



# Sudekum Planetarium

**June 2008**  
 11:00 p.m. on June 1  
 10:00 p.m. on June 15  
 9:00 p.m. on July 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.

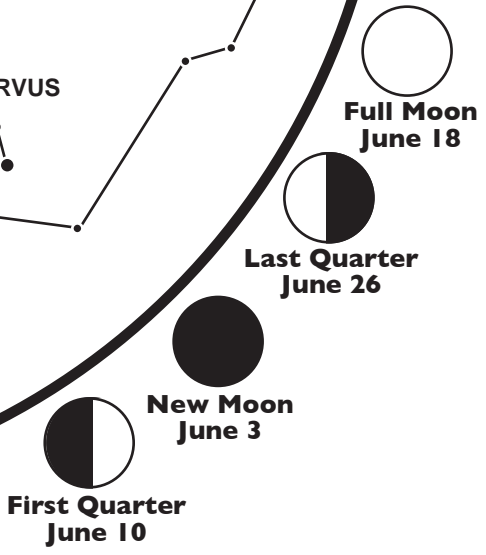
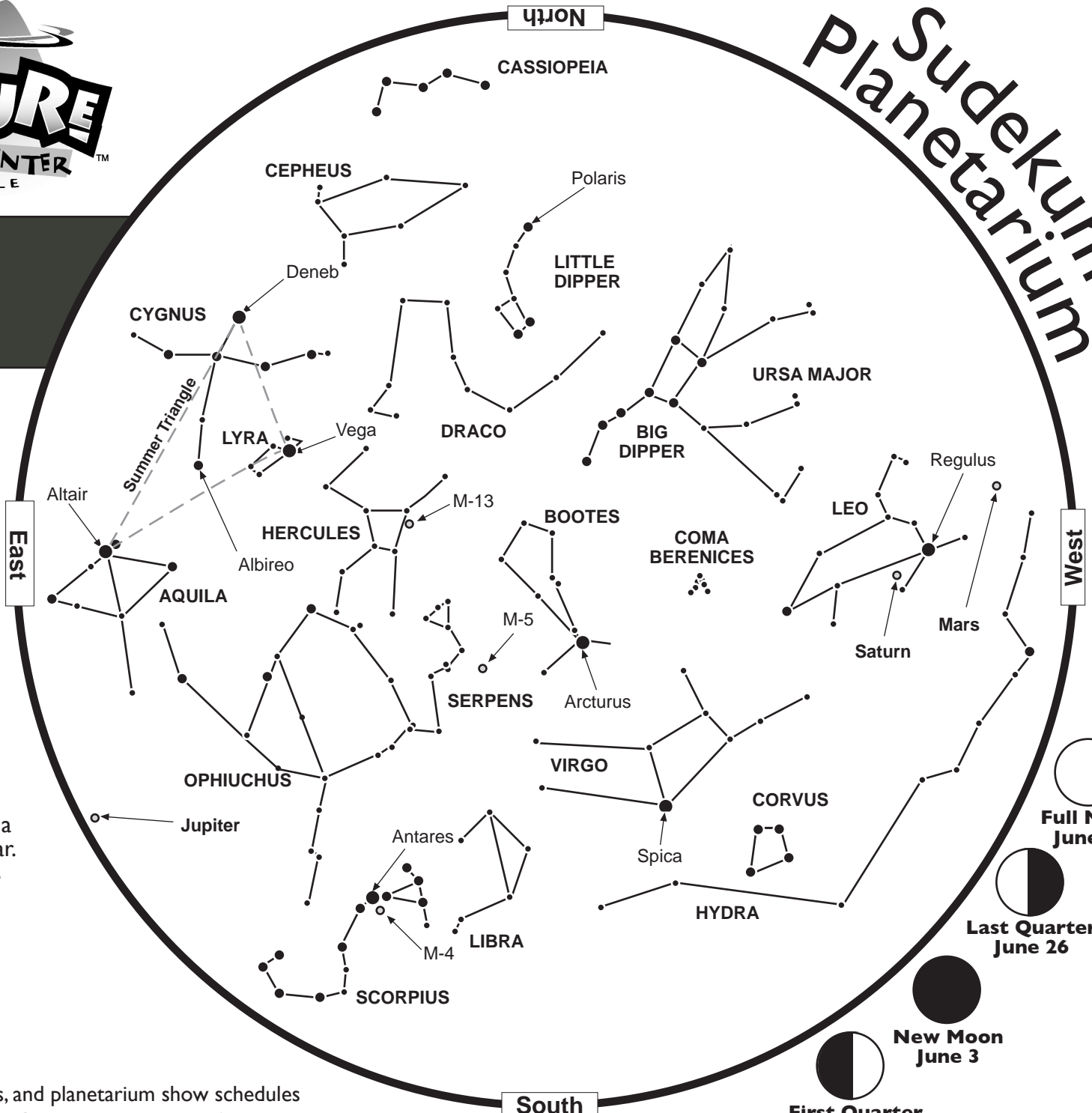
- **Bright Stars**
- **Medium Bright Stars**
- **Faint Stars**

**Scan the sky with binoculars:** the darker the sky, the better.

Globular star clusters:  
 M-13 in Hercules  
 M-4 in Scorpius  
 M-5 in Serpens

Look at the star Albireo through a telescope. It's actually a double star. One star is blue and the other is yellow.

From Nashville:		
	Sunrise	Sunset
June 1	5:31 AM	7:59 PM
June 15	5:29 AM	8:06 PM
July 1	5:34 AM	8:08 PM



Monthly star charts, feature articles, and planetarium show schedules are available on our web site at [www.SudekumPlanetarium.com](http://www.SudekumPlanetarium.com).



June 2008

## It's Planet Time

As June begins, Mars is moving from **Cancer the crab** into **Leo the lion**. The dim, pale, pink dot seems hardly worthy to be named for a god of war. On **June 7**, Mars will appear close by a pretty **crescent Moon**, and on **June 30**, will make a stunning contrast to the blue star **Regulus** that marks the heart of Leo.

In the same **binocular** view as Mars and Regulus is the pale yellow spectacle of **Saturn**. Saturn will be shining brightly in the west southwest at sunset and sets late in the evening. If you look at Saturn through binoculars, it will appear oval-shaped. This is because binoculars cannot provide enough magnification to separate the rings from the disk of the planet.

Face east **after 10 PM** to see mighty **Jupiter** rising. It takes about an hour after a planet rises to get high enough above the horizon and the haze of the atmosphere to be clearly visible. For some people, 11 PM may be too late, but Jupiter will be rising a little earlier every night all summer long and will make a great target for telescopes during **summer star parties**.

Early risers can look for **Mercury** sneaking up in the northeastern sky just before the Sun. Even though this little planet can be surprisingly bright, it can be difficult to spot against the glow of the predawn sky. Scanning with binoculars makes it much easier.

Meanwhile, **Venus** is hiding behind the Sun throughout June. In fact, on June 9, Venus will be directly behind the Sun as seen from Earth. This marks the midpoint between the **transits of Venus**. In June 2004, astronomers around the world watched as the tiny, dark disk of Venus passed across the face of the Sun. There will be another transit

of Venus on June 6, 2012. Mark your calendar now, because the next transit after 2012 will not take place for more than one hundred years.

## News From Mars

On May 25, 2008, the **Phoenix lander** settled down on the surface of Mars for three months of exploration. Unlike the rovers **Spirit** and **Opportunity**, Phoenix will stay put where she landed to search for evidence of water on or beneath the martian surface.

Cameras are already returning dramatic images of the frozen plains and surface patterns at this northerly latitude. The robotic arm has been unstowed in preparation for digging into the soil of the surrounding landscape.

To follow the progress of the Phoenix mission, visit <http://phoenix.lpl.arizona.edu>

At the same time, after nearly four and a half years, the rovers **Spirit** and **Opportunity** continue their exploration of Mars at locations closer to the equator of the planet.

As of the end of April, Spirit has traveled a total of 4.7 miles across Gusev Crater and into the Columbia Hills. Unfortunately, a thick layer of dust has accumulated on the solar panels that provide power to the rover. There is minimal power and heat to keep Spirit functioning, but mission planners continue to conduct science, receive data and hope for a strong gust of wind to clear off the dust.

Opportunity has driven 7.25 miles across the open plains of Meridiani Planum and is currently exploring the enormous Victoria crater. Opportunity has plenty of power but suffers from a severely arthritic shoulder joint in her robotic arm. The joint stopped working in April, but engineers got the joint moving again long enough to extend it. Plans now are to keep the arm pointed forward at all times, but engineers have to determine how best to move Opportunity with the arm permanently unfolded.

It will be a sad day when the rovers stop working, but until then you can follow their adventures at <http://marsrovers.jpl.nasa.gov/home/index.html>

Meanwhile, Mars Reconnaissance Orbiter has

taken phenomenal images of the Phoenix lander as well as performed spectacular research from orbit. Find out more at <http://mars.jpl.nasa.gov/mro/>

The European Space Agency's Mars Express works with the other spacecraft while studying Mars on its own. [http://www.esa.int/esaMI/Mars\\_Express/](http://www.esa.int/esaMI/Mars_Express/)

Last but not least is the oldest functioning spacecraft at Mars, Mars Odyssey. To learn more, visit <http://mars.jpl.nasa.gov/odyssey/mission/>

## Summer Star Parties

The next **FREE** public star party is scheduled for **Saturday, July 12**, from 8:30 - 10:30 PM at the Visitors Information Center at Longhunter State Park. The next one after that is **Saturday, August 9**, from 8:30 - 10:30 PM at Edwin Warner Park. For directions to the locations and weather information, check our web site.

## It's Planetarium Time !!!

Oh yeah, and there is a **new Sudekum Planetarium** and **Space Chase** exhibit wing opening at Adventure Science Center on **June 28!**

Nashville is the first planetarium in the United States to have a **GOTO Chiron Hybrid** projection system. The Chiron projects 6.5 million beautiful pinpoint stars on the dome for a spectacular and realistic recreation of the night sky.

The stars are awesome, but the star projector can also be combined with high resolution, fulldome, digital projection. The **Digistar 3** system from **Evans and Sutherland Digital Theater** can put 12 million pixels worth of full color images and animation on the planetarium dome.

Sudekum is the first large planetarium where these two technologies seamlessly work together in tandem.

The staff at Adventure Science Center has been working on this project for more than six years, and we're extremely excited to share the beauty of the night sky and the wonders of the universe with you in ways we could only dream of before. We'll see you under our starry skies soon!

*For information about programs and events at the Sudekum Planetarium and Adventure Science Center, visit [www.SudekumPlanetarium.com](http://www.SudekumPlanetarium.com)*

*For current night sky information, call AstroLine at 615-401-5092.*