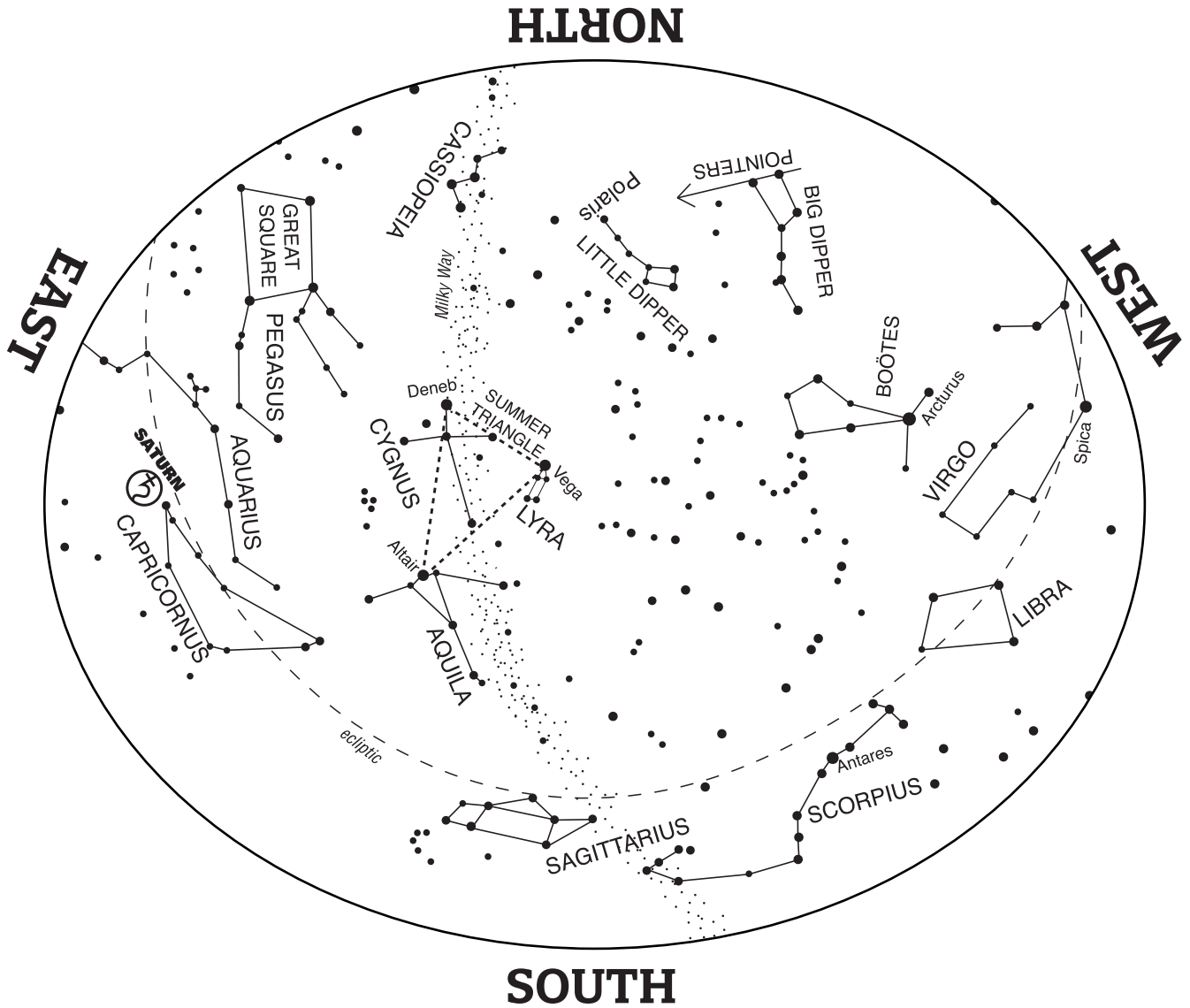


# Starmap

JULY/AUGUST 2022



601 Light Street • Baltimore's Inner Harbor  
410.685.5225 • www.marylandsciencecenter.org



**TO USE MAP:**

Hold the map in front of you so that the direction you are facing is on the bottom. The stars on the lower half on the map will match up with the stars in the sky. The center of the map is directly overhead in the sky. Constellation and star pattern names are all capitalized. Names of stars have only the first letter capitalized. The map is valid within an hour of:  
11:30pm Mid-July  
9:30pm Mid-Aug.

**MAGNITUDE** is a measure of a star's brightness. The lower the number, the brighter the star

- 1<sup>st</sup> or brighter magnitude star
- 2<sup>nd</sup> magnitude star
- 3<sup>rd</sup> magnitude star
- 4<sup>th</sup> or fainter magnitude star









**ECLIPTIC:**

The imaginary path of the Sun through the year. Constellations of the Zodiac surround the Ecliptic and the Moon and planets appear along it.

# Starmap

JULY/AUGUST 2022

## IN THE JULY/AUGUST SKY

- July 3**  
Earth at aphelion  
(See *Celestial Highlights*)
-  **July 6**  
First quarter Moon
- July 10**  
Moon near Antares
-  **July 13**  
Full Moon
- July 15**  
Moon near Saturn  
(See *Celestial Highlight*)
- July 16**  
Superior conjunction of Mercury
- July 19**  
Moon near Jupiter (morning)
-  **July 20**  
Last quarter Moon
- July 21**  
Moon near Mars (morning)
- July 23**  
Moon near Pleiades (morning)
- July 26**  
Moon near Venus (morning)
-  **July 28**  
New Moon  
Delta Aquarid meteor shower
-  **Aug. 5**  
First Quarter Moon
- Aug. 6**  
Venus near Pollux (morning)  
Moon near Antares
-  **Aug. 11**  
Full Moon  
Moon near Saturn
- Aug. 12**  
Annual Perseid meteor shower  
(See *Celestial Highlight*)
- Aug. 14**  
Saturn in opposition  
(See *Celestial Highlight*)
- Aug. 14/15**  
Moon near Jupiter
- Aug. 17**  
Venus near Beehive Cluster (morning)
-  **Aug. 19**  
Last Quarter Moon  
Moon near Mars (morning)  
Moon near Pleiades (morning)
- Aug. 20**  
Mars near Pleiades (morning)
- Aug. 23**  
Moon near Pollux (morning)
- Aug. 25**  
Moon near Venus (morning)
-  **Aug. 27**  
New Moon  
Mercury at greatest elongation

**MERCURY**

**When:** Morning sky, first week July  
Evening sky, last half August

**Where:** Very low in East, first week July  
Very low in West, last half August

**Constellation:**  
Taurus, Gemini, first week July  
Leo, Virgo, last half August

**VENUS**

**When:** Morning sky

**Where:** East

**Constellation:**  
Taurus, Orion, Gemini, Cancer, Leo

**MARS**

**When:** Morning sky

**Where:** East to Southeast

**Constellation:**  
Pisces, Aries, Taurus

**JUPITER**

**When:** Morning sky, July  
Late night to dawn, August

**Where:** East to South, July  
East to Southwest, August

**Constellation:**  
Cetus

**SATURN**

**When:** Late night to dawn

**Where:** Southeast to southwest

**Constellation:**  
Capricornus

## CELESTIAL HIGHLIGHTS

**Earth at Aphelion, July 3** - Aphelion is a planet's farthest point from the Sun in its annual elliptical orbit. This year, Earth reaches aphelion on July 3, with a distance of 94,508,169 miles, making it about 3,000,000 miles farther from the Sun than perihelion, when we are at our closest distance, in January. Despite the variable distance between the Earth and the Sun, changing temperatures and seasons are caused by the tilt of the Earth.

**Planet Oppositions and Conjunctions with Sun** - The astronomical term opposition describes when an object appears opposite the Sun in the sky as seen from Earth. Planets at opposition are visible all night. Saturn goes into opposition August 14. In contrast, conjunction means that two objects appear in the same place in the sky as seen from Earth. Planets in conjunction with the Sun are not visible. Mercury is in conjunction with the Sun on July 16.

**Perseids Meteor Shower peaks August 12** - While the peak occurs on August 12, some meteors may be visible July 17 - August 24. Look to the north-eastern sky after dark to watch for Perseid meteors.

**Planet and Moon Pairings** - Throughout the months of July and August, the Moon is sometimes seen next to a planet in the sky. On July 15 and August 11, the Moon will be close to Saturn. In the pre-dawn sky of July 19 and late night of August 14/15 the Moon will be close to Jupiter. On July 21 and August 19, the Moon and Mars are near each other in the pre-dawn sky. Venus gets its Moon visit on the morning of July 26 and August 25 before sunrise.

The bi-monthly STARMAP is available on the web at <https://www.mdsci.org/learn/resources/starmaps/>