

The Evening Sky Map

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

Sky Calendar – May 2022

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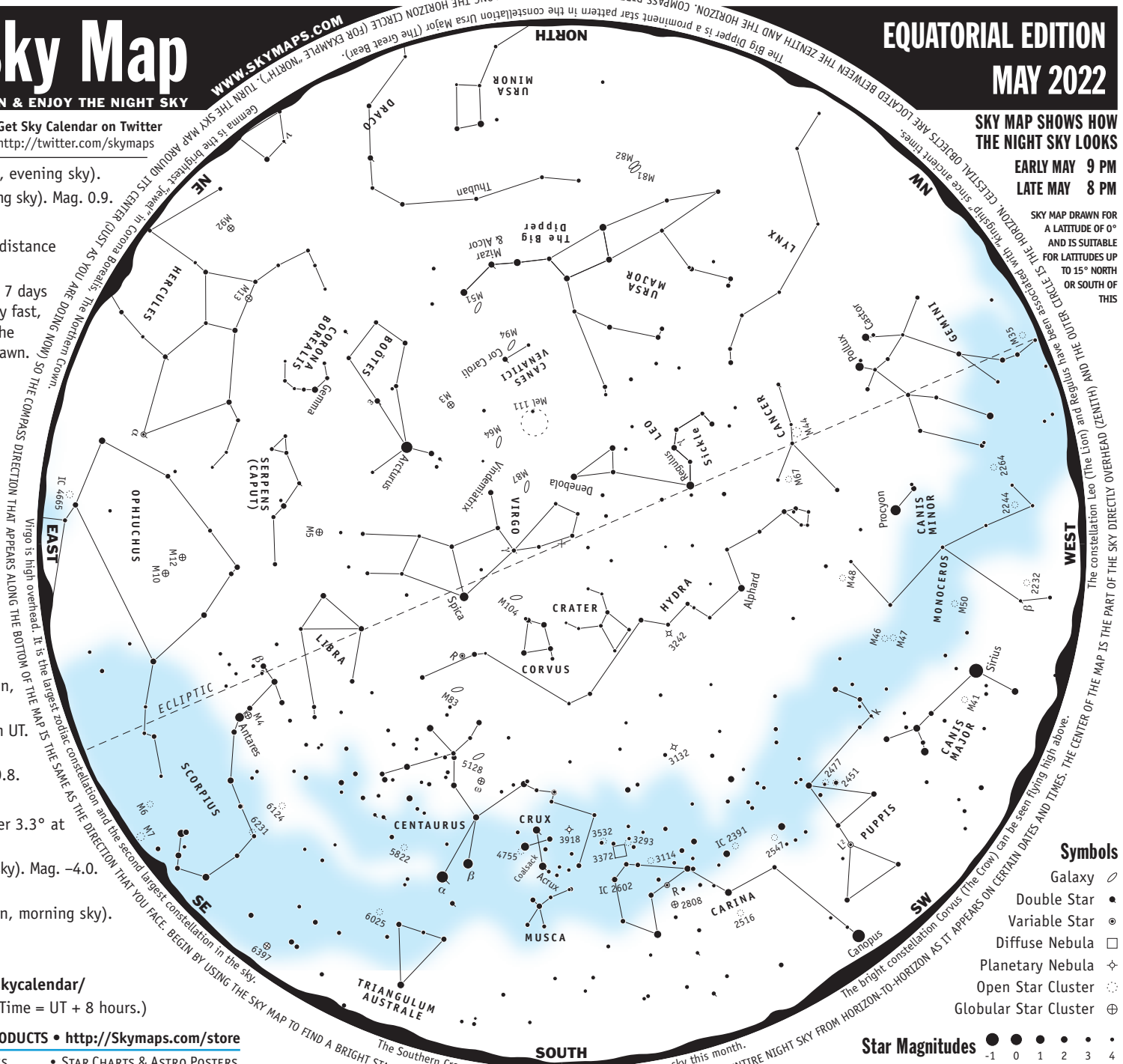
- 2 **Moon near the Pleiades** at 13h UT (19° from Sun, evening sky).
- 2 **Moon near Mercury** at 16h UT (20° from Sun, evening sky). Mag. 0.9.
- 3 **Moon near Aldebaran** at 6h UT (evening sky).
- 5 **Moon at apogee** (farthest from Earth) at 13h UT (distance 405,285km; angular size 29.5').
- 6 **Eta Aquarid meteor shower peaks.** Most active for 7 days around this date. Associated with Comet Halley. Very fast, bright meteors, up to 40 per hour. Best seen from the tropics and southern hemisphere a few hours before dawn.
- 9 **First Quarter Moon** at 0:21 UT.
- 10 **Moon near Regulus** at 0h UT (evening sky).
- 14 **Moon near Spica** at 2h UT (evening sky).
- 16 **Full Moon** at 4:15 UT.
- 16 **Total Eclipse of the Moon** begins at 3:29 UT and ends at 4:54 UT. Mid-eclipse at 4:11 UT. Partial phases begin at 2:28 UT and end at 5:55 UT. During totality the Moon will turn red-orange in color as it passes into the Earth's shadow. Light passing through the Earth's atmosphere scatters into red colors and reflects off the lunar surface. Visible from the Americas, Europe and Africa.
- 17 **Moon at perigee** (closest to Earth) at 15:29 UT (distance 360,298km; angular size 33.2').
- 18 **Mars 0.52° SE of Neptune** at 7h UT (62° from Sun, morning sky). Mags. 0.8 and 7.9.
- 21 **Mercury at inferior conjunction** with the Sun at 19h UT. The innermost planet passes into the morning sky.
- 22 **Moon near Saturn** at 8h UT (morning sky). Mag. 0.8.
- 22 **Last Quarter Moon** at 18:43 UT.
- 25 **Moon, Mars and Jupiter** within a circle of diameter 3.3° at 1h UT (morning sky). Mags. 0.7 and -2.2.
- 27 **Moon near Venus** at 4h UT (38° from Sun, morning sky). Mag. -4.0. Occultation visible from SE Asia and Indonesia.
- 29 **Mars 0.58° SE of Jupiter** at 11h UT (65° from Sun, morning sky). Mags. 0.7 and -2.2.
- 30 **New Moon** at 11:31 UT. Start of lunation 1230.

More sky events and links at <http://Skymaps.com/skycalendar/>
 All times in Universal Time (UT). (Singapore Standard Time = UT + 8 hours.)



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EQUATORIAL EDITION MAY 2022

SKY MAP SHOWS HOW THE NIGHT SKY LOOKS

EARLY MAY 9 PM
LATE MAY 8 PM

SKY MAP DRAWN FOR A LATITUDE OF 0° 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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INSTRUCTIONS: THE SKY MAP SHOWS THE ENTIRE NIGHT SKY FROM HORIZON-TO-HORIZON AS IT APPEARS ON CERTAIN DATES AND TIMES. THE CENTER OF THE MAP IS THE PART OF THE SKY DIRECTLY OVERHEAD (ZENITH) AND THE OUTER CIRCLE IS THE HORIZON. CELESTIAL OBJECTS ARE LOCATED BETWEEN THE ZENITH AND THE HORIZON. COMPASS DIRECTIONS ARE INDICATED ALONG THE HORIZON CIRCLE (FOR EXAMPLE, 'NORTH'). TURN THE SKY MAP AROUND ITS BRIGHTEST 'JEWEL' IN CORONA BOREALIS, THE NORTHERN CROWN, SO THE COMPASS DIRECTION THAT APPEARS ALONG THE BOTTOM OF THE MAP IS THE SAME AS THE DIRECTION THAT YOU FACE. BEGIN BY USING THE SKY MAP TO FIND A BRIGHT STAR PATTERN IN THE SKY.

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. Singapore Standard Time is UT plus 8 hours.

Variable Star – A star that changes brightness over a period of time.

EQUATORIAL EDITION
MAY 2022

CELESTIAL OBJECTS

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Easily Seen with the Naked Eye

Arcturus	Boo	●	Orange, giant K star. Name means "bear watcher". Dist=36.7 ly.
Procyon	CMi	●	Greek name meaning "before the dog" -- rises before Sirius (northern latitudes). Dist=11.4 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.
Castor	Gem	●	Multiple star system with 6 components. 3 stars visible in telescope. Dist=52 ly.
Pollux	Gem	●	With Castor, the twin sons of Leda in classical mythology. Dist=34 ly.
α Herculis	Her	⊛	Semi-regular variable. Magnitude varies between 3.1 & 3.9 over 90 days. Mag 5.4 companion.
Regulus	Leo	●	Brightest star in Leo. A blue-white star with at least 1 companion. Dist=77 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

M44	Cnc	⊛	Præsepe or Beehive Cluster. Visible to the naked eye. Dist=590±20 ly.
M3	CVn	⊛	Easy to find in binoculars. Might be glimpsed with the naked eye.
2808	Car	⊛	Located 4 deg W of Nu Carinae. Visible to the naked eye on clear nights.
R Carinae	Car	⊛	Long period variable. Magnitude varies between 3.9 & 10.5 over 309 days.
3114	Car	⊛	Stunning open cluster. 30+ stars visible through 7x binoculars. Dist=2,900 ly.
3293	Car	⊛	Rich, tightly packed. Surrounded by large, faint nebulosity. Dist=8,500 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.
Mel 111	Com	⊛	Coma Berenices. 80 mag 5-6 stars in 5 deg. Dist=288 ly. Age=400 million years.
4755	Cru	⊛	Jewel Box. Outstanding star cluster. Many contrasting colours. Dist=7,600 ly.
M13	Her	⊛	Best globular in northern skies. Discovered by Halley in 1714. Dist=23,000 ly.
M48	Hya	⊛	12+ stars in 7x binoculars. Triangular asterism near centre. Dist=1,990 ly.
R Hydrae	Hya	⊛	Long period variable. Mag varies between 3.0 & 11.0 over 390 days. Brilliant red.
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.
M4	Sco	⊛	A close globular. May just be visible without optical aid. Dist=7,000 ly.
6231	Sco	⊛	Easy to see in binoculars. Dist=5,900 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.
Mizar & Alcor	UMa	●	Good eyesight or binoculars reveals 2 stars. Not a binary. Mizar has a mag 4 companion.
IC 2391	Vel	⊛	Omicron Velorum Cluster. Superb object for binoculars. Dist=450 ly.

Telescopic Objects

ε Boötis	Boo	●	Red giant star (mag 2.5) with a blue-green mag 4.9 companion. Sep=2.8". Difficult to split.
M67	Cnc	⊛	Contains 500+ stars mag 10 & fainter. One of the oldest clusters. Dist=2,350 ly.
M94	CVn	⊙	Compact nearly face-on spiral galaxy. Dist=15 million ly.
M51	CVn	⊙	Whirlpool Galaxy. First recognised to have spiral structure. Dist=25 million ly.
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=11 million ly.
M64	Com	⊙	Black-Eye Galaxy. Discovered by J.E. Bode in 1775 -- "a small, nebulous star".
3242	Hya	◆	Ghost of Jupiter. Bright blue disk. Mag 11 central star. Dist=2,600 ly.
M83	Hya	⊙	Classic face-on spiral. Discovered in 1752 by Lacaille. In attractive star field.
γ Leonis	Leo	●	Superb pair of golden-yellow giant stars. Mags 2.2 & 3.5. Orbit=600 years. Sep=4.4".
5822	Lup	●	Large, attractive cluster. Dist=1,800 ly. Open cluster NGC 5823 to the south.
k Puppis	Pup	●	Telescope easily shows two blue-white stars of almost equal brightness. Sep=9.9".
6124	Sco	⊛	Contains 5 bright tightly packed stars near centre. 7 star chain. Dist=1,600 ly.
M81	UMa	⊙	Beautiful spiral galaxy visible with binoculars. Easy to see in a telescope.
M82	UMa	⊙	Close to M81 but much fainter and smaller.
3132	Vel	◆	One of the brightest planetaries. Magnitude 10 central star. Dist=2,600 ly.
M87	Vir	⊙	Supergiant galaxy with supermassive black hole at its core. Dist=53.5 million ly.
M104	Vir	⊙	Sombrero Galaxy. Almost edge-on spiral galaxy. Protruding central core.
γ Virginis	Vir	●	Superb pair of mag 3.5 yellow-white stars. Orbit=169 years. At their closest in 2005.