

The Evening Sky Map

FREE* EACH MONTH FOR YOU TO EXPLORE, LEARN & ENJOY THE NIGHT SKY

SOUTHERN HEMISPHERE
AUGUST 2023

Sky Calendar – August 2023

- 1 **Full Moon** at 18:32 UT. The first of two Full Moons this month.
- 2 **Moon at perigee** (closest to Earth) at 5:58 UT (distance 357,311km; angular size 33.4'). Only 11.4 hours after Full Moon.
- 3 **Moon near Saturn** at 13h UT (morning sky). Mag. 0.6.
- 8 **Moon near Jupiter** at 9h UT (morning sky). Mag. -2.4.
- 8 **Last Quarter Moon** at 10:29 UT.
- 9 **Moon near the Pleiades** at 15h UT (morning sky).
- 10 **Mercury at greatest elongation** east at 2h UT (27° from Sun, evening sky). Mag. 0.4.
- 13 **Perseid meteor shower peaks** at 7h UT. Peak lasts about 12 hours. Active from July 14 to September 1. Produces swift, bright meteors (50-75 per hour) with persistent trains. Best viewed after midnight. Excellent viewing conditions in 2023.
- 13 **Mercury 4.7° WSW of Mars** at 8h UT (31° from Sun, evening sky). Mags. 0.5 and 1.8.
- 13 **Venus at inferior conjunction** with the Sun at 11h UT. The brightest planet passes into the morning sky.
- 16 **New Moon** at 9:38 UT. Start of lunation 1245.
- 16 **Moon at apogee** (farthest from Earth) at 12h UT (distance 406,635km; angular size 29.4').
- 18 **Moon near Mercury** at 19h UT (evening sky). Mag. 0.8.
- 19 **Moon near Mars** at 2h UT (evening sky). Mag. 1.8.
- 21 **Moon near Spica** at 13h UT (evening sky).
- 24 **First Quarter Moon** at 9:57 UT.
- 25 **Moon near Antares** at 3h UT (evening sky). Occultation visible from USA and southern Canada.
- 27 **Saturn at opposition** (opposite the Sun) at 8h UT. The planet is at its closest and brightest at Mag. 0.4. Saturn's rings are visible even in a small telescope.
- 30 **Moon at perigee** (closest to Earth) at 16:00 UT (distance 357,181km; angular size 33.5'). Only 9.6 hours before Full Moon.
- 30 **Moon near Saturn** at 21h UT (midnight sky). Mag. 0.4.
- 31 **Full Moon** at 1:36 UT. A Blue Moon and the closest Supermoon in 2023.

More sky events and links at <http://Skymaps.com/skycalendar/>

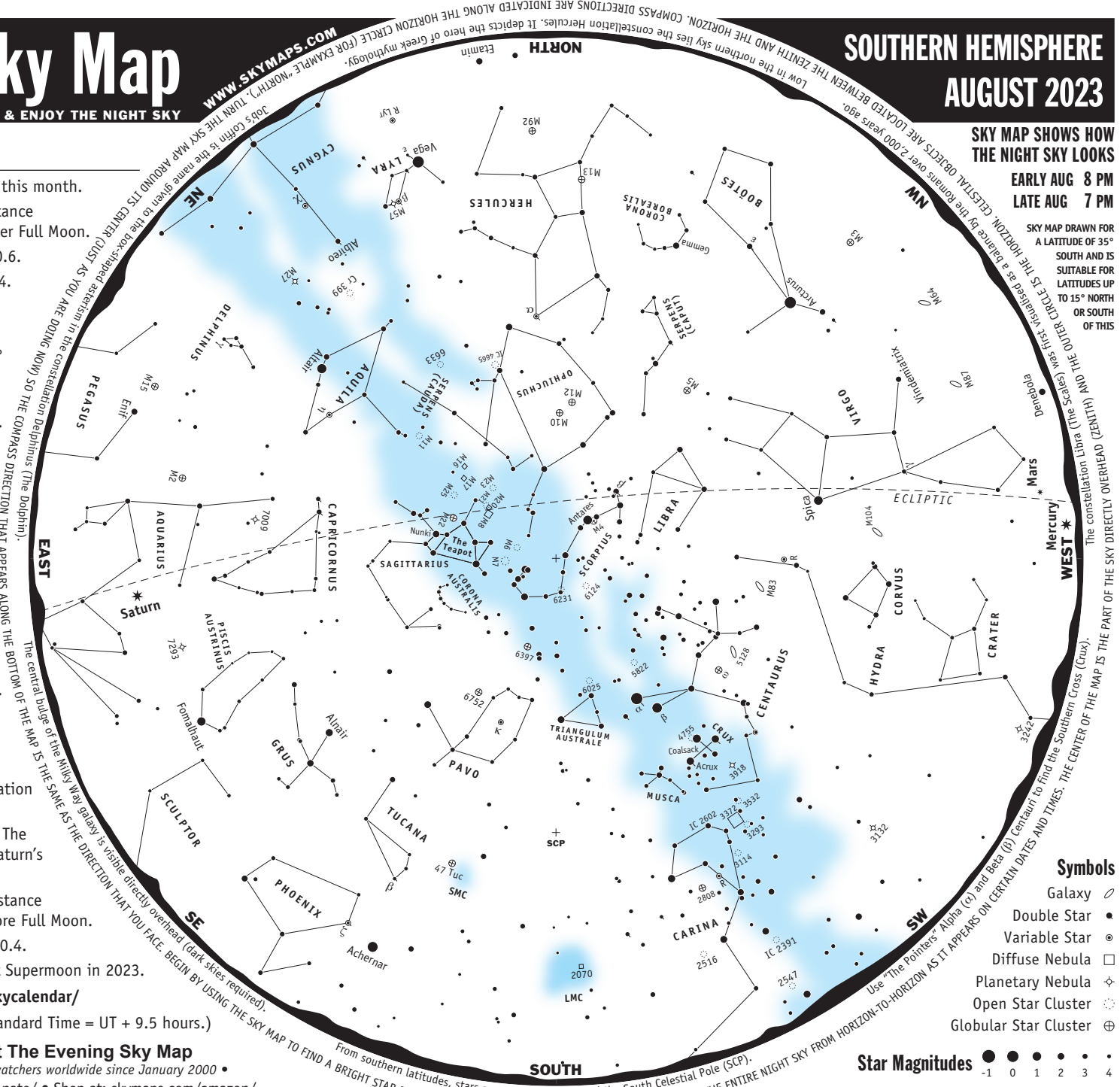
All times in Universal Time (UT). (Australian Central Standard Time = UT + 9.5 hours.)



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SKY MAP SHOWS HOW THE NIGHT SKY LOOKS

EARLY AUG 8 PM
LATE AUG 7 PM

SKY MAP DRAWN FOR A LATITUDE OF 35° SOUTH AND IS SUITABLE FOR LATITUDES UP TO 15° NORTH OR SOUTH OF THIS

- ### Symbols
- Galaxy ☾
 - Double Star ●●
 - Variable Star ⊙
 - Diffuse Nebula □
 - Planetary Nebula ☆
 - Open Star Cluster ○
 - Global Star Cluster ⊕

Star Magnitudes ●●●●●
-1 0 1 2 3 4

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About the Celestial Objects

Listed on this page are several of the brighter, more interesting celestial objects visible in the evening sky this month (refer to the monthly sky map). The objects are grouped into three categories. Those that can be easily seen with the naked eye (that is, without optical aid), those easily seen with binoculars, and those requiring a telescope to be appreciated. **Note, all of the objects (except single stars) will appear more impressive when viewed through a telescope or very large binoculars.** They are grouped in this way to highlight objects that can be seen using the optical equipment that may be available to the star gazer.

Tips for Observing the Night Sky

When observing the night sky, and in particular deep-sky objects such as star clusters, nebulae, and galaxies, it's always best to observe from a dark location. Avoid direct light from street lights and other sources. If possible observe from a dark location away from the light pollution that surrounds many of today's large cities.

You will see more stars after your eyes adapt to the darkness—usually about 10 to 20 minutes after you go outside. Also, if you need to use a torch to view the sky map, cover the light bulb with red cellophane. This will preserve your dark vision.

Finally, even though the Moon is one of the most stunning objects to view through a telescope, its light is so bright that it brightens the sky and makes many of the fainter objects very difficult to see. So try to observe the evening sky on moonless nights around either New Moon or Last Quarter.

Astronomical Glossary

Conjunction – An alignment of two celestial bodies such that they present the least angular separation as viewed from Earth.

Constellation – A defined area of the sky containing a star pattern.

Diffuse Nebula – A cloud of gas illuminated by nearby stars.

Double Star – Two stars that appear close to each other in the sky; either linked by gravity so that they orbit each other (binary star) or lying at different distances from Earth (optical double). Apparent separation of stars is given in seconds of arc (").

Ecliptic – The path of the Sun's center on the celestial sphere as seen from Earth.

Elongation – The angular separation of two celestial bodies. For Mercury and Venus the greatest elongation occurs when they are at their most angular distance from the Sun as viewed from Earth.

Galaxy – A mass of up to several billion stars held together by gravity.

Globular Star Cluster – A ball-shaped group of several thousand old stars.

Light Year (ly) – The distance a beam of light travels at 300,000 km/sec in one year.

Magnitude – The brightness of a celestial object as it appears in the sky.

Open Star Cluster – A group of tens or hundreds of relatively young stars.

Opposition – When a celestial body is opposite the Sun in the sky.

Planetary Nebula – The remnants of a shell of gas blown off by a star.

Universal Time (UT) – A time system used by astronomers. Also known as Greenwich Mean Time. Australian Eastern Standard Time (Sydney, Australia) is UT plus 10 hours.

SOUTHERN HEMISPHERE AUGUST 2023 CELESTIAL OBJECTS Sky maps.com

Easily Seen with the Naked Eye

| | | |
|------------|-----|---|
| Altair | Aql | • Brightest star in Aquila. Name means "the flying eagle". Dist=16.7 ly. |
| Arcturus | Boo | • Orange, giant K star. Name means "bear watcher". Dist=36.7 ly. |
| β Centauri | Cen | • With Alpha Centauri, forms the so-called "Pointers-to-the-Cross". Dist=525 ly. |
| α Centauri | Cen | • Nearest bright star to Sun at 4.4 ly. Brilliant double star in a telescope. 80 year period. |
| Coalsack | Cru | • Most famous naked-eye dark nebula. Requires dark sky. Dist=600 ly. |
| Achernar | Eri | • Brightest star in Eridanus, The River. Arabic name meaning "end of river". Dist=140 ly. |
| α Herculis | Her | • Semi-regular variable. Magnitude varies between 3.1 & 3.9 over 90 days. Mag 5.4 companion. |
| Vega | Lyr | • The 5th brightest star in the sky. A blue-white star. Dist=25.0 ly. |
| Fomalhaut | PsA | • Brightest star in Piscis Austrinus. In Arabic the "fish's mouth". Dist=25 ly. |
| Antares | Sco | • Red, supergiant star. Name means "rival of Mars". Dist=135.9 ly. |
| Spica | Vir | • Latin name means "ear of wheat" and shown held in Virgo's left hand. Dist=250 ly. |

Easily Seen with Binoculars

| | | |
|------------|-----|--|
| η Aquilae | Aql | • Bright Cepheid variable. Mag varies between 3.6 & 4.5 over 7.166 days. Dist=1,200 ly. |
| 6397 | Ara | • Thought to be the nearest globular. Dist=7,000 ly. |
| IC 2602 | Car | • The "Five of Diamonds". Bright cluster twice diameter of full Moon. Dist=491 ly. |
| 3372 | Car | • Eta Carinae Nebula. Enormous glowing cloud in rich star field. Dist=8,000 ly. |
| 3532 | Car | • Herschel - "most brilliant cluster". 60+ stars in 7x binoculars. Dist=1,300 ly. |
| ω Centauri | Cen | • Largest and brightest globular star cluster in sky. 1 million stars. Dist=17,000 ly. |
| 4755 | Cru | • Jewel Box. Outstanding star cluster. Many contrasting colours. Dist=7,600 ly. |
| LMC | Dor | • Large Magellanic Cloud. A neighbouring galaxy of the Milky Way. Dist=180,000 ly. |
| M13 | Her | • Best globular in northern skies. Discovered by Halley in 1714. Dist=23,000 ly. |
| R Hydrae | Hya | • Long period variable. Mag varies between 3.0 & 11.0 over 390 days. Brilliant red. |
| ε Lyrae | Lyr | • Famous Double Double. Binoculars show a double star. High power reveals each a double. |
| M12 | Oph | • Close to the brighter M10. Dist=18,000 ly. |
| M10 | Oph | • 3 degrees from the fainter M12. Both may be glimpsed in binoculars. Dist=14,000 ly. |
| κ Pavonis | Pav | • Cepheid-type. Magnitude varies between 3.9 & 4.8 over 9.088 days. |
| 6752 | Pav | • One of the better globular star clusters in the sky. Dist=14,000 ly. |
| M8 | Sgr | • Lagoon Nebula. Bright nebula bisected by a dark lane. Dist=5,200 ly. |
| M25 | Sgr | • Bright cluster located about 6 deg N of "teapot's" lid. Dist=1,900 ly. |
| M22 | Sgr | • A spectacular globular star cluster. Telescope will show stars. Dist=10,000 ly. |
| M4 | Sco | • A close globular. May just be visible without optical aid. Dist=7,000 ly. |
| M6 | Sco | • Butterfly Cluster. 30+ stars in 7x binoculars. Dist=1,960 ly. |
| M7 | Sco | • Superb open cluster. Visible to the naked eye. Age=260 million years. Dist=780 ly. |
| M5 | Ser | • Fine globular star cluster. Telescope will reveal individual stars. Dist=25,000 ly. |
| 6025 | TrA | • A small open star cluster in Milky Way. Dist=2,700 ly. |
| 47 Tucanae | Tuc | • Spectacular object. Telescope will reveal stars. Near edge of SMC. Dist=15,000 ly. |
| SMC | Tuc | • Small Magellanic Cloud. Companion galaxy to Milky Way. Requires dark sky. Dist=210,000 ly. |

Telescopic Objects

| | | |
|------------|-----|---|
| 7009 | Aqr | • Saturn Nebula. Requires 8-inch telescope to see Saturn-like appendages. |
| 3918 | Cen | • The Blue Planetary. Visible in a small telescope as a round blue disk. |
| 5128 | Cen | • Bisected by a wide obscuring lane. Strong radio source. Dist=14 million ly. |
| Albireo | Cyg | • Beautiful double star. Contrasting colours of orange and blue-green. Sep=34.4". |
| γ Delphini | Del | • Appear yellow & white. Mags 4.3 & 5.2. Dist=100 ly. Struve 2725 double in same field. |
| M83 | Hya | • Classic face-on spiral. Discovered in 1752 by Lacaille. In attractive star field. |
| 5822 | Lup | • Large, attractive cluster. Dist=1,800 ly. Open cluster NGC 5823 to the south. |
| M57 | Lyr | • Ring Nebula. Magnificent object. Smoke-ring shape. Dist=4,100 ly. |
| M23 | Sgr | • Elongated star cluster. Telescope required to show stars. Dist=2,100 ly. |
| M20 | Sgr | • Trifid Nebula. A telescope shows 3 dust lanes trisecting nebula. Dist=5,200 ly. |
| M21 | Sgr | • A fine and impressive cluster. Dist=4,200 ly. |
| M17 | Sgr | • Omega Nebula. Contains the star cluster NGC 6618. Dist=4,900 ly. |
| 6124 | Sco | • Contains 5 bright tightly packed stars near centre. 7 star chain. Dist=1,600 ly. |
| M11 | Sct | • Wild Duck Cluster. Resembles a globular through binoculars. V-shaped. Dist=5,600 ly. |
| M16 | Ser | • Eagle Nebula. Requires a telescope of large aperture. Dist=8,150 ly. |
| M104 | Vir | • Sombrero Galaxy. Almost edge-on spiral galaxy. Protruding central core. |
| M27 | Vul | • Dumbbell Nebula. Large, twin-lobed shape. Most spectacular planetary. Dist=975 ly. |