

MAY 2022

11:00 pm on May 1
 10:00 pm on May 15
 9:00 pm on June 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-13: The Hercules Cluster
- M-44: The Beehive Cluster
- M-57: The Ring Nebula

It's spring! The days have been getting longer ever since the first day of winter, and will continue to lengthen until the first day of summer, June 20.

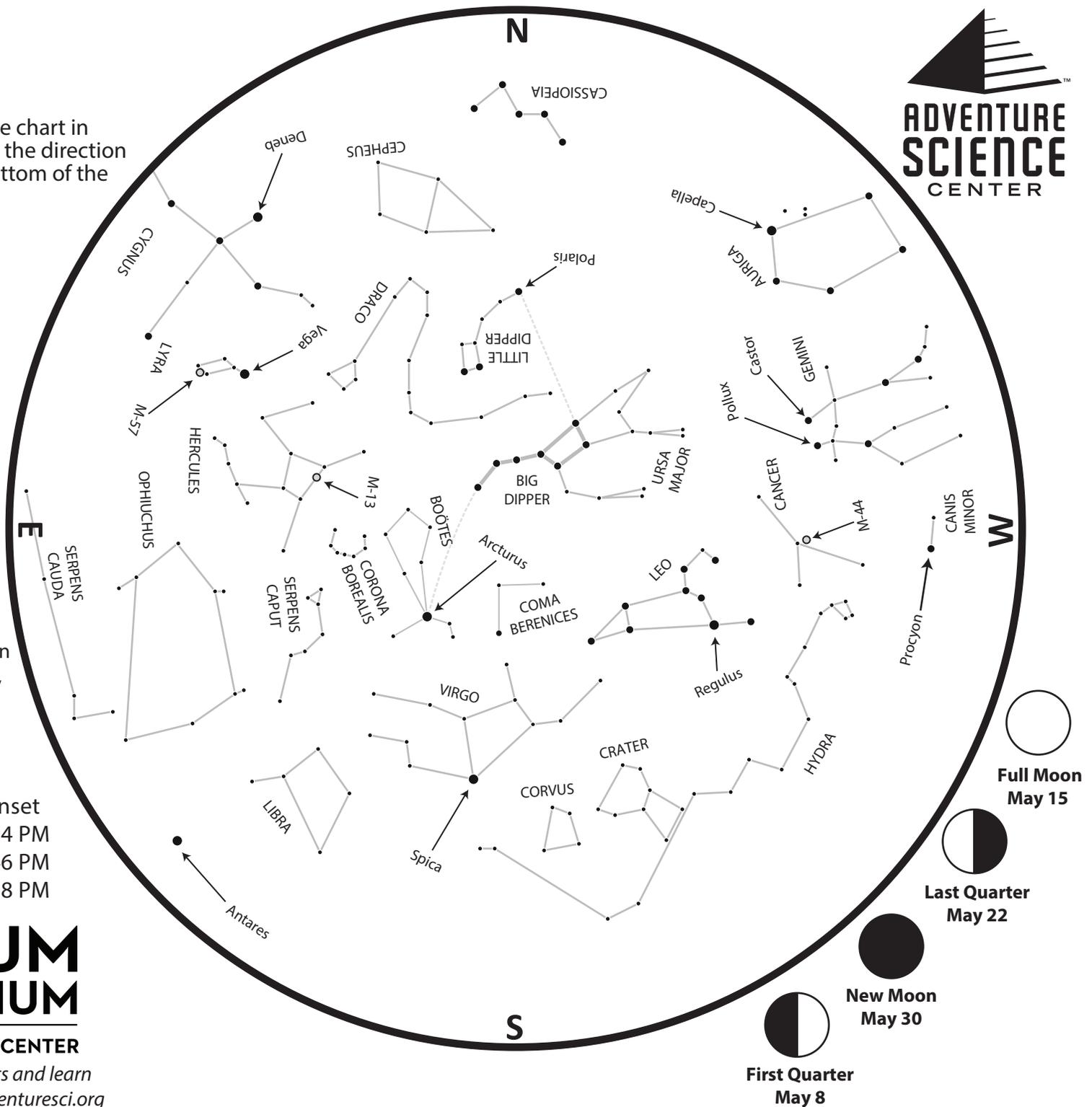
From Nashville:

	Sunrise	Sunset
May 1	5:55 AM	7:34 PM
May 15	5:41 AM	7:46 PM
June 1	5:31 AM	7:58 PM

SUDEKUM PLANETARIUM

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After Sunset

Look high in the north for the **Big Dipper**. As famous as the Dipper is, it's not always easily visible from our latitude in Tennessee. During the autumn, it stays hidden near the northern horizon, only to emerge in the wee hours of the morning. But in the spring, the Dipper is easy to find, high in the north after sunset, almost straight overhead.

The Big Dipper is not officially a constellation; it's what astronomers sometimes call an **asterism**. The Big Dipper is a familiar name for this pattern of stars, especially known to 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**.

Imagine poking a hole in the bottom of the Dipper to let the water drip out. The water falls onto the back of **Leo the Lion**. The head and mane of the lion are represented by a group of stars that looks something like a backwards question mark. Other stargazers imagine the top hook of a coat hanger, or a sickle in this group of stars. The "dot" at the bottom of the question mark is **Regulus**, the brightest star in Leo. It represents the regal heart of the lion.

Go back to the Big Dipper once more and follow its curved handle 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.

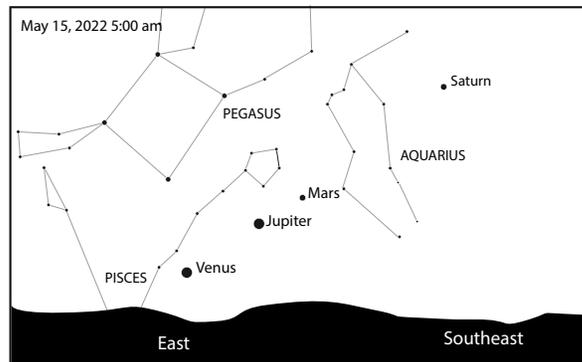
Unfortunately there won't be any planets to see in the early evening before July! Until then, we'll have to look for planets in the pre-dawn hours.

Early Morning

As 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 summer evening sky.

By morning, many of our spring constellations have set in the west. High overhead are the three bright stars that make up the **Summer Triangle**. To the southwest is the J-shaped **Scorpius the Scorpion**, with the red star **Antares**.

There may be no planets in the early evening sky, but there are plenty to find before dawn. **Venus**, **Mars**, **Jupiter** and **Saturn** are all easily visible, together in the east. We start the month with Venus and Jupiter very close to each other, low to the horizon. Go out on several mornings and you'll see Jupiter gradually inch away from Venus and closer to Mars. By the end of the month, Mars and Jupiter will be close to each other.



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 will be on any date and time, and help you plan ahead.

Total Lunar Eclipse: May 15, 2022

On the night of Sunday, May 15, 2022, the Moon will turn a dramatic red color, during a **total lunar eclipse**. If the weather is clear, it'll be something worth staying up late for!

A lunar eclipse happens when the Moon moves through Earth's shadow. During a total lunar eclipse, direct sunlight is completely blocked from the face of the Moon.

The eclipse will last several hours. As the eclipse progresses, you'll see Earth's shadow gradually move across the Moon's surface. As totality begins, the Moon will appear to change color to a coppery orange or deep red. This is caused by sunlight scattered through Earth's atmosphere onto the lunar surface. The color can be affected by atmospheric conditions such as recent volcanic eruptions on Earth.

After totality ends, the Moon will gradually move out of Earth's shadow.

Weather permitting, the eclipse on May 15, 2022, will be visible to almost everyone in North and South America.

MAY 15, 2022

- Partial eclipse begins: 9:27 pm CDT
- Total eclipse begins: 10:29 pm CDT
- Maximum eclipse: 11:11 pm CDT
- Total eclipse ends: 11:53 pm CDT
- Partial eclipse ends: 12:55 am CDT

Lunar eclipses are perfectly safe to view, and you don't need any special equipment. Go out and take a look, even if just for a few minutes at a time, but definitely don't miss totality!

You may see sources that list the lunar eclipse as occurring on May 16. That is correct in Universal, or Greenwich Mean Time. For local times in the United States, the eclipse begins on the 15th. You may also see references to this eclipse starting at 8:32 pm Central Time. This is the beginning of the **penumbral eclipse**, which is when the very faint outer shadow of the Earth begins to fall on the Moon. The penumbral part of the eclipse is barely noticeable at all. The darker, easily visible **umbral eclipse** begins to cross the Moon's face at 9:27 pm CST.

This Month in the Sudekum Planetarium