

# Mountaineer Skies

Volume 1, Issue 2

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

October 2001

## From The Editor:

The *Mars Odyssey* spacecraft is scheduled to arrive on October 24, 2001. Among other experiments, it will look for water, a necessary ingredient for life, as we understand it.

As I have had numerous requests for web addresses that would be of interest to the amateur astronomer, I will include several, with a short description, monthly. If you have one that you have found to be of particular interest, please send it to me and I will try to use it in a future issue.

Here are a few web addresses to begin with.

1. **Mars Odyssey 2001** – NASA's web page for the Mars Odyssey spacecraft, launched April 7, 2001 and scheduled to arrive at Mars on October 24. <http://mars.jpl.nasa.gov/odyssey/>
2. **Tomchin Planetarium and Observatory homepage** – Extensive astronomical links. Check back often. <http://www.as.wvu.edu/~planet/index.html>

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## In The Sky This Month

**Daylight Savings Time** ends at 2:00 A.M. on Sunday, October 28. This requires that you set your clocks **BACK** one hour. For convenience, clocks are usually set on the preceding Saturday night. To remember which way to set your clocks recall “**Fall back, Spring forward.**”

### Visible Planets in the Night Sky

**Mars** is located between Sagittarius, the Archer, and Capricorn, the Goat. Look in the south-southwest after dusk. (See *the sky chart on page 4.*)

For late night observers, **Saturn** rises about 10:00 P.M. EDT in the Eastern sky early in the month and about 7:00 P.M. EST towards the end of the month. **Jupiter** rises about two hours later, also in the East.

### Meteor Showers

The Orionids come from a stream of debris from Halley's Comet and are visible between October 15 and 29. Its maximum should be on Oct. 21 about 11:45 P.M. Look eastward.



Estimates range from 20 to as many as 35 meteors per hour.

## About: Mars



Mars: Photographed by the Hubble Space Telescope on June 26, 2001

Mass (kg)	$6.4 \times 10^{23}$
Diameter (km)	6794
Mean density (g/cm <sup>3</sup> )	3.94
Escape velocity (km/sec)	5.0
Avg distance from Sun (AU)	1.524
Mean surface temperature (°C)	- 63

### Atmospheric Composition

Carbon Dioxide	95.32%
Nitrogen	2.7%
Argon	1.6%
Oxygen	0.13%

### Moons (2)

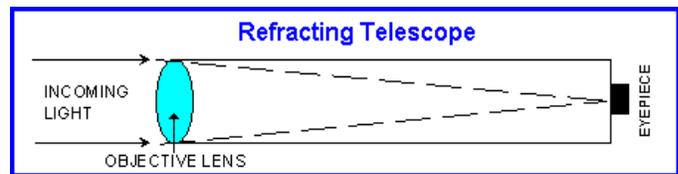
Deimos meaning panic  
Phobos meaning fear

The *Mars Odyssey* spacecraft is scheduled to arrive at Mars on October 24, 2001.

## Telescopes, Part 1 – The Refractor

There are three basic types of telescopes, the refractor, the Newtonian reflector, and the catadioptric. The latter two will be discussed in future issues.

A refracting telescope is a simple device made up of three basic parts, the objective lens, the eyepiece, and a light tight, sealed connecting tube, usually painted black on the inside.



Light from the object you are viewing passes through the objective lens to the eyepiece where the image may be focused to suit the vision of the user.

This is an excellent telescope for lunar, planetary, and distant terrestrial viewing. Although it is reasonably priced for small apertures, say up to two or three inches, it is prohibitively expensive in larger sizes.

Aperture refers to the diameter of the objective lens.



(Next month – The Reflecting Telescope)

## 2001 – 2002 Planetarium Shows

<p><b><i>Magellan: Report from Venus</i></b> – 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.</p>	<p><b><i>'Tis The Season</i></b>– The program is shown annually in November and December and recounts the historical, religious, and cultural rituals practiced during the time of winter solstice -- not only Christian and Jewish, but also Nordic, Roman, Egyptian, and Hopi. It also takes a look at some of our more light-hearted seasonal traditions, from gift-giving and kissing under the mistletoe to the custom of decking the halls with greenery and candles. St. Nicholas, Sinterklaas, Kris Kringle, Father Christmas, and Santa Claus all drop by as well. This is our most popular show.</p>
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October 12 & 26, 2001 <i>Magellan from Venus</i>	NOVEMBER 9 & 16, 2001 <i>'TIS THE SEASON</i>	December 14 & 21, 2001 <i>'TIS THE SEASON</i>
January 11 & 25, 2002 <i>Magellan from Venus</i>	February 8 & 22, 2002 <i>Magellan from Venus</i>	March 8 & 22, 2002 <i>Magellan from Venus</i>
April 12 & 26, 2002 <i>Magellan from Venus</i>	May 10 & 24, 2002 <i>Magellan from Venus</i>	June 14, 2002 <i>Magellan from Venus</i>
July, 2002 Closed		

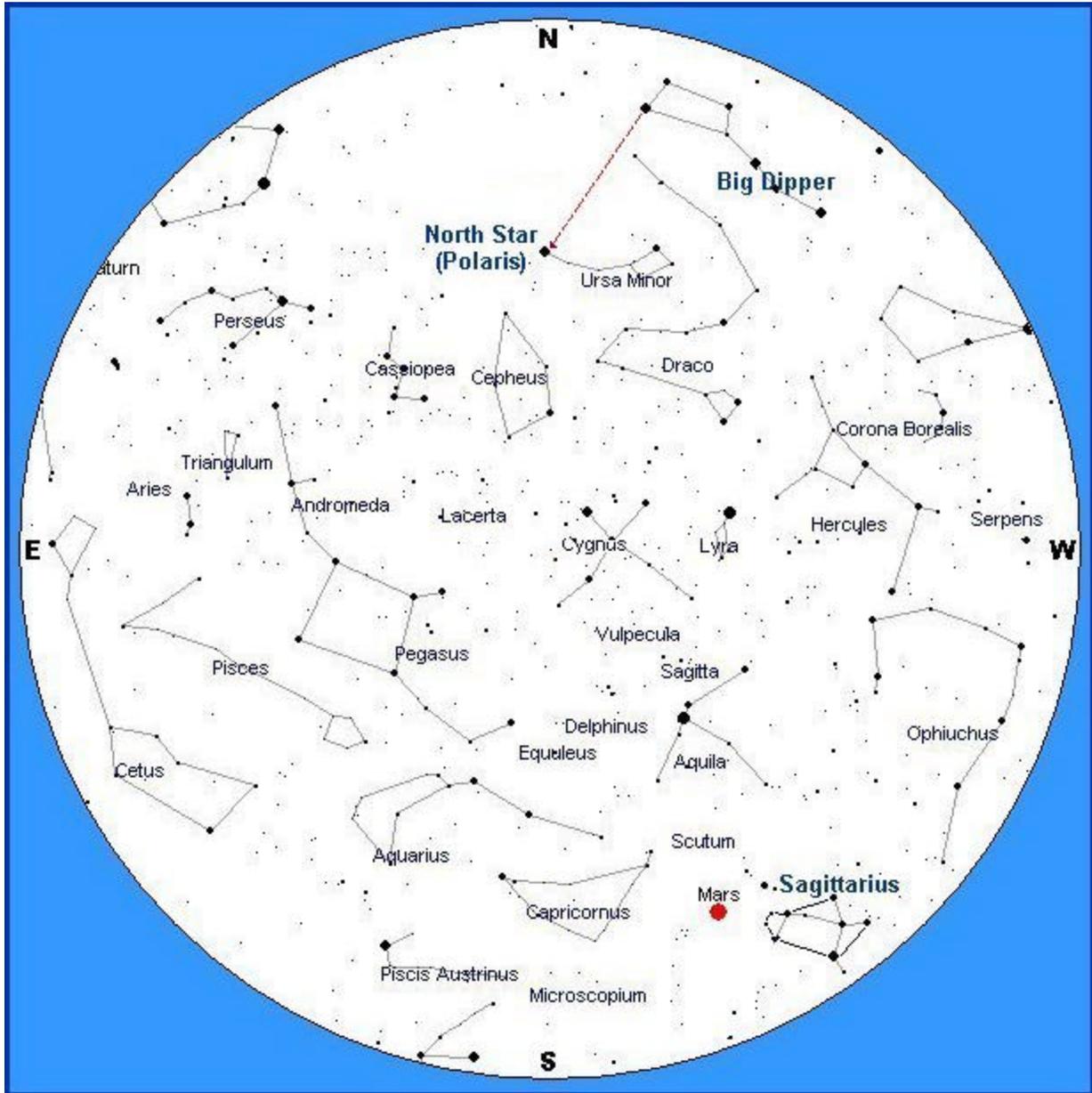
For those who are interested in bringing a group, such as schools or scouts, during the day, please call for more information. These shows are usually given on Tuesday or Thursday mornings.

For further information or reservations, please call John Hopkins at (304)296-1211, extension 1433 or by email at: [jhopkins@mail.wvu.edu](mailto:jhopkins@mail.wvu.edu)

### Selected Sunrise/Sunset and Moon Rise/Moon Set Times

Date	Sunrise	Sunset	Moon Rise	Moon Set	Moon Phase
Oct. 2	7:17 A.M.	7:00 P.M.	7:30 P.M.	7:07 A.M.	Full Moon
Oct. 10	7:25 A.M.	6:48 P.M.	-----	3:16 P.M.	Last Quarter
Oct. 16	7:31 A.M.	6:39 P.M.	7:05 A.M.	7:00 P.M.	New Moon
Oct. 23	7:39 A.M.	6:29 P.M.	2:31 P.M.	-----	First Quarter

October 2001 Sky Chart\* for:  
 8:00 P.M at the beginning of the month  
 9:00 P.M in the middle of the month  
 10:00 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 Bluefield, 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 Foundation Inc.



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