

Astronomy targets: October 2017

Unless stated otherwise, all times are for mid-month, for Birmingham UK and are GMT+1. Rise & set times are for 20 degrees above horizon. Dark & light times are nautical twilight times (Sun 12 degrees below horizon) and astronomical darkness (Sun 18 degrees below horizon).

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Sun times

Date	S.Set	Dark	Astro dark	Light	S.Rise	Moon
07/10/17	1831	1944	2024	0527	0607	0721 ☾ ☾ ☾
14/10/17	1815	1929	2008	0540	0619	0733 ☾
21/10/17	1800	1914	1954	0552	0631	0746
28/10/17	1745	1901	1940	0603	0643	0759 ☾ ☾

Moon phases

Full Moon 5 Oct; New Moon 19 Oct

Calendar

21 Oct: Orionid meteor shower (25 per hour)

Planets

- ☐ Uranus: 2030-0545
- ☐ Neptune: to 0105

Transient objects

- ☐ Comets C/2017 O1 in Perseus → Camelopardalis; C/2015 ER61 in Taurus → Aries. See <http://cometchasing.skyhound.com>

Andromeda (2000-0550, best 0040)

- GA M31, M32 & M110 Andromeda Galaxy
- GA NGC404 Mirach's Ghost
- GA NGC891 (C23) galaxy
- PN NGC7662 (C22) Blue Snowball
- OC NGC752 (C28) open cluster
- DS Almaak γ (gamma): gold & green

Aquarius (2020-0020, best 2140)

- PN NGC7293 Helix Nebula
- GC M2 globular cluster
- GC M72 globular cluster
- OC M73 open cluster

Aries (2020-Sunrise, best 0140)

- DS Σ 326: orange & red

Auriga (2240-Sunrise, best 0440)

- EN IC405 (C31) Flaming Star Nebula
- OC M36 open cluster
- OC M37 open cluster
- OC M38 open cluster
- DS Ω 147: yellowish & two blue

Camelopardalis (all night, best 0410)

- GA NGC2403 (C7) galaxy
- AS Kemble's Cascade & NGC1502 cluster

Cancer (0340-Sunrise)

- OC M44 Beehive Cluster
- OC M67 open cluster
- DS ι (iota): gold & blue

Canes Venatici (0520-Sunrise)

- GA M51 Whirlpool Galaxy
- GA M63 Sunflower Galaxy
- GA M94 galaxy
- GA M106 galaxy
- GA NGC4631 Whale Galaxy
- GC M3 globular cluster
- DS Cor Caroli α (alpha): yellow & orange
- ST La Superba Y carbon star

Canis Major (partly visible, best 0620)

- OC M41 open cluster
- OC NGC2362 open cluster

Capricornus (low, best 2000)

- GC M30 globular cluster

Cassiopeia (all night, best 0010)

- EN NGC281 Pacman Nebula
- EN NGC7635 (C11) Bubble Nebula
- EN IC1805 Heart Nebula
- EN IC1848 Soul Nebula
- OC M52 open cluster
- OC M103 open cluster
- OC NGC457 (C13) Owl cluster
- OC NGC654 open cluster
- OC NGC659 open cluster
- OC NGC663 (C10) open cluster
- OC NGC7789 open cluster
- OC NGC7790 open cluster
- DS η (eta): gold & red

Cepheus (all night, best 2050)

- RN NGC7023 (C4) Iris Nebula
- OC NGC188 (C1) open cluster
- OC NGC7160 open cluster
- DS δ (delta): yellow & purple
- DS Σ 2816: yellow & two white
- ST The Garnet Star: μ (mu)

Cetus (low, best 0220)

- GA M77 galaxy
- PN NGC246 (C56) planetary nebula

Cygnus (Sunset-0100, best 2010)

- GA NGC6946 (C12) Fireworks Galaxy
- EN NGC6888 Crescent nebula
- EN NGC6960 Veil nebula
- EN IC5070 Pelican Nebula
- EN IC5146 (C19) Cocoon Nebula
- EN IC7000 (C20) North American Nebula
- PN NGC6826 Blinking Nebula
- PN NGC7008 Fetus Nebula
- OC M29 open cluster
- OC M39 open cluster
- OC NGC6871 open cluster
- OC NGC6883 open cluster
- OC NGC6910 Rocking Horse Cluster
- DS Albireo β (beta): gold & blue
- DS 61: orange & red

Delphinus (Sunset-0040, best 2010)

GC NGC7006 (C42) globular cluster
 GC NGC6934 (C47) globular cluster
 DS γ (gamma): yellow & blue

Draco (Sunset-0210)

GA M102 galaxy
 PN NGC6543 Cats Eye Nebula

Eridanus (partly visible, best 0350)

PN NGC1535 planetary nebula

Gemini (0140-Sunrise, best 0600)

PN NGC2392 (C39) Eskimo Nebula
 OC M35 open cluster
 DS Castor α (alpha): two blue

Hercules (Sunset-2110)

GC M13 Hercules Globular Cluster
 GC M92 globular cluster

Lacerta (Sunset-0450, best 2200)

OC NGC7243 (C16) open cluster

Lepus (low, best 0530)

GC M79 globular cluster
 ST Hind's Crimson Star: R

Lynx (0200-Sunrise)

GC NGC2419 (C25) globular cluster

Lyra (Sunset-0050)

PN M57 Ring Nebula
 GC M56 globular cluster
 DS Double-Double ϵ (epsilon): four white
 DS Other Double-Double Σ 2470 & Σ 2474: four white

Monoceros (0440-Sunrise)

EN NGC2239 Rosette Nebula
 RN NGC2261 (C46) Hubble's Variable Nebula
 OC M50 open cluster
 OC NGC2232 open cluster
 OC NGC2264 open cluster
 DS β (beta): three blue

Orion (0120-Sunrise, best 0500)

RN M42 & M43 Orion Nebula
 RN M78 nebula
 RN NGC1977 Running Man
 EN NGC2024 Flame Nebula
 EN NGC2174 Monkey Head Nebula
 EN IC434 Horsehead Nebula
 OC NGC1662 open cluster
 OC NGC1981 open cluster
 DS Trapezium θ 1 (theta-1): four white

Pegasus (Sunset-0340, best 2310)

GA NGC7320 Stefan's Quintet galaxy cluster
 GA NGC7331 (C30) galaxy cluster
 GC M15 globular cluster
 DS Σ 2841: orange & green

Perseus (2100-Sunrise, best 0300)

EN NGC1499 California Nebula
 PN M76 Little Dumbell Nebula
 OC M34 open cluster
 OC NGC869 & NGC884 (C14) Double Cluster
 OC NGC1528 open cluster
 OC NGC1582 open cluster
 OC Melotte 20 open cluster
 DS η (eta): gold & blue

Pisces (2140-0240, best 0000)

GA M74 galaxy

Sagitta (Sunset-0030)

GC M71 globular cluster

Taurus (2340-Sunrise, best 0410)

PN M1 Crab Nebula
 PN NGC1514
 OC M45 Pleiades
 OC NGC1647 open cluster
 OC Melotte 25 Hyades

Triangulum (all night, best 0100)

GA M33 Triangulum Galaxy

Ursa Major (Sunset-2350 & 0440-Sunrise)

GA M81 Bode's Galaxy & M82 Cigar Galaxy
 GA M101 Pinwheel Galaxy
 GA M108 galaxy
 GA M109 galaxy
 PN M97 Owl Nebula
 DS Mizar & Alcor ζ (zeta): 3 white

Ursa Minor (all night)

DS Polaris α (alpha): yellow & white

Vulpecula (Sunset-0040)

PN M27 Dumbell Nebula
 OC NGC6885 (C37) open cluster
 AS Coathanger

Key

GA Galaxy
 EN Emmission nebula
 RN Reflection nebula
 PN Planetary nebula
 GC Globular cluster
 OC Open cluster
 AS Asterism
 DS Double star
 ST Star