

# Astronomy targets: March 2019

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 & Moon times

Monday date	Sunset	Naut	Astro	Astro	Naut	Sunrise	Moon
		Dark	Dark	Light	Light		
04/03/19	1752	1905	1945	0453	0532	0646	3%
11/03/19	1804	1918	1959	0436	0516	0630	25%
18/03/19	1817	1931	2013	0418	0500	0614	94%
25/03/19	1829	1944	2028	0359	0442	0557	71%

## Calendar

6 Mar New Moon

20 Mar Full Moon

## Planets

Mercury: Low at Sunset (early March)

Mars: Sunset-2105

Jupiter: Low at Sunrise

Saturn: Low at Sunrise

Uranus: Sunset-1915

## Aries Sunset-1940

Multiple star:  $\Sigma$ 326 orange & red

## Auriga Sunset-0000

Emission nebula: IC405 (C31) Flaming Star Nebula

Open clusters:

M36

M37

M38

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

## Boötes 2110-Sunrise, best 0250

Multiple star:  $\xi$ -Boo (xi-Boo) yellow & orange

## Camelopardalis all night

Galaxy: NGC2403 (C7)

Asterism: Kemble's Cascade & NGC1502 cluster

## Cancer Sunset-0110, best 2130

Open clusters:

M44 Beehive Cluster

M67

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

## Canes Venatici all night, best 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  $\alpha$ -CVn (alpha-CVn) yellow & orange

## Cassiopeia Sunset-2350 & 0220-Sunrise

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

## Cepheus Sunset-2150 & 2350-Sunrise

Reflection nebula: NGC7023 (C4) Iris Nebula

Open clusters:

NGC188 (C1)

NGC7160

Coloured star: Garnet Star  $\mu$ -Cep (mu-Cep)

Multiple stars:

$\delta$ -Cep (delta-Cep) yellow & purple

$\Sigma$ 2816 yellow & two white

## Coma Berenices 2020-Sunrise, best 0140

Globular cluster: M53

Open clusters: Melotte 111

Galaxies:

M64 Black Eye Galaxy

M85

M88

M91

M98

M99

M100

NGC4565 Needle Galaxy

## Cygnus 0240-Sunrise

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  $\beta$ -Cyg (beta-Cyg) gold & blue

61-Cyg orange & red

## Delphinus 0420-Sunrise

Globular clusters:

NGC6934 (C47)

NGC7006 (C42)

## Draco 2120-Sunrise, best 0450

Planetary nebula: NGC6543 Cats Eye Nebula

Galaxy: M102

## Gemini Sunset-0000

Planetary nebula: NGC2392 (C39) Eskimo Nebula

Open cluster: M35

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

## Hercules 0020-Sunrise

Globular clusters:

M13 Hercules Globular Cluster

M92

**Hydra** partly visible, best 2100

Globular cluster: M68

Open cluster: M48

Galaxy: M83

**Lacerta** 0340-Sunrise

Open cluster: NGC7243 (C16)

**Leo** Sunset-0320, best 2250

Galaxies

M65, M66 &amp; NGC3628 Leo Triplet

M95

M96

M105 &amp; NGC3384

Multiple star: Algieba  $\gamma$ -Leo (gamma-Leo) two yellow**Lynx** Sunset-0430, best 2150

Globular cluster: NGC2419 (C25)

**Lyra** 0050-Sunrise

Planetary nebula: M57 Ring Nebula

Globular cluster: M56

Multiple stars:

Double-Double  $\epsilon$ -Lyr (epsilon-Lyr) four whiteOther Double-Double  $\Sigma$ 2470 &  $\Sigma$ 2474 four white**Monoceros** Sunset-2140, best 1940

Emission nebula: NCG2239 Rosette Nebula

Reflection nebula: NGC2261 (C46) Hubble's Variable Nebula

Open clusters:

M50

NGC2232

NGC2264

Multiple star:  $\beta$ -Mon (beta-Mon) three blue**Ophiuchus** 0420-Sunrise, best 0450

Globular clusters:

M9

M10

M12

M14

M19

M62

M107

Open cluster: IC4665

**Orion** Sunset-2020

Emission nebulae:

NGC2024 Flame Nebula

NGC2174 Monkey Head Nebula

IC434 Horsehead Nebula

Reflection nebulae:

M42 &amp; M43 Orion Nebula

M78

NGC1977 Running Man

Open clusters:

NGC1662

NGC1981

Multiple star: Trapezium  $\theta$ 1-Ori (theta-1-Ori) four white**Perseus** Sunset-2230

Emission nebula: NGC1499 California Nebula

Planetary nebula: M76 Little Dumbell Nebula

Open clusters:

M34

NGC869 &amp; NGC884 (C14) Double Cluster

NGC1528

NGC1582

Melotte 20

Multiple star:  $\eta$ -Per (eta-Per) gold & blue**Puppis** partly visible, best 2000

Open clusters:

M46

M47

M93

NGC2539

**Sagitta** 0310-Sunrise

Globular cluster: M71

**Taurus** Sunset-2020

Planetary nebulae:

M1 Crab Nebula

NGC1514

Open clusters:

M45 Pleiades

NGC1647

Melotte 25 Hyades

**Triangulum** Sunset-2040

Galaxy: M33 Triangulum Galaxy

**Ursa Major** all night, best 0040

Planetary nebula: M97 Owl Nebula

Galaxies:

M81 Bode's Galaxy &amp; M82 Cigar Galaxy

M101 Pinwheel Galaxy

M108

M109

Multiple star: Mizar & Alcor  $\zeta$ -UMa (zeta-UMa) 3 white**Ursa Minor** all night, best 0310Multiple star: Polaris  $\alpha$ -UMi (alpha-UMi) yellow & white**Virgo** 0020-0400, best 0150

Galaxies:

M49

M58

M59

M60

M61

M84, M86, NGC4435, etc. Markarian's Chain

M87

M89

M90

M104 Sombrero Galaxy

**Vulpecula** 0220-Sunrise

Planetary nebula: M27 Dumbell Nebula

Open cluster: NGC6885 (C37)

Asterism: Coathanger