

A summary of the main sky events, July to August 2026. All times Universal Time (UT)

Moon phases



Last quarter
07 Jul, 19:29
06 Aug, 02:22



New
14 Jul, 09:44
12 Aug, 17:37



First quarter
21 Jul, 11:06
20 Aug, 02:46



Full
29 Jul, 14:36
28 Aug, 04:19

Apsides	Date	Apsis	Dist (km)	Size	Date	Apsis	Dist (km)	Size
	13 Jul, 08h	Perigee	359,112	33' 15"	10 Aug, 11h	Perigee	363,284	32' 52"
	25 Jul, 17h	Apogee	405,548	29' 26"	22 Aug, 08h	Apogee	404,642	29' 30"

Occultations



The position angle (PA) of the occultations given below is measured anticlockwise from the north point of the Moon's disc (use the Moon's north pole as a guide).



Event				Greenwich				Edinburgh			
Date	Star Name	Mag	Phase	Time UT	Alt°	Az°	PA°	Time UT	Alt°	Az°	PA°
22 Aug	HD 163685	6.0	DD	21h 02m	8	195	60	Moon Too Low			
30 Aug	21 Piscium	5.8	RD	00h 10m	38	159	307	No Occultation			

These are the only lunar occultations of stars brighter than mag 6 for this period that can be seen without difficulty through small telescopes in a sky that is dark enough. Abbreviations: Mag: Visual magnitude. Phase: (R)eappearance, (D)isappearance or (G)raze at (D)ark or (B)right lunar limb. Alt: Altitude. The Moon's height. Az: The angular position along the horizon measured clockwise from true north (through E, S, W back to N). PA: Position Angle, measured anticlockwise from the direction of the celestial North Pole.

A pair of twilight occultations

There are just two opportunities to view a lunar occultation during July and August, one a disappearance at the dark lunar limb, and one a reappearance. Both events are restricted by a northern limit and will not be visible from Edinburgh.

The first event is on 22 August at 21:02 UT, when the magnitude 6.0 star HD 163685 in Sagittarius will disappear behind the dark lunar limb of a 75 per cent illuminated waxing gibbous Moon. There's just enough dark limb available to keep the bright limb out of the field of view, if you apply a high enough magnification. It's an ideal opportunity if this is your first time observing a lunar occultation.

Our second and final event for this period is the reappearance of the magnitude 5.8 star 21 Piscium, in Pisces, taking place on 30 August at 00:10. This will be the more challenging of the two events, as the Moon will just have passed full and the waning gibbous lunar disc will still be 96 per cent illuminated. It is, nonetheless, an opportunity to hone your observing skills. For reappearances, it is very important to be able to visualise exactly where the target star will re-emerge relative to the dark lunar limb. Once you have this in mind, use your highest workable magnification to see if you can spot the moment of reappearance.



▲ The sixth magnitude star HD 163685 will be occulted by the dark limb of the Moon on 22 August at 21:02 UT. Image credit: NASA Scientific Visualisation Studio.

While you are waiting for this event, it's a good opportunity to look at Saturn, which will be a short distance east of the Moon. Don't become too distracted by the lure of the ringed planet though – remember to stay focused on that challenging reappearance.

Jeff Stevens

Summer's meteor prospects

The July Pegasids peak on 10 July under a waning crescent Moon. The Gamma Draconids should peak on 28 July and might produce an outburst this year.

The Southern Delta Aquarids and Alpha Capricornids peak around dawn on 30 July. Capricornids can be distinguished by their lower velocity. Combined rates of around five to six are possible.

The Perseids peak on the night of 12/13 August and with the solar eclipse on the 12th, we'll have a

New Moon enabling a darker sky in which to hunt for meteors. Visual rates of more than 50 per hour are possible if you have a clear sky. The Kappa Cygnids (KCG) peak a few days later under a waxing crescent Moon with a potential rate of one or two per hour. Both showers do sometimes produce bright fireballs. Finally, the Eta Eridanids (ERI) peak a little earlier around 8 August with a rate of one or two per hour visible under a waning crescent Moon.

Mark McIntyre

Looking forward to the planets

Mercury

Mercury is in inferior conjunction, between the Earth and Sun, on 13 July and then enters a morning apparition for Northern Hemisphere observers, best seen in late July and early August. Greatest western elongation from the Sun is on 2 August and for a week around that date Mercury can be seen rising in the north-west at approximately 03:00 UT and followed telescopically for perhaps an hour and to nearly 10 degrees of elevation. Over that week it brightens from magnitude 0.8 to −0.2 with its illuminated phase growing rapidly from 26 to 49 per cent and its apparent size falling slightly from 8 to 7 arcseconds. After this Mercury falls back towards the Sun, passing behind it (superior conjunction) on 27 August.

Venus

Venus is a low but bright evening object, stretching slowly from the Sun until 15 August, when it reaches greatest eastern elongation. However, the ecliptic will be low to the western horizon during evening twilight so Venus doesn't appear any higher, night to night, even though it stretches further from the Sun. Look for it appearing perhaps 15 degrees up, due west, around 20:30 UT for mid-UK observers. At magnitude −4.0 Venus will be obvious, while showing a 68 per cent illuminated phase 16 arcseconds from pole to pole. Mid-period Venus won't be obvious until after 19:50, then some 12 degrees high in the west. Noticeably brighter and larger at magnitude −4.3 and 21 arcseconds in size, Venus's illuminated phase will have fallen to 55 per cent. By late August Venus will appear five degrees high towards the south-west from around 18:50. It will be very bright at magnitude −4.6 and as it hugs the horizon it will, no doubt, spawn a few UFO reports!

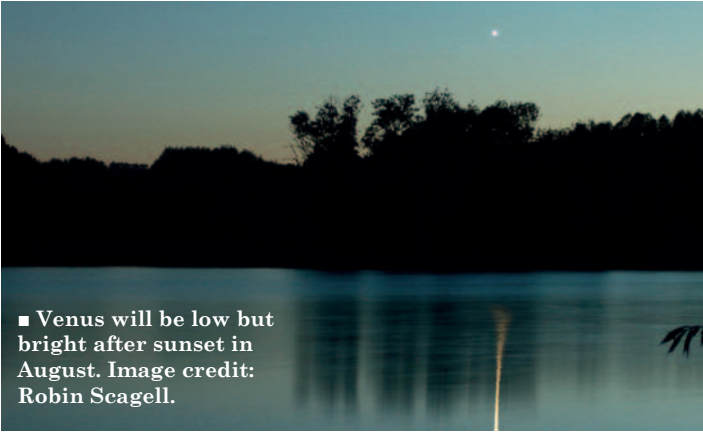
Variable star notes

Eclipsing binaries: During July, RZ Cassiopeiae will be in mid-eclipse on the evening of the 13th at 23:30 UT. During August, RZ Cassiopeia will be in mid-eclipse on the evenings of the 2nd, 8th, 14th, 20th and 26th at 02:30, 01:54, 01:18, 00:42 and 00:12 respectively.

There are no favourable eclipses of Beta Persei (Algol) visible from the UK during July. However, Algol will be in mid-eclipse on the evening of 30 August at 03:00.

Long-period variables: R Ursae Majoris is predicted to reach maximum brightness during July, and T Ursae Majoris is expected to reach peak brightness in August. T Cephei and Chi Cygni will be rising to a predicted maximum in September and October, respectively. S Ursae Majoris and R Serpentis are fading to a minimum in September and October respectively.

Matthew Barrett



Mars

Rising in the north-east around 01.30 UT in early July, you'll find Mars sitting directly below the Pleiades. The Red Planet can then be followed for well over an hour, rising above 10 degrees of elevation before being lost to the dawn. At magnitude 1.4 it will be easy to find but too small for detailed observation. By the end of July Mars rises around 00:30 and can be followed for more than three hours, rising to 25 degrees in the east, but is still below five arcseconds in size. Late in August, Mars rises at 00:00, can be followed to nearly 40 degrees high and at just over five arcseconds in size is becoming a reasonable target.

Jupiter

Passing behind the Sun on 29 July, Jupiter is too low for sensible observation in the evening. It slowly emerges into the morning sky such that on 15 August, Jupiter rises just below Mercury at around 03:30 UT, with the pair visible for perhaps 45 minutes in a rapidly brightening sky. Later in the month Jupiter will be very obvious low in the east and promises much more into autumn.

Saturn

Saturn offers better prospects, rising at 00:00 in early July and remaining visible for three hours. Its rings will be 9 degrees open to us, offering a clearer view than at the end of its previous apparition. By August, Saturn rises two hours earlier and is nearly due south by sunrise. More than 40 degrees high at that time, Saturn will be an excellent target. Late in August Saturn transits the meridian in full darkness around 02:15 UT with the rings spreading 45 arcseconds across and tilted 8.6 degrees towards us.

Uranus and Neptune

Uranus rises with Mars in early July but is not a viable target until late in August. Sitting midway between the Pleiades and Aldebaran, Uranus will be some 30 degrees high in the east around 01:20 UT.

Neptune leads Saturn by 10 degrees but is best seen late in August when it transits around 01:40 UT, 37 degrees high. However, the Moon is nearby so perhaps it will be best to wait until September before targeting the outer planet.

Alan Clitherow