Brian Jones, 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)**