

Mountaineer Skies

Volume 8, Issue 3

<http://www.as.wvu.edu/~planet/index.html>

July – Sept, 2008

NEW PROJECTOR INSTALLED

On Thursday, May 22 our new digital projector was installed. This should add significantly to the planetarium experience by making it much more dynamic and immersive. The new planetarium shows will cover the entire dome with action, not limited to just one area.

Along with *'tis the Season*, our annual holiday presentation, we have purchased several other new shows. The two we will show first are *It's About Time* and *Earth's Wild Ride*.

It's About Time lets you experience the thrill of riding a space elevator from Mt. Kilimanjaro to a geosynchronous space station and then looking through a large telescope. The ride back to Earth is even more exciting.

Earth's Wild Ride takes place in 2081 on the Moon. A grandfather tells his Moon-born grandchildren stories about the Earth, a place they can never visit. He tells them about volcanoes erupting, the ice ages, dinosaurs, and the raging rivers of Earth.

INSIDE THIS ISSUE

- 1 In The Sky This Month
- 2 About: **The Eleven (not nine) Planets**
- 3 Planetarium Show Schedule
- 3 Selected Sunrise/Sunset, Moon Rise/Moon Set Times
- 4 Monthly Sky Chart

In The Sky This Month

Visible Planets in the Night Sky

Beginning of July, 2008

	Const	Rise	Transit	Set	Mag
Sun		05:54	13:23	20:53	-26.8
Mercury	Tau	04:35	11:51	19:06	0.4
Venus	Gem	06:22	13:50	21:20	-3.9
Mars	Leo	10:01	16:49	23:35	1.6
Jupiter	Sgr	21:11	01:56	06:42	-2.7
Saturn	Leo	10:20	17:06	23:49	0.7

Beginning of August, 2008

	Const	Rise	Transit	Set	Mag
Sun		06:18	13:26	20:34	-26.8
Mercury	Cnc	06:35	13:41	20:51	-1.7
Venus	Leo	07:32	14:26	21:21	-3.9
Mars	Leo	09:34	15:57	22:18	1.7
Jupiter	Sgr	18:55	23:38	04:21	-2.7
Saturn	Leo	08:35	15:17	21:55	0.8

Beginning of September, 2008

	Const	Rise	Transit	Set	Mag
Sun		06:47	13:19	19:52	-26.8
Mercury	Vir	08:57	14:50	20:45	0.0
Venus	Vir	08:43	14:46	20:50	-3.9
Mars	Vir	09:11	15:06	21:01	1.7
Jupiter	Sgr	16:46	21:28	02:10	-2.5
Saturn	Leo	06:52	13:29	20:02	0.8

Tau	Taurus, the Bull
Gem	Gemini, the Twins
Leo	Leo, the Lion
Sgr	Sagittarius, the Archer
Cnc	Cancer, the Crab
Vir	Virgo, the Maid

About: **The Eleven Planets**

Most everyone knows that there are not nine planets any more. For a short time, after Pluto's demotion, there were only eight. But not anymore. There are, of course, as you probably have guessed, eleven. Eleven. Why eleven? That is a reasonable question. Here is the current listing of the solar system's major and minor planets beginning with the closest to the Sun: Mercury, Venus, Earth, Mars, Ceres, Jupiter, Saturn, Uranus, Neptune, Pluto and Eris. Of these, there are eight major planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, and three minor or dwarf planets: Ceres, Pluto, and Eris. You probably recognize the names of all of them except maybe Ceres and Eris.

If you have trouble remembering all of their names, you are not alone. Maryn Smith, a very creative fourth grader from Great Falls, Montana came up with a mnemonic to help. **My Very Exciting Magic Carpet Just Sailed Under Nine Palace Elephants**, where the first letter in the word stands for the first letter of the planets, major or minor.

As most of us are less familiar with the minor planets than with the major ones, here is a little information about the three dwarf planets.

The first of these, Ceres, was discovered by Giuseppe Piazzi, an Italian astronomer, on New Year's Day, 1801. It is named after the Roman goddess of growing things like cereal and is the largest object located in the asteroid belt. This belt is found between the planets Mars and Jupiter and is nearly 420,000,000 km from the Sun. Ceres has a solid core composed of a rocky material and a surface covered by frozen water ice. No moons are evident. At 980 km in radius, it is the smallest of the solar system dwarf planets. Pluto is 1160 km in diameter and Eris is even larger at 1300 km.

The next minor planet is Pluto, a name familiar to all of us. It was discovered by Clyde Tombaugh at the Lowell Observatory, in Arizona in 1930. This dwarf planet is located nearly 6,000,000,000 km from the Sun and has three moons, Charon, Nix and Hydra.

The third minor planet Eris was discovered by astronomers Chad Trujillo from Gemini Observatory, Mike Brown from Caltech, and finally David Rabinowitz from Yale in 2005 after a review of photographs taken at Mount Palomar in 2003. This minor planet got its name from the Roman goddess of chaos and confusion. At just over 10,000,000,000 km from the Sun, it is the most distant of our planets so far and has one moon called Dysnomia. Before the IAU (International Astronomical Union) gave the planet and its moon their current names, they were nicknamed Xena and Gabrielle, respectively. These cognomens came from a popular television program of some years ago, **Xena: Warrior Princess**.

Comparative Planetary Chart

Planet	Type	Distance from Sun (km)	Radius (km)
Mercury	Terrestrial	57,909,000	2440
Venus	Terrestrial	108,204,000	6050
Earth	Terrestrial	149,598,000	6380
Mars	Terrestrial	227,987,000	3400
Ceres	Dwarf	419,000,000	980
Jupiter	Gas Giant	778,358,000	71500
Saturn	Gas Giant	1,427,015,000	60270
Uranus	Gas Giant	2,870,786,000	25560
Neptune	Gas Giant	4,496,916,000	25270
Pluto	Dwarf	5,906,129,000	1160
Eris	Dwarf	10,123,012,000	1300

2008 – 2009 Planetarium Shows



August 8 & 22, 2008 <i>It's about Time & Earth's Wild Ride</i>	Sept 12 & 26, 2008 <i>It's about Time & Earth's Wild Ride</i>	Oct 10 & 24, 2008 <i>It's about Time & Earth's Wild Ride</i>
Nov 7 & 14, 2008 <i>It's about Time & Earth's Wild Ride</i>	Dec 5, 12 & 19, 2008 <i>'tis The Season</i>	Jan 9 & 23, 2009 <i>It's about Time & Saturn, the Ring Planet</i>
Feb 13 & 27, 2009 <i>It's about Time & Saturn, the Ring Planet</i>	Mar 13 & 27, 2009 <i>It's about Time & Saturn, the Ring Planet</i>	April 10 & 24, 2009 <i>It's about Time & Saturn, the Ring Planet</i>
May 8 & 22, 2009 <i>It's about Time & Saturn, the Ring Planet</i>	Jun 12, 2009 <i>It's about Time & Saturn, the Ring Planet</i>	July, 2009 Closed

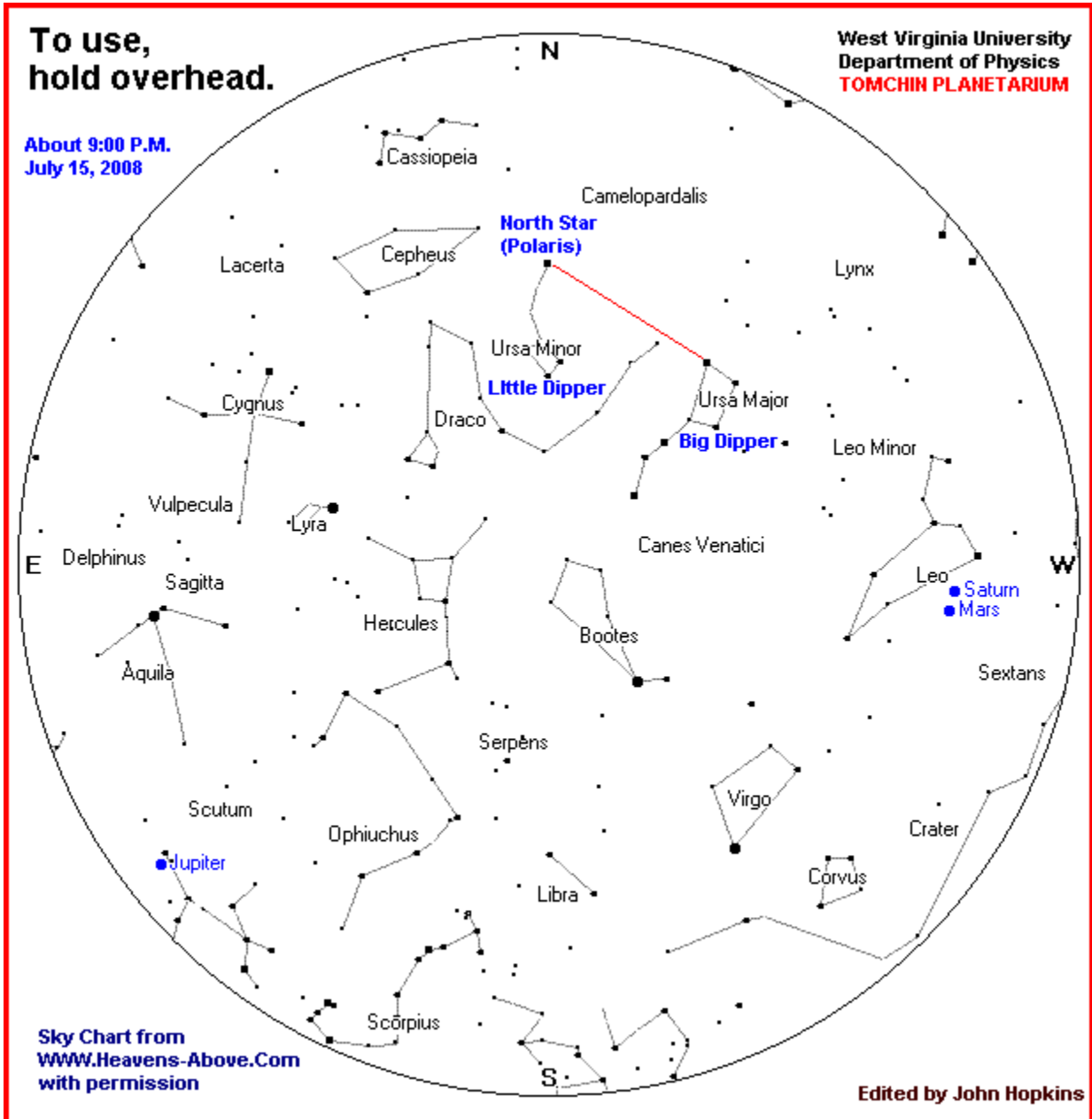
For those who are interested in bringing a group, such as schools or scouts, during the day, please call for more information. These shows are usually given on Tuesday or Thursday mornings.

For further information or reservations, please call John Hopkins at (304)293-3422, extension 1443 or by email at: jhopkins@mail.wvu.edu

Selected Sunrise/Sunset and Moon Rise/Moon Set Times

Date (2008)	Sunrise	Sunset	Moon Rise	Moon Set	Moon Phase
July 2	5:56 A.M.	8:51 P.M.	5:00 A.M.	8:56 P.M.	New Moon
July 9	6:00 A.M.	8:49 P.M.	1:18 P.M.	12:05 A.M.	First Qtr
July 18	6:06 A.M.	8:44 P.M.	9:13 P.M.	6:10 A.M.	Full Moon
July 25	6:12 A.M.	8:39 P.M.	NA	1:58 P.M.	Last Qtr
Aug 1	6:18 A.M.	8:32 P.M.	6:23 A.M.	8:50 P.M.	New Moon
Aug 8	6:25 A.M.	8:25 P.M.	2:12 P.M.	11:51 P.M.	First Qtr
Aug 16	6:32 A.M.	8:14 P.M.	8:10 P.M.	6:09 A.M.	Full Moon
Aug 23	6:39 A.M.	8:05 P.M.	11:36 P.M.	2:16 P.M.	Last Qtr
Aug 30	6:45 A.M.	7:54 P.M.	6:28 A.M.	7:44 P.M.	New Moon
Sep 7	6:53 A.M.	7:42 P.M.	2:58 P.M.	11:52 P.M.	First Qtr
Sep 15	7:00 A.M.	7:29 P.M.	7:26 P.M.	7:14 A.M.	Full Moon
Sep 22	7:07 A.M.	7:17 P.M.	NA	3:23 P.M.	Last Qtr
Sep 29	7:13 A.M.	7:06 P.M.	7:33 A.M.	6:57 P.M.	New Moon

July 2008 Sky Chart* for:
 10:00 P.M at the beginning of the month
 9:00 P.M in the middle of the month
 8:00 P.M at the end of the month



*Sky Chart used with the kind permission of Heavens-Above at <http://www.heavens-above.com/>

The TOMCHIN PLANETARIUM is named in honor of the late Harold Tomchin, of Princeton, W.Va., who made a generous donation to ensure its continuing operation, and whose family continues to support the planetarium for the educational benefit of WVU students, staff, and faculty members, as well as the local community. Contributions can be made in support of the planetarium through the WVU Planetarium Project at the WVU Foundation, Inc., phone (304)284-4000. Thank You.



Edited by John Hopkins
 (304)293-3422, extension 1443
 jhopkins@mail.wvu.edu

