

Mountaineer Skies

From the Editor's Desk

The Well and The Sky

In our March issue, we found that standing an egg on end could be accomplished with equal ease any day of the year, not just during the Equinox. Another popular myth is that if you stand at the bottom of a well during the daytime and look up, you could see stars.

This phenomenon has been mentioned by Aristotle, by Charles Dickens in "The Pickwick Papers" as well as in popular mythology. So this misconception has a lot of history. As with the egg, the best way to find out if this is true is to experiment. You can

- (1) Find a well or vertical cave and look up. This can be very dangerous and is not recommended.
- (2) Find a chimney and look up. This also can be dangerous if the chimney contains soot or other debris.
- (3) Use a long plastic or cardboard tube to simulate being in a well. This is the safest method.
- (4) Find a large refracting telescope. The Allegheny Observatory Thaw Refractor at the University of Pittsburgh is 30 inches in diameter and 47 feet long.

DO NOT LOOK AT THE SUN WHEN TRYING ANY OF THESE. EYE DAMAGE IS ALMOST CERTAIN.

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In The Sky This Month

There will be an annular solar eclipse (see Volume 2, Issue 1, January, 2002 of *Mountaineer Skies*) on June 10. This partial eclipse will be visible throughout North America and Hawaii. In eastern North America, it will begin at about 19:30 and last for 16 minutes. The eclipse will probably be very subtle.

NEVER LOOK AT A SOLAR ECLIPSE WITHOUT APPROPRIATE EYE PROTECTION.

Visible Planets in the Night Sky

Beginning of June

	Const	Rise	Transit	Set
Sun		5:54	13:18	20:41
Venus	Gem	8:13	15:44	23:16
Mars	Gem	7:19	14:52	22:23
Jupiter	Gem	8:26	15:52	23:15
Saturn	Tau	6:24	13:46	21:04

Middle of June

	Const	Rise	Transit	Set
Sun		5:52	13:20	20:49
Venus	Cnc	8:40	16:00	23:20
Mars	Gem	7:06	14:37	22:06
Jupiter	Gem	7:45	15:09	22:31
Saturn	Tau	5:36	12:58	20:18

End of June

	Const	Rise	Transit	Set
Sun		5:55	13:23	20:51
Venus	Leo	9:11	16:11	23:13
Mars	Gem	6:55	14:20	21:44
Jupiter	Gem	7:02	14:24	21:44

Gem = Gemini, The Twins

Tau = Taurus, The Bull

Cnc = Cancer, The Crab

Leo = Leo, The Lion

About: Meteors and Mother Earth

A **meteoroid** is a stony or iron fragment that travels in space. It is often from an asteroid or comet. When the meteoroid is attracted by the earth's gravitational field and begins to glow due to atmospheric friction, it is called a **meteor**. Finally, when the meteor impacts the earth, it is called a **meteorite**.

We are bombarded by thousands of meteors every day. Most are dust size and burn up, unnoticed, in the atmosphere. Some are a little larger and last long enough so we can see its incandescence as it burns up producing a bright trail of light popularly known as "falling stars" or "shooting stars." These can be seen on any night. However, there are specific times when many light up the night sky. These are called **meteor showers** and occur at about the same time each year. Here are the major ones. Their names come from the constellation from which they appear.

Name	Dates	Maximum
Quadrantids	Dec. 28-Jan. 7	Jan. 3
Lyrids	April 16-25	Apr. 22
Eta Aquarids	April 21-May 12	May 5
Perseids	July 23-Aug. 22	Aug. 12
Orionids	October 15-29	Oct. 21
Leonids	Nov. 14-20	Nov. 18
Geminids	December 6-19	Dec. 14

Larger ones do hit the earth and can have a catastrophic effect, but, fortunately, they are fairly rare.

There is very strong evidence that a very large meteor, probably an asteroid, hit the earth about 65 million years ago and caused the death of the dinosaurs.

Some 50,000 years ago a 150 foot diameter meteor, made up primarily of nickel and iron, slammed into the earth at 25,000 miles per hour near present day Winslow, Arizona. The result is the **Barringer Meteor Crater**, a huge hole 4000 feet across and 650 feet deep.

Barringer Meteor Crater, Arizona



photo by USGS, D. Roddy

In 1908 a loosely consolidated 70 foot meteor exploded over the Tunguska region located in the western part of Siberia. Because it did not hit the ground, there was no crater. However, it still caused an incredible amount of destruction to the surrounding forest, a roughly circular area 30 miles across. So extensive was the damage, that some likened it to a nuclear explosion. So loud was that explosion that it was heard in London, nearly half way around the world.

Tunguska



photo by N. A. Strukov, 1928

Because of the catastrophic effect a large meteor would have on earth, some astronomers have been actively cataloging Near Earth Objects (**NEOs**) in order to give us some warning time in which to react. Other scientists and engineers are trying to find ways to destroy or divert these large meteors before they can hit the earth.

For more information about Near Earth Objects try <http://neo.jpl.nasa.gov/>.

2002 Planetarium Shows

Magellan: Report from Venus – The Magellan radar-mapping mission to Venus was extraordinarily successful; the spacecraft returned more data than all NASA's previous planetary missions combined. During this half-hour planetarium show, we follow Magellan's progress, from its launch through the most significant discoveries. Included are spectacular images of volcanoes, impact craters and landslides. Important planetary science topics of volcanism, tectonism, and impact cratering are covered, and radar imaging is discussed.

Coming in Late August



Narrated by Patrick Stewart

http://www.as.wvu.edu/~planet/mars_quest.htm

June 14, 2002
Magellan from Venus

July, 2002
Closed

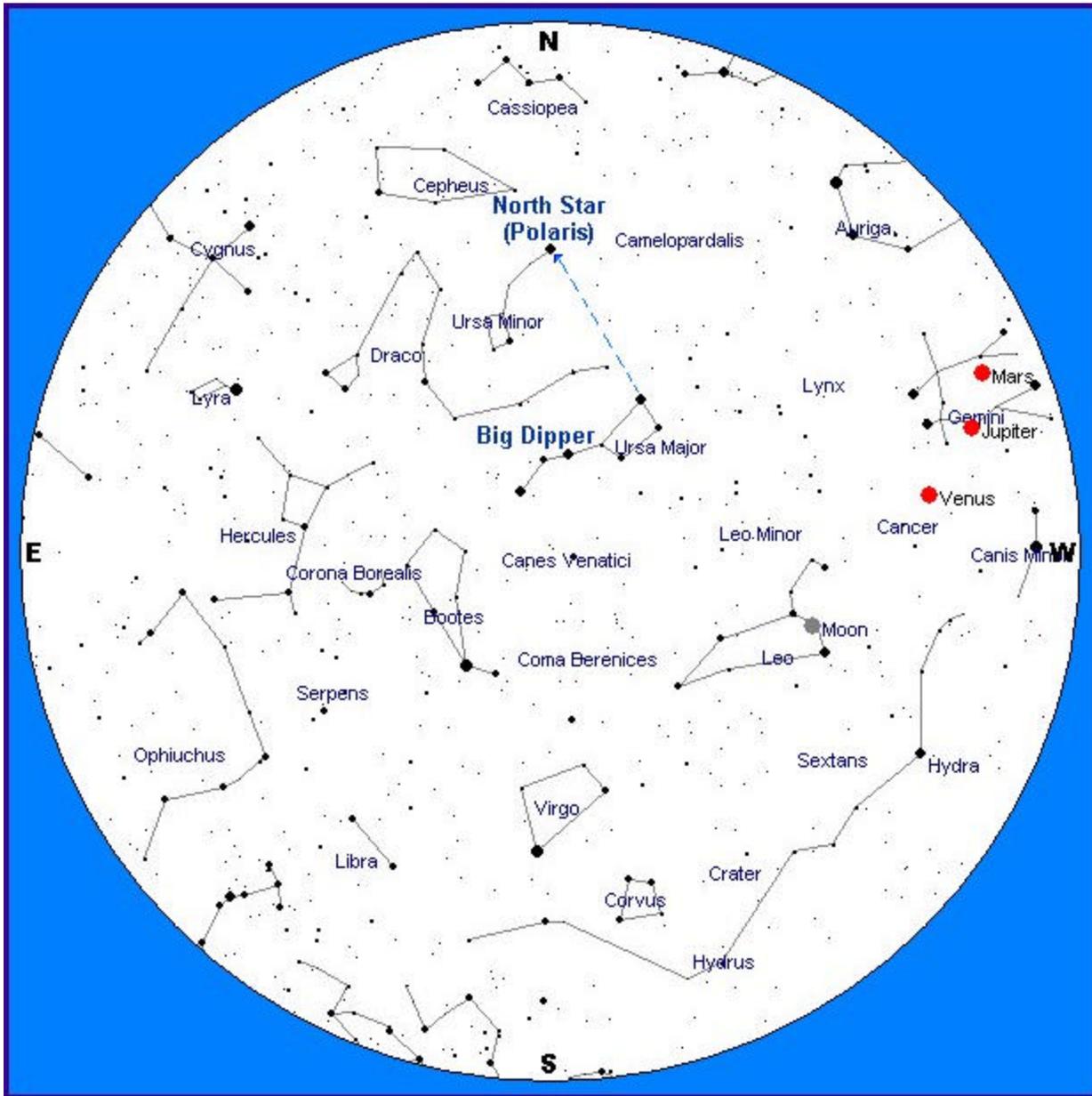
For those who are interested in bringing a group, such as schools or scouts, during the day, please call for more information. These shows are usually given on Tuesday or Thursday mornings.

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	Sunrise	Sunset	Moon Rise	Moon Set	Moon Phase
June 2	5:53 A.M.	8:41 P.M.	1:57 A.M.	12:39 P.M.	Waning Gibbous
June 10	5:51 A.M.	8:46 P.M.	5:32 A.M.	8:44 P.M.	New Moon
June 17	5:51 A.M.	8:49 P.M.	12:50 P.M.	1:27 A.M.	First Quarter
June 24	5:52 A.M.	8:50 P.M.	9:01 P.M.	5:26 A.M.	Full (Strawberry) Moon

June 2002 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.**



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