

Astronomy targets: November 2018

Unless stated otherwise, all times are for mid-month, for Birmingham UK and are GMT. 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

Monday date	Sunset	Naut Dark	Astro Dark	Astro Light	Naut Light	Sunrise	Moon	Moon %
05/11/18	1631	1748	1828	0516	0555	0713	0517 →	4%
12/11/18	1619	1738	1818	0526	0606	0726	← 2006	26%
19/11/18	1609	1730	1810	0536	0617	0738	← 0343	88%
26/11/18	1602	1724	1805	0546	0627	0749	1921 →	82%

Calendar

7 Nov New Moon
17 Nov Leonids meteor shower (15 per hour)
22 Nov Full Moon

Planets

Venus (low at Sunrise)
Mars (Sunset-2040)
Saturn (low at Sunset)
Uranus (Sunset-0310)
Neptune (Sunset-2220)

Hercules Sunset-1810

Globular clusters:
M13 Hercules Globular Cluster
M92

Lyra Sunset-2150

Planetary nebula: M57 Ring Nebula
Globular cluster: M56
Multiple stars:
Double-Double ϵ -Lyr (epsilon-Lyr) four white
Other Double-Double Σ 2470 & Σ 2474 four white

Sagitta Sunset-2130

Globular cluster: M71

Vulpecula Sunset-2140

Planetary nebula: M27 Dumbell Nebula
Open cluster: NGC6885 (C37)
Asterism: Coathanger

Cygnus Sunset-2200

Emission nebulae:
NGC6888 Crescent Nebula
NGC6960 Veil Nebula
IC5070 Pelican Nebula
IC7000 (C20) North American Nebula
Planetary nebulae:
IC5146 (C19) Cocoon Nebula
NGC6826 Blinking Nebula
NGC7008 Fetus Nebula
Open clusters:
M29
M39
NGC6871
NGC6883
NGC6910 Rocking Horse Cluster
Galaxy: NGC6946 (C12) Fireworks Galaxy
Multiple stars:
Albireo β -Cyg (beta-Cyg) gold & blue
 δ 1-Cyg orange & red

Delphinus Sunset-2140

Globular clusters:
NGC6934 (C47)
NGC7006 (C42)

Cepheus Sunset-0550, best 1750

Reflection nebula: NGC7023 (C4) Iris Nebula
Open clusters:
NGC188 (C1)
NGC7160
Coloured star: Garnet Star μ -Cep (mu-Cep)
Multiple stars:
 δ -Cep (delta-Cep) yellow & purple
 Σ 2816 yellow & two white

Aquarius 1920-2120, best 1840

Planetary nebula: NGC7293 Helix Nebula
Globular clusters:
M2
M72
Open cluster: M73

Lacerta Sunset-0150, best 1900

Open cluster: NGC7243 (C16)

Pegasus Sunset-0040, best 2010

Globular cluster: M15
Galaxies:
NGC7320 Stefan's Quintet galaxy cluster
NGC7331 (C30) galaxy cluster
Multiple star: Σ 2841 orange & green

Pisces 1840-2340, best 2100

Galaxies: M74

Cassiopeia all night, best 2110

Emission nebulae:
NGC281 Pacman Nebula
NGC7635 (C11) Bubble Nebula
IC1805 Heart Nebula
IC1848 Soul Nebula
Open clusters:
M52
M103
NGC457 (C13) Owl cluster
NGC654
NGC659
NGC663 (C10)
NGC7789
NGC7790
Multiple star: η -Cas (eta-Cas) gold & red

Andromeda Sunset-0250, best 2140

Planetary nebula: NGC7662 (C22) Blue Snowball
Open cluster: NGC752 (C28)
Galaxies:
M31, M32 & M110 Andromeda Galaxy
NGC404 Mirach's Ghost
NGC891 (C23)
Multiple star: Almaak γ -And (gamma-And) gold & green

Triangulum Sunset-0440, best 2200

Galaxy: M33 Triangulum Galaxy

Aries Sunset-0340, best 2240

Multiple star: Σ 326 orange & red

Cetus low, best 2320

Planetary nebula: NGC246 (C56)
Galaxy: M77

Perseus 1800-Sunrise, best 0000
Emission nebula: NGC1499 California Nebula
Planetary nebula: M76 Little Dumbell Nebula
Open clusters:

M34
NGC869 & NGC884 (C14) Double Cluster
NGC1528
NGC1582
Melotte 20

Multiple star: η -Per (eta-Per) gold & blue

Eridanus partly visible, best 0050
Planetary nebula: NGC1535

Taurus 2040-0420, best 0110
Planetary nebulae:

M1 Crab Nebula
NGC1514

Open clusters:

M45 Pleiades
NGC1647
Melotte 25 Hyades

Camelopardalis all night, best 0110
Galaxy: NGC2403 (C7)

Asterism: Kemble's Cascade & NGC1502 cluster

Auriga 1940-Sunrise, best 0140
Emission nebula: IC405 (C31) Flaming Star Nebula
Open clusters:

M36
M37
M38

Multiple star: $O\zeta$ 147 yellowish & two blue

Orion 2220-0420, best 0200

Emission nebulae:
NGC2024 Flame Nebula
NGC2174 Monkey Head Nebula
IC434 Horsehead Nebula

Reflection nebulae:

M42 & M43 Orion Nebula
M78
NGC1977 Running Man

Open clusters:

NGC1662
NGC1981

Multiple star: Trapezium θ 1-Ori (theta-1-Ori) four white

Lepus low, best 0230

Globular cluster: M79

Coloured star: Hind's Crimson Star R-Lep

Gemini 2240-Sunrise, best 0300
Planetary nebula: NGC2392 (C39) Eskimo Nebula
Open cluster: M35
Multiple star: Castor α -Gem (alpha-Gem) two blue

Monoceros 0140-0540, best 0340

Emission nebula: NCG2239 Rosette Nebula
Reflection nebula: NGC2261 (C46) Hubble's Variable Nebula
Open clusters:

M50
NGC2232
NGC2264

Multiple star: β -Mon (beta-Mon) three blue

Puppis partly visible, best 0400

Open clusters:

M46
M47
M93
NGC2539

Hydra partly visible, best 0500

Globular cluster: M68

Open cluster: M48

Galaxy: M83

Cancer 0040-Sunrise, best 0530

Open clusters:

M44 Beehive Cluster
M67

Multiple star: ι -Cnc (iota-Cnc) gold & blue

Lynx 2300-Sunrise, best 0550

Globular cluster: NGC2419 (C25)

Leo 0320-Sunrise

Galaxies

M65, M66 & NGC3628 Leo Triplet
M95
M96
M105 & NGC3384

Multiple star: Algieba γ -Leo (gamma-Leo) two yellow

Ursa Major Sunset-2050 & 0140-Sunrise

Planetary nebula: M97 Owl Nebula

Galaxies:

M81 Bode's Galaxy & M82 Cigar Galaxy
M101 Pinwheel Galaxy
M108
M109

Multiple star: Mizar & Alcor ζ -UMa (zeta-UMa) 3 white

Canes Venatici 0220-Sunrise

Globular cluster: M3

Galaxies:

M51 Whirlpool Galaxy
M63 Sunflower Galaxy
M94
M106
NGC4631 Whale Galaxy

Coloured star: La Superba Y-CVn carbon star

Multiple star: Cor Caroli α -CVn (alpha-CVn) yellow & orange

Coma Berenices 0420-Sunrise

Globular cluster: M53

Open clusters: Melotte 111

Galaxies:

M64 Black Eye Galaxy
M85
M88
M91
M98
M99
M100
NGC4565 Needle Galaxy

Boötes 0510-Sunrise

Multiple star: ξ -Boo (xi-Boo) yellow & orange

Ursa Minor all night

Multiple star: Polaris α -UMi (alpha-UMi) yellow & white

Draco Sunset-2310 & 0520-Sunrise

Planetary nebula: NGC6543 Cats Eye Nebula

Galaxy: M102