

Astronomy targets: July 2018

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

Monday date	Sunset	Naut Dark	Astro Dark	Astro Light	Naut Light	Sunrise	Moon	Moon %
02/07/18	2133	2341	(no astro dark)		0243	0451	2355 →	81%
09/07/18	2129	2331	(no astro dark)		0255	0457	0242 →	14%
16/07/18	2122	2317	(no astro dark)		0311	0506	← 2331	21%
23/07/18	2114	2301	(no astro dark)		0328	0515	← 0229	87%
30/07/18	2103	2243	0014	0214	0345	0526	2224 →	91%

Calendar

- 12 Jul New Moon
- 27 Jul Full Moon; Lunar Eclipse at Moonrise
- 28 Jul Delta Aquarids meteor shower (20 per hour)

Planets

- Mars (low at Sunset)
- Jupiter (low at Sunset)
- Saturn (low at Sunset)
- Uranus (0240-Sunrise)
- Neptune (0140-Sunrise)

Ursa Major all night

- 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 Sunset-0130

- 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 Sunset-2350

- Globular cluster: M53
- Open clusters: Melotte 111
- Galaxies:
 - M64 Black Eye Galaxy
 - M85
 - M88
 - M91
 - M98
 - M99
 - M100
 - NGC4565 Needle Galaxy

Boötes Sunset-0020

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

Ursa Minor all night

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

Draco all night

- Planetary nebula: NGC6543 Cats Eye Nebula
- Galaxy: M102

Ophiuchus Sunset-2350

- Globular clusters:
 - M9
 - M10
 - M12
 - M14
 - M19
 - M62
 - M107
- Open cluster: IC4665

Hercules Sunset-0310

- Globular clusters:
 - M13 Hercules Globular Cluster
 - M92

Serpens Sunset-0030

- Emission nebula: M16 Eagle Nebula
- Globular cluster: M5

Sagittarius partly visible, best 2320

- Emission nebulae:
 - M8 Lagoon Nebula
 - M17 Swan Nebula
 - M20 Trifid Nebula
- Globular clusters:
 - M28
 - M54
 - M55
 - M69
 - M70
 - M75
- Open clusters:
 - M18
 - M21
 - M22
 - M23
 - M24
 - M25
 - NGC6530

Lyra all night, best 0000

- Planetary nebula: M57 Ring Nebula
- Globular cluster: M56
- Multiple stars:
 - Double-Double ε-Lyr (epsilon-Lyr) four white
 - Other Double-Double Σ2470 & Σ2474 four white

Scutum Sunset-0130, best 0000

- Open clusters:
 - M11 Wild Duck Cluster
 - M26

Sagitta all night, best 0100

- Globular cluster: M71

Vulpecula all night, best 0100

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

Capricornus low, best 0200

- Globular cluster: M30

Cygnus all night, best 0210

Emmission 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
61-Cyg orange & red

Delphinus all night, best 0210

Globular clusters:

NGC6934 (C47)
NGC7006 (C42)

Cepheus all night, best 0250

Reflection nebula: NGC7023 (C4) Iris Nebula

Open clusters:

NGC188 (C1)
NGC7160

Coloured star: Garnet Star μ -Cep (μ -Cep)

Multiple stars:

δ -Cep (delta-Cep) yellow & purple
 Σ 2816 yellow & two white

Aquarius 0220-Sunrise

Planetary nebula: NGC7293 Helix Nebula

Globular clusters:

M2
M72

Open cluster: M73

Lacerta all night, best 0400

Open cluster: NGC7243 (C16)

Pegasus 0040-Sunrise

Globular cluster: M15

Galaxies:

NGC7320 Stefan's Quintet galaxy cluster
NGC7331 (C30) galaxy cluster

Multiple star: Σ 2841 orange & green

Cassiopeia all night

Emmission 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 0200-Sunrise

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 0110-Sunrise

Galaxy: M33 Triangulum Galaxy

Aries 0220-Sunrise

Multiple star: Σ 326 orange & red

Perseus 0300-Sunrise

Emmission 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

Camelopardalis all night

Galaxy: NGC2403 (C7)

Asterism: Kemble's Cascade & NGC1502 cluster