

October 2007

10:00 p.m. on October 1

9:00 p.m. on October 15

8:00 p.m. on November 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.

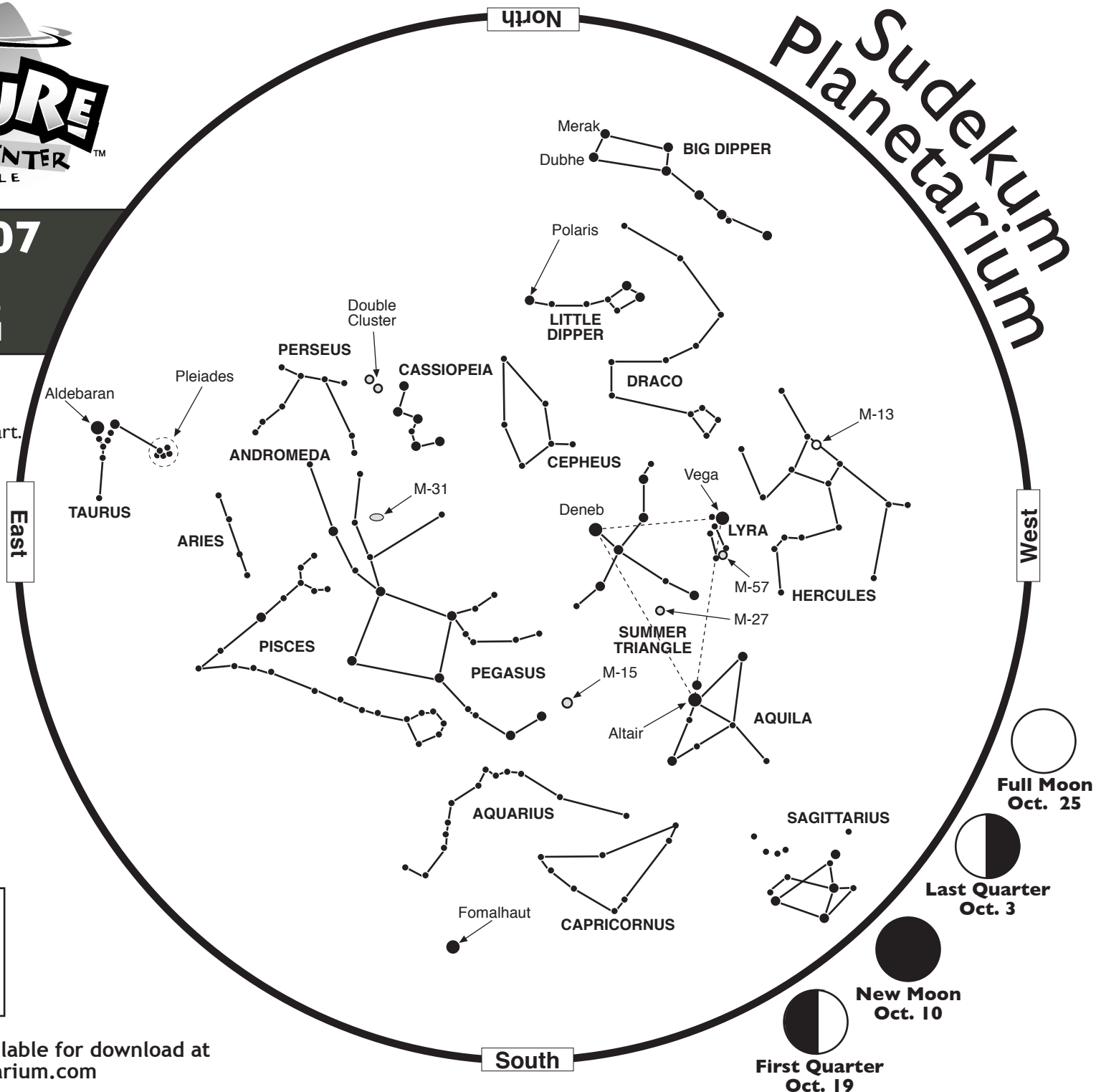
- **Bright Stars**
- **Medium Bright Stars**
- **Faint Stars**

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

- **Globular Star Clusters:**
M-13 in Hercules
M-15 in Pegasus
- **'Double Cluster'**
Between Perseus and Cassiopeia
- **Planetary Nebulae in the Summer Triangle:**
M-57 The Ring Nebula
M-27 The Dumbbell Nebula
- **A Spiral Galaxy:**
M-31 in Andromeda

From Nashville:

	Sunrise	Sunset
October 1	6:42 AM	6:31 PM
October 15	6:54 AM	6:11 PM
November 1	7:10 AM	5:51 PM





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Counting the Stars...

How many stars can you see at night? If you're near Nashville or any other large city, the answer is probably 'not very many.' Light pollution from street lights, buildings, and billboards spills up into the sky, making it hard to see any but the brightest stars and planets. If you are in a location further away from city lights, you'll see more stars. But can you judge how dark your local sky really is? This month, you can take part in the **Great World Wide Star Count** and find out. The event takes place from **October 1-15**.

The organizers of this event are encouraging people all over the world to count the stars they see in a particular constellation and report their results. In the Northern Hemisphere, observers will be asked to determine how many stars they see in the constellation of **Cygnus the swan**, which is high in the sky after sunset this month.

Using the guide on their web site at www.starcount.org, you can determine the **limiting magnitude** of your observing site. **Magnitude** is a measure of the brightness of a star or planet in the sky. It may seem counter-intuitive, but stars with a lower magnitude are actually brighter. **Sirius**, the brightest star in the night sky, has a magnitude of -1.4. Under perfectly clear, dark skies, most people are just able to see stars as faint as magnitude 6. Meanwhile, **Pluto**, as seen from Earth, is an extremely faint magnitude 14. Limiting magnitude, then, is a measure of the faintest star you can see from your location. Star maps on the web site will help you determine your limiting magnitude.

To participate in the Great World Wide Star Count, you'll need to be able to determine your exact location on Earth. You can do this by using a GPS, Google Earth, or with a topographic map of your area. The starcount.org web site even has a Google Maps tool that can help you find your latitude and longitude. Check out the starcount.org web site for more details and instructions. The results of this global event will be posted there by the end of October.

October's Skies

At the beginning of the month, **Mars** rises in the northeast about 11:00 at night. As the month goes on, you'll find it rising earlier and earlier each night. At the end of the month, observant trick-or-treaters will see Mars rise just after 9:30 PM, in the constellation **Gemini the twins**. It helps to wait at least an hour after the planet rises so you can see it over the trees and buildings that can block your view of the horizon.

As the weeks pass, Mars will grow brighter as well. That's because the faster-moving Earth is catching up with Mars as the two planets orbit the Sun. The distance between Mars and Earth is shrinking, making Mars appear gradually brighter. Mars begins October at magnitude -0.09. On December 24, Mars will be at its brightest for the year, magnitude -1.63 - that's brighter than Sirius! Still, that's nothing compared to how Mars appeared in August 2003, when it shone at magnitude -2.88.

The closest approach between Mars and Earth falls in December, so there's still a few months to go. But why wait until then? Start watching Mars now, keeping track of its changing appearance. After December, Mars will gradually fade in our skies as the distance between it and Earth grows again.

Meanwhile, there is still some time left to enjoy **Jupiter**, setting in the west shortly after sunset. Watch low in the southwest for a bright point of light - it will probably be the first thing you see in that direction as the sky begins to darken. (Careful: If it blinks, it's an airplane.) If you're not sure you've found it, check it out with binoculars or a small telescope. If it's just a star, it will still look like a point of light. A planet such as Jupiter will appear to grow in size in the eyepiece: it will look round! Also, look for a row of three or four dots in a straight line. Those are Jupiter's brightest moons. You can watch them orbit Jupiter over the course of several evenings.

Finally, early-birds will want to watch a pretty trio appearing on the morning of October 13. Look in the east for **Venus**, **Saturn** and the bright star **Regulus in Leo the Lion**. These three points of light will form a compact triangle that rises a little before 3:15 am and will remain visible until the twilight glow of sunrise.

Venus, the brightest of the three, shines at an astounding -4.47 magnitude. On October 15, Venus appears as far west of the Sun as it ever gets. At this position, called **greatest western elongation**, Venus rises over two hours before the Sun does. With Venus so bright, and so far away from the Sun in our sky, you stand a good chance of seeing it in full daylight if you know just where to look.

Star Party

Join us on Friday, **December 15, 2007**, from 8:00 to 10:00 PM at Ridgefield at Edwin Warner Park for a **FREE** public star party. Dress warmly along with the **Barnard-Seyfert Astronomical Society** as we watch the sky for the Geminid meteor shower, bright Mars, and a thin crescent Moon. Directions to Ridgefield are available on our website.

For information about programs and events at the Sudekum Planetarium and Adventure Science Center, visit www.SudekumPlanetarium.com

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