Sudekum Planetarium

ADVENTURE SCIENCE CENTER NASHVILLE

September 2008

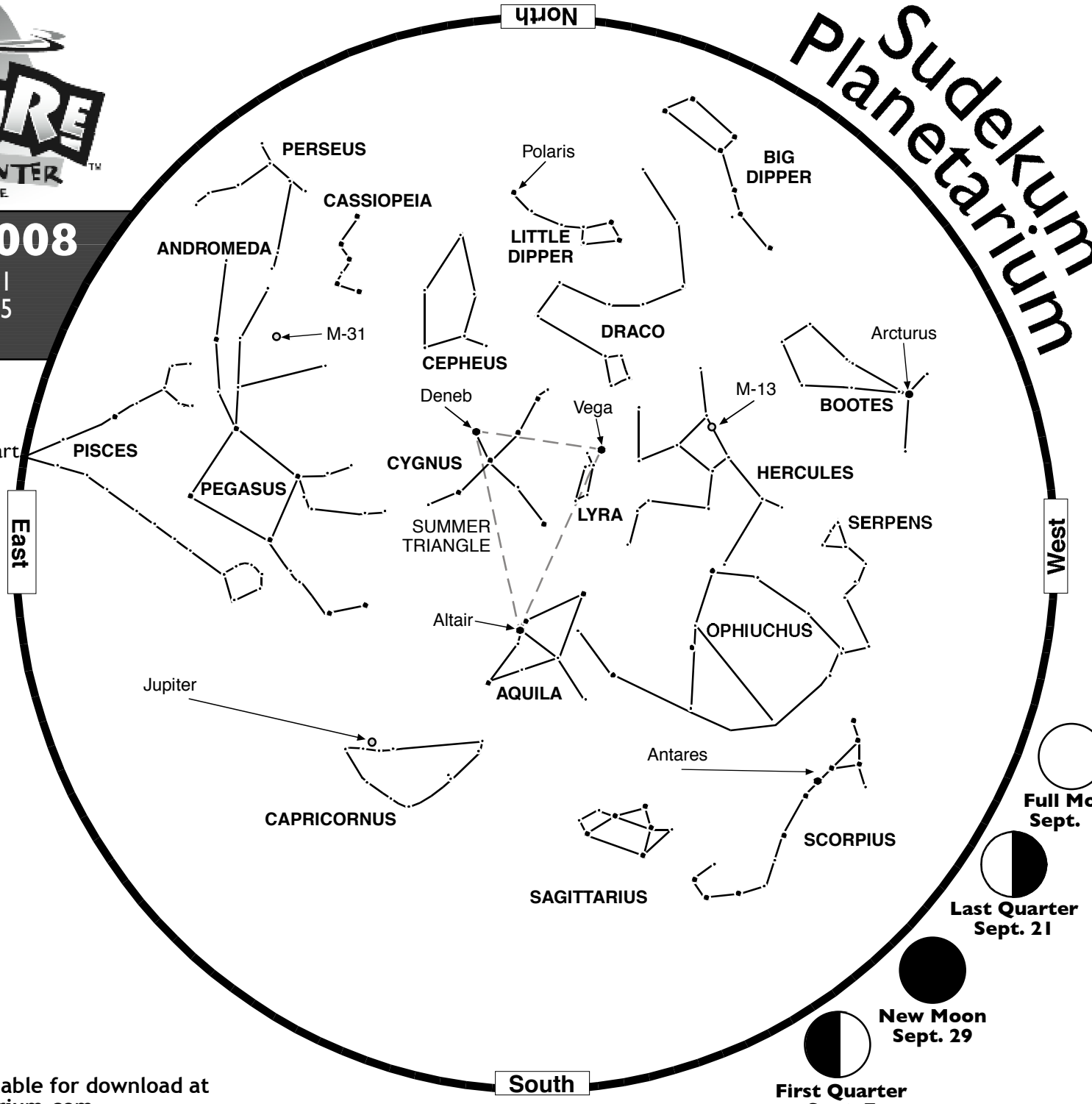
10:00 p.m. on September 1
9:00 p.m. on September 15
8:00 p.m. on October 1

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-13 in Hercules
- **A Spiral Galaxy:** M-31 in Andromeda



From Nashville:	Sunrise	Sunset
September 1	6:19 AM	7:14 PM
September 15	6:30 AM	6:54 PM
October 1	6:43 AM	6:30 PM

Full Moon
Sept. 15

Last Quarter
Sept. 21

New Moon
Sept. 29

First Quarter
Sept. 7

FREE monthly star charts are available for download at
www.SudekumPlanetarium.com

THE NEW SUDEKUM PLANETARIUM

AT ADVENTURE SCIENCE CENTER

September 2008

A Passel of Planets

This summer has flown by, and September is finally here. Most everyone has gone back to school. The Sun is setting earlier each night, and the temperatures are more comfortable for staying outside to do a little stargazing.

The month gets off to a spectacular start on the evening of September 1, when the crescent **Moon** joins a little cluster of planets low in the western sky just after sunset. The brightest of the three planets is **Venus**, which should be easily visible to the unaided eye. The other two planets require binoculars to be located. **Mercury** is the brighter of the two, lying below and to the left of Venus. Once you have found Mercury through binoculars, it might be possible to spot this elusive planet with just your eyes because you'll have a better idea where to look. **Mars**, above and to the left of Venus, is quite small and faint because it is more than 200 million miles (380 million km) away. Mars won't really be worth looking at, even through a telescope, until late in 2009 when Earth passes the red planet in its orbit.

Each night after the 1st, the Moon will be moving away from the cluster of planets as its phase increases. Since you had the binoculars out to look for planets, take a look at the Moon, too. After all, your average pair of binoculars are better than Galileo's first telescope. The best place to focus your attention is the **terminator**, the line where day and night meet on the Moon. The terminator is also where the low angle of the sunlight striking the lunar surface and the longer shadows it creates make the mountains and craters stand out with greater relief.

Keep an eye on the planets in the west over the next two weeks because Venus and Mercury are closing in on Mars. Venus will pass extremely close to Mars on the evening of September 11 with Mercury nearby. For the remainder of the month, Mercury and Mars will remain low, close to horizon, and will soon be completely lost in the glow of the sunset. Meanwhile Venus will continue to pull away, appearing higher in the sky every night. This 'evening star' will be a brilliant beacon now through the end of the year.

Also visible as the Sun sets is **Jupiter**, about 30 degrees above the southern horizon. Many people will probably spot Jupiter first because those other planets in the west are so low they may be blocked from view by trees or buildings. Even though Jupiter is the largest planet in our solar system it still only looks like a bright white disk through your binoculars.

Careful observers might be able to see as many as four tiny points of light close to the disk of the planet itself. Those are Jupiter's largest moons. They are called the Galilean satellites because Galileo was the first to observe them, tracking their movements around the planet. If you watch Jupiter from night to night, you too can note how the satellites change position. We don't always see all four because sometimes they pass in front of or behind the bright disk of the planet.

Today we know that Jupiter has at least 63 moons. That's not a typo! Many more will likely be discovered in the future. Don't try to look for them all with binoculars, though! Some of them have only been seen by manmade probes visiting the Jupiter for a close up look.

Excuse for an Equinox

This year the **Autumnal Equinox** for the northern hemisphere occurs at **10:45 am Central Daylight Time** on the morning of **September 22**. Meanwhile in the southern hemisphere, this is the first day of spring. The seasons are reversed for our neighbors down south because the Earth is tilted on its axis with respect to the Sun. As our days get shorter, those in the southern hemisphere are getting longer. Many calendars today simply call this event the September Equinox. On the date of the equinox, the Sun rises due east and sets due west for all locations on the planet Earth.

The design of our new Sudekum Planetarium building takes into account the changing position of the Sun throughout the year. One tall exterior window is aligned to the west. If look through this window you'll see a tall post outside marking due west. On the evening of the equinox, the Sun will set directly behind that post as seen through that window. If the weather's clear, we'll take a picture and post it on our web site!

Upcoming Star Parties

The next **FREE public star party** is scheduled for **Saturday, October 4**, from 8-10 PM at the Visitor Center at Longhunter State Park. For driving directions, check the Sudekum Planetarium web site, where you can also find helpful tips for enjoying a star party.

Members of the **Barnard-Seyfert Astronomical Society** (BSAS) will set up their telescopes to provide views of a pretty crescent Moon, Jupiter, the Andromeda Galaxy, and other treats. Everyone is welcome!

If it is cloudy or raining, the star party will be canceled. If the weather is questionable, visit www.SudekumPlanetarium.com or call Astroline at 615-401-5092 before leaving home.

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.