

December 2007

10:00 p.m. on December 1
 9:00 p.m. on December 15
 8:00 p.m. on January 1

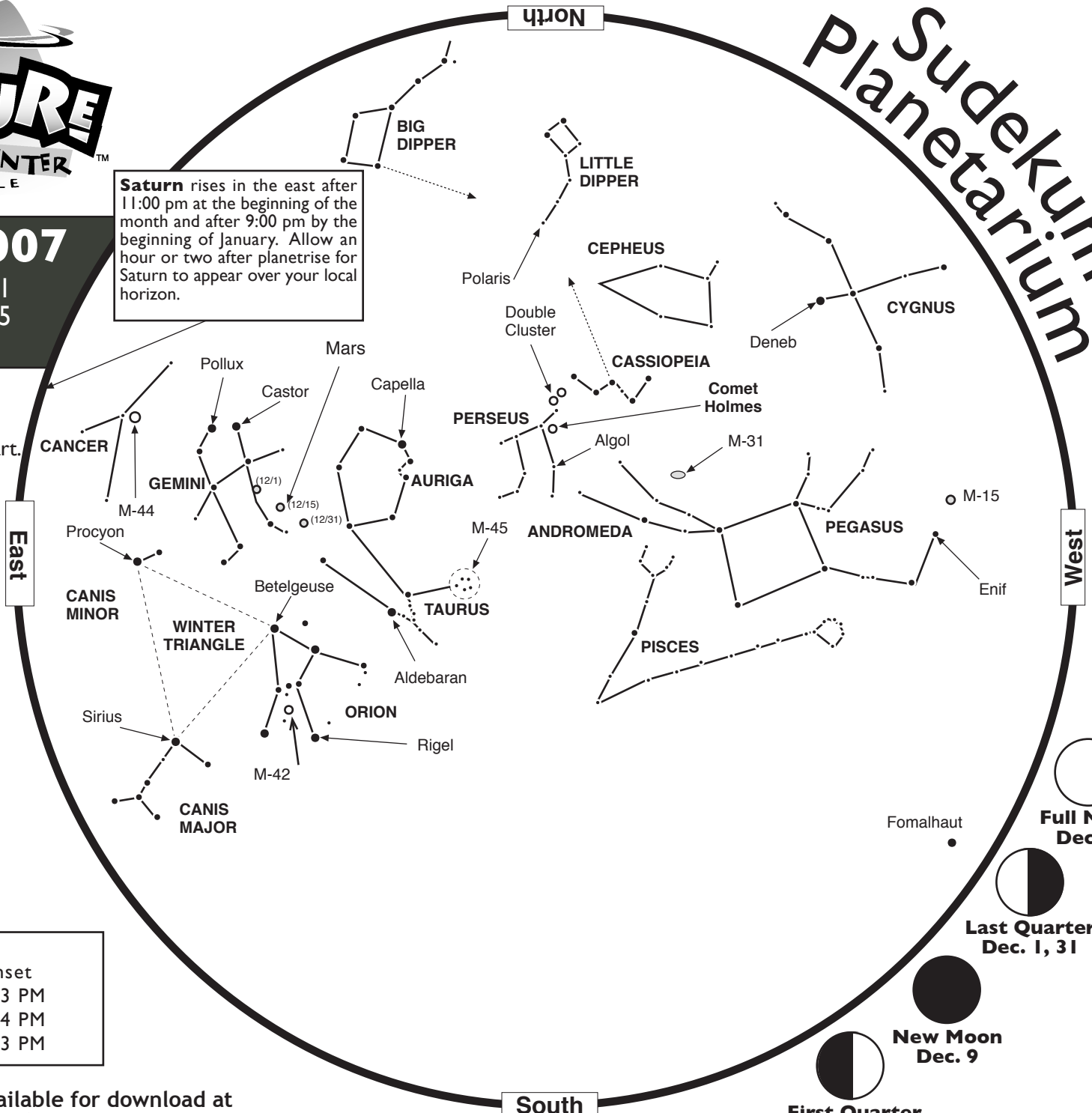
To use this chart: hold the chart in front of you and turn it so the direction you are facing is at the bottom of the chart.

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

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

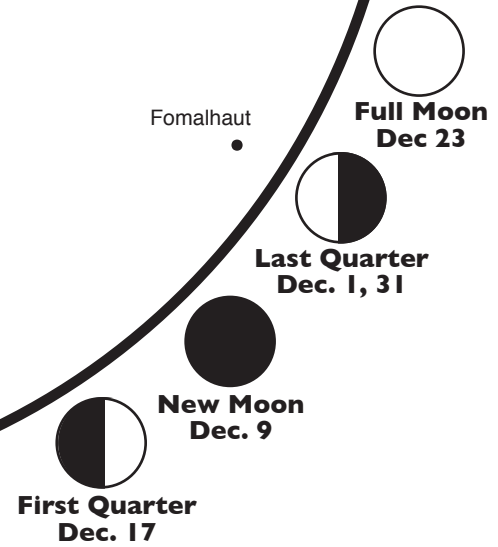
- **Globular Star Cluster:**
M-15 in Pegasus
- **Open Star Clusters:**
M-44 - The Beehive
M-45 - The Pleiades
"Double Cluster" between Perseus and Cassiopeias
The Hyades form the face of Taurus
- **A Spiral Galaxy:**
M-31 in Andromeda
- **A Nebula:**
M-42 - the Orion Nebula

Saturn rises in the east after 11:00 pm at the beginning of the month and after 9:00 pm by the beginning of January. Allow an hour or two after planetrise for Saturn to appear over your local horizon.



From Nashville:

	Sunrise	Sunset
December 1	6:39 AM	4:33 PM
December 15	6:51 AM	4:34 PM
January 1	6:58 AM	4:43 PM





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Close Encounters of Three Kinds

On **December 18**, Mars will make its closest approach to Earth this year. Close encounters between Earth and Mars happen once every 26 months, but some are closer than others. You may remember August 2003 when Mars was a mere 55 million kilometers from Earth and shone very brightly in the sky. This time, Mars will be over 88 million kilometers away at closest approach.

Even so, Mars will be bright enough in the sky to stand out. It's currently in the constellation **Gemini** the twins, high in the east in the evening sky. If you have trouble finding it, look for the bright constellation **Orion** the Hunter. Draw an imaginary line from the blue star **Rigel** in Orion's right foot, to red **Betelgeuse** in his left shoulder. Keep drawing that imaginary line until you find a bright orange point of light. That's Mars!

An entirely different kind of close encounter involving Mars happens on **December 23**, when the full **Moon** will appear right next to Mars. Of course, they only look like they're next to each other because they're in the same part of the sky as seen from our location here on Earth. The Moon is 400,000 kilometers away from Earth, but Mars will still be over 88 million kilometers away.

Meanwhile, the **Mars Phoenix Lander** is on its way to Mars for an extreme close encounter. Phoenix is scheduled to land on **May 25, 2008**. Unlike the famous rovers **Spirit** and **Opportunity** which still roam the surface, Phoenix will stay put where it lands. Its mission is to search for water ice beneath the surface, so it's built not to

roll, but to dig. Scientists hope to learn more about the geologic history of Mars and whether life could have ever existed on the Red Planet.

Other Planetary Views

Mars isn't the only planet visible this month. If you stay out a little later, this is a good time to look for the ringed planet **Saturn**. It rises a little after 11:00 pm early in December, and just after 9:00 pm as January begins. Unless you have a perfectly flat horizon and crystal clear skies, it helps to wait an hour or two after the planet rises so you can get a clear, unobstructed view. A small telescope can provide an excellent view of Saturn's famously beautiful rings.

Meanwhile, **Venus** remains high and extremely bright in the pre-dawn hours. Look for it high in the southeast before sunrise throughout the month. It will be the single brightest point of light in the sky, aside from the occasional airplane.

Comet Holmes Update

Last month, a surprise visitor appeared in our skies. **Comet Holmes** will never rank among the list of great, bright comets such as **Halley**, **Hale-Bopp**, or **Hyakutake**, but under the right conditions it's still visible to the naked eye.

Toward the end of November it was washed out by the glare of a bright Moon, but during early December you have another chance to see this comet. It's fainter than it was, but now appears larger than the full Moon. Use binoculars or a low-power telescope to get a closer look. Visit Sky and Telescope Magazine's Comet Holmes page at <http://tinyurl.com/2x68be> for more information.

Meet and Greet (and Eat)

This month's meeting of the Barnard-Seyfert Astronomical Society is **December 20** at Adventure Science Center. The annual **BSAS** holiday potluck starts at 6:30 pm to be followed

by **Astro-Jeopardy** with **Charlie Warren**, Editor of Amateur Astronomy Magazine, as Master of Ceremonies. Bring a dish and join us!

The regular BSAS meeting starts at 7:30 pm. Charlie Warren's after-dinner presentation will include a compilation of astronomical images including his 25 favorite objects to view with binoculars, small telescopes, and large telescopes. His program will conclude with a discussion of Astronomical Trends from an editor's perspective.

If you or a friend find a new telescope under the tree this year, you'll want to attend the BSAS meeting on **January 18, 2008**. The presentation will be designed to help new telescope owners get the most out of their equipment.

For details about BSAS, visit their web site at www.bsasnashville.com.

Star Parties

The next FREE public star party is Friday, **December 15, 2007**, from 8:00 to 10:00 pm at the Special Events Field at Edwin Warner Park. We'll be watching for the Geminid meteor shower while telescopes from BSAS will provide views of the Moon, Mars, and beyond.

Another free star party at Warner Park will be on **February 9**, from 7:30 to 9:30 PM. Then, on **February 20**, join us here at Adventure Science Center for a star party from 7:00 to 9:00 pm. The main attraction: a **total lunar eclipse!**

Visit our web site for more details, tips for attending star parties, and a list of future events.

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

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