

# JULY 2026

11:00 pm on July 1  
 10:00 pm on July 15  
 9:00 pm on August 1

**To use this chart:** hold the chart in front of you and turn it so the direction you are facing is at the bottom of the chart.

- **Bright Stars**
- **Medium Bright Stars**
- **Faint Stars**

**Scan dark skies with binoculars:**

- M-6: Butterfly Cluster
- M-7: Open star cluster
- M-8: Lagoon Nebula
- M-15: Globular star cluster
- M-13: Globular star cluster
- M-22: Globular star cluster
- M-27: Dumbell Nebula

Summer is here! It might not feel like it yet, but the days are now getting shorter and the nights longer. This will continue until the first day of winter on December 21.

**Saturn** rises just after midnight in early July and by 11 pm late in the month.

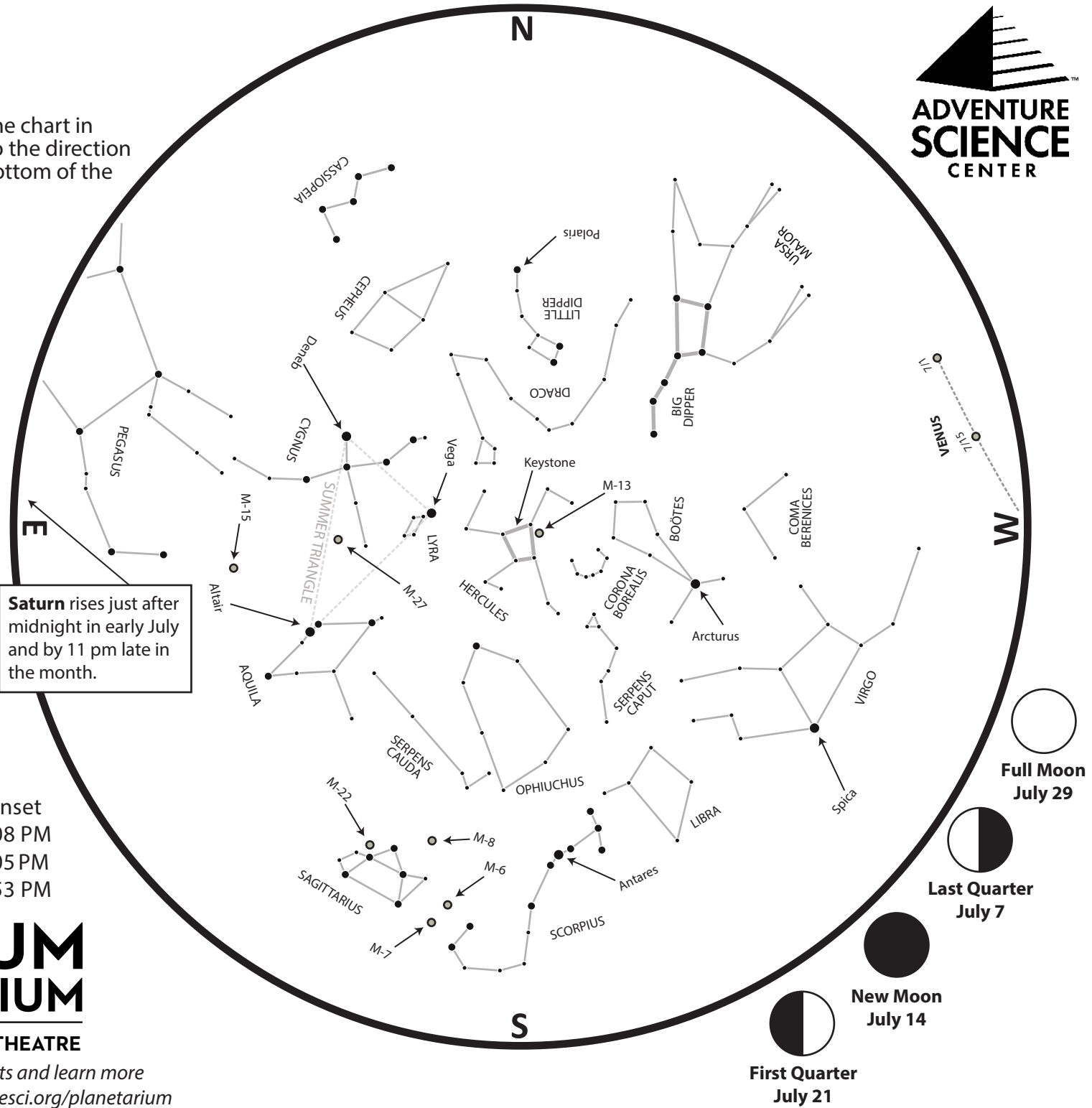
From Nashville:

	Sunrise	Sunset
July 1	5:33 AM	8:08 PM
July 15	5:41 AM	8:05 PM
Aug 1	5:54 AM	7:53 PM

## SUDEKUM PLANETARIUM

JUDITH PAYNE TURNER THEATRE

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## After Sunset

Look to the west as the sky begins to darken for the brilliant planet **Venus**, which may be the first bright point of light you'll see. Venus will remain low in the west after sunset through the summer, but will quickly get lost in the Sun's glow as autumn begins. Look for a slim crescent Moon just below and to the right of Venus on July 16.

If you have an exceptionally clear, low horizon to the west, you may also catch a glimpse of **Jupiter** during the first week of the month, but it will quickly hide near the Sun after that. It will return to morning skies in August.

In the early summer, the **Big Dipper** is easy to find, high in the northwest after sunset. Connect the dots to imagine a big spoon or ladle high above.

The Big Dipper is not officially a constellation; it's what astronomers sometimes call an **asterism**. It's a familiar name for this pattern of stars, especially used by observers in the United States, but it's not one of the 88 constellations recognized by astronomers worldwide. **Ursa Major the Great Bear** is the official constellation here, but you'll need dark skies to see its fainter stars.

Use the two stars at the end of the Dipper's bowl to lead you to **Polaris**, also known as the **North Star**. Polaris is not a particularly bright star, but it does remain fixed in the sky throughout the night and throughout the year. When you face the North Star, you're facing due north. Polaris is at the end of the handle of the **Little Dipper**. This group of stars is also officially known as **Ursa Minor the Little Bear**.

Follow the curved handle of the Big Dipper to trace an 'arc' to **Arcturus**, the orange colored star in **Boötes the Herdsman**. Then speed on to **Spica**, the single bright star in **Virgo the Maiden**. Neither of these constellations has any other bright stars. Even under dark skies away from city lights, it's hard to imagine these mythological figures just by connecting the dots.

Look to the east for the three bright stars that make up the **Summer Triangle**. Viewers with darker skies might find the fainter stars that make up the three constellations of the Triangle: **Cygnus the Swan**, **Aquila the Eagle**, and **Lyra the Harp**.

Look closely for the fairly unremarkable white colored star **Albireo** that marks the head of Cygnus. A small telescope reveals that there are really two stars there, appearing very close to each other. Not only that, but the

two stars are different colors, one blue and one yellow! Recent analysis of the two stars' motion suggests that unlike many double stars, these two stars are not in orbit around each other. They just happen to appear extremely close to each other from our vantage point on Earth.

Low in the south is the hook-shaped constellation **Scorpius the Scorpion**. The red star **Antares** marks the heart of the scorpion.

Just to the east of Scorpius is **Sagittarius the Archer**. To ancient civilizations it may have looked like a mythical centaur holding a bow and arrow, but to modern stargazers it looks a lot more like a teapot.

## From Dark Skies

Bright outdoor lighting can make it hard to see all but the brightest stars. On a clear night, find a dark spot far away from city lights, give your eyes time to adjust to the dark, and look for even more celestial sights.

Evenings in the early summer are great for spotting the **Milky Way** coursing from Sagittarius and Scorpius, through the Summer Triangle and on towards Cassiopeia the Queen in the northeast. This hazy band of light is the bulk of our disc-shaped galaxy, as we see it from within.

As you look towards Scorpius and Sagittarius, you are looking in the direction of the dense center of the Milky Way Galaxy. Scan with binoculars or a telescope in this area to find many faint star clusters and nebulae throughout this part of the sky.

Look high overhead for the constellation **Hercules**. Four stars in Hercules form a trapezoid shape called the **Keystone**, after the top stone in an arch. This time of year the Keystone can appear directly overhead, from our part of the world. Imagine the Keystone holding up the arch of the sky!

Look near the Keystone for the globular cluster known as the **Hercules Cluster**, or **M-13**. Using binoculars, you may be able to spot a round-shaped glow. If that blurry glow doesn't seem impressive, just remember that it's a collection of around 300,000 stars, at a distance of over 22,000 light years, at an age of over 11 billion years old.

Some challenging constellations become much easier to spot under truly dark skies. Can you find **Corona Borealis the Northern Crown** or **Ophiuchus the Serpent Bearer**?

## Early Morning

As the Earth orbits the Sun throughout the year, the constellations rise and set just a little bit earlier every day. You

won't see much difference from night to night, but you will over the course of weeks or months. What we see in today's pre-dawn sky is a preview of the early evening sky in later months. Go out before dawn this month for a look ahead at the late autumn night sky.

In the hours before dawn, the Summer Triangle is high in the west. Sagittarius has already set. Autumn constellations such as **Pegasus the Flying Horse** and **Andromeda the Princess** are high overhead.

Ringed planet **Saturn** rose around midnight and is now high in the southeast. Meanwhile, **Mars** is low in the east before dawn. Look for the Moon near Saturn on the morning of July 7 and near Mars on July 11.

Before you set your alarm for the wee hours of the morning, consider planning out your observing. Desktop planetarium software like the free, open-source Stellarium (stellarium.org) can show you more precisely where night sky objects can be found on any date and time, and help you plan ahead.

## Partial Lunar Eclipse - August 27-28

Mark your calendars - the Earth will cast a shadow on the Moon on the evening of August 27 and morning of August 28. This time, the Earth's shadow won't completely cover the Moon, making it a **partial lunar eclipse**. Still, about 96% of the Moon's face will darken and possibly turn red, so it will be worth a look!

The eclipse will take several hours from beginning to end, but the maximum eclipse will occur just after 11pm Central Time.

Stay tuned for our August star chart for more details!

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This month in the Sudekum Planetarium  
Judith Payne Turner Theatre

# NIGHTWATCH

THE POWERHOUSES OF THE UNIVERSE  
**STARS**  
NARRATED BY MARK HAMILL

THE  
**STELLARS**  
MISSION: GREEN

# MARS

THE ULTIMATE VOYAGE