

# Astronomy targets: September 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	Astro	Astro	Naut	Sunrise	Moon	Moon %
		Dark	Dark	Light	Light			
03/09/18	1951	2110	2158	0416	0504	0623	2353 →	40%
10/09/18	1935	2052	2137	0433	0518	0635		2%
17/09/18	1918	2033	2117	0448	0531	0647	← 2346	60%
24/09/18	1902	2016	2057	0502	0544	0658	1916 →	100%

## Calendar

9 Sep New Moon

24 Sep Full Moon

## Planets

Mars (low at Sunset)

Jupiter (low at Sunset)

Saturn (low at Sunset)

Uranus (2230-Sunrise)

Neptune (2130-0330)

## Ursa Major Sunset-0150

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-2130

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

## Ursa Minor all night

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

## Draco Sunset-0410

Planetary nebula: NGC6543 Cats Eye Nebula

Galaxy: M102

## Hercules Sunset-2310

Globular clusters:

M13 Hercules Globular Cluster

M92

## Lyra Sunset-0250

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-2130

Open clusters:

M11 Wild Duck Cluster

M26

## Sagitta Sunset-0230, best 2100

Globular cluster: M71

## Vulpecula Sunset-0240, best 2100

Planetary nebula: M27 Dumbell Nebula

Open cluster: NGC6885 (C37)

Asterism: Coathanger

## Capricornus low, best 2200

Globular cluster: M30

## Cygnus Sunset-0300, best 2210

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

61-Cyg orange & red

## Delphinus Sunset-0240, best 2210

Globular clusters:

NGC6934 (C47)

NGC7006 (C42)

## Cepheus all night, best 2250

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

Σ2816 yellow & two white

## Aquarius 2220-0220, best 2340

Planetary nebula: NGC7293 Helix Nebula

Globular clusters:

M2

M72

Open cluster: M73

## Lacerta all night, best 0000

Open cluster: NGC7243 (C16)

## Pegasus 2040-Sunrise, best 0110

Globular cluster: M15

Galaxies:

NGC7320 Stefan's Quintet galaxy cluster

NGC7331 (C30) galaxy cluster

Multiple star: Σ2841 orange & green

## Pisces 2340-0440, best 0200

Galaxies: M74

## **Cassiopeia** all night, best 0210

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:  $\eta$ -Cas (eta-Cas) gold & red

## **Andromeda** 2200-Sunrise, best 0240

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  $\gamma$ -And (gamma-And) gold & green

## **Triangulum** 2110-Sunrise, best 0300

Galaxy: M33 Triangulum Galaxy

## **Aries** 2220-Sunrise, best 0340

Multiple star:  $\Sigma$ 326 orange & red

## **Cetus** low, best 0420

Planetary nebula: NGC246 (C56)

Galaxy: M77

## **Perseus** 2300-Sunrise, best 0500

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:  $\eta$ -Per (eta-Per) gold & blue

## **Taurus** 0140-Sunrise

Planetary nebulae:

M1 Crab Nebula  
NGC1514

Open clusters:

M45 Pleiades  
NGC1647  
Melotte 25 Hyades

## **Camelopardalis** all night

Galaxy: NGC2403 (C7)

Asterism: Kemble's Cascade & NGC1502 cluster

## **Auriga** 0040-Sunrise

Emission nebula: IC405 (C31) Flaming Star Nebula

Open clusters:

M36  
M37  
M38

Multiple star:  $\Sigma$ 147 yellowish & two blue

## **Orion** 0320-Sunrise

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  $\theta$ 1-Ori (theta-1-Ori) four white

## **Gemini** 0340-Sunrise

Planetary nebula: NGC2392 (C39) Eskimo Nebula

Open cluster: M35

Multiple star: Castor  $\alpha$ -Gem (alpha-Gem) two blue

## **Lynx** 0400-Sunrise

Globular cluster: NGC2419 (C25)