

Mountaineer Skies

Volume 1, Issue 3

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

November 2001

From The Editor:

This month the Leonids meteor shower should provide an exciting phenomenon to watch. If the upper limits of predictions are reached, it could look like a Fourth of July fireworks display. If, on the other hand, a more modest event occurs, it still should be worth watching.

For dates of the major meteor showers, see page 2.

Links

1. [Meteor Observing Page](http://www.maa.mhn.de/Comet/calendar.html) – has monthly meteor shower information, both for major as well as minor occurrences.
<http://www.maa.mhn.de/Comet/calendar.html>

2. [NASA's home page](http://www.nasa.gov/) – source for just about everything about our space program.
<http://www.nasa.gov/>

In The Sky This Month

Visible Planets in the Night Sky

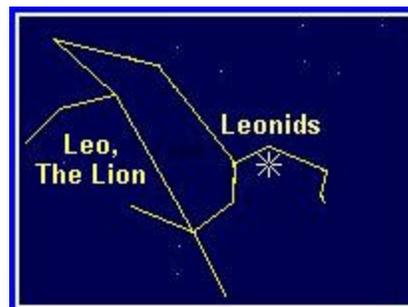
Saturn is very bright this month between the horns of Taurus, The Bull, in the eastern sky. This is an excellent time to view the planet with a telescope. Jupiter rises about an hour later than Saturn and is the brightest object in the night sky. It is in the constellation Gemini, The Twins. Mars, found in the southwest in Capricorn, the Goat, is dimming as it begins to move further and further away from the earth.

Meteor Showers

This month we are treated to what could be a spectacular meteor shower, **The Leonids**. Though visible from November 14 to 20, its local maximum should occur on Sunday morning, November 18, about 5:00 A.M. This is two hours before sunrise. It should appear in the southeastern sky. Estimates are as high as 2500 per hour. This shower is associated with Comet Tempel-Tuttle, which was discovered in 1865/1866 by William Tempel, an Englishman, and Horace Tuttle, an American.

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About: Meteor Showers



Meteors, also called falling or shooting stars occur when space debris is attracted to earth by gravity and vaporizes by air friction producing a white-hot streak. These can be seen on any night of the year, but there are times during the year when you can expect to see more.

Meteor showers happen when the earth's path around the sun intersects the path of a comet, which contains its debris.

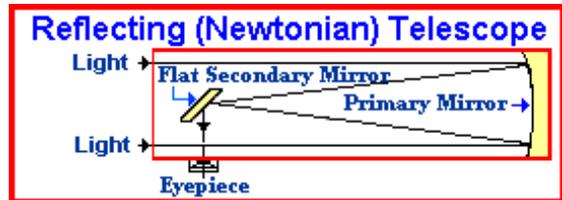
There are many meteor showers during the year, but some of the major ones are:

Meteor Shower	Dates Visible	Date of Maximum
Quadrantids	Dec 28 – Jan 7	Jan 3-4
Lyrids	Apr 16-25	Apr 21-22
Eta Aquarids	Apr 21 – May 12	May 5
Perseids	Aug. 8-15	Aug. 12
Leonids	Nov. 17-18	Nov. 18
Geminids	Dec. 12-14)	Night of Dec.12/13

They are named after the constellation from which they appear, Perseids from the constellations of Perseus, Leonids from Leo. and so on.

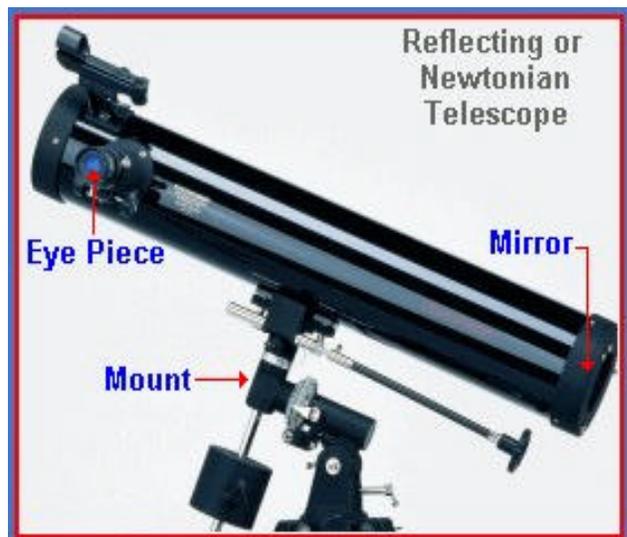
Telescopes, Part 2 – The Reflector

The reflecting or Newtonian telescope uses a concave parabolic primary mirror to collect and focus incoming light onto a flat secondary (diagonal) mirror, which in turn reflects the image into the eyepiece located on the side of the telescope tube. This type of telescope is usually closed at the primary mirror end and open at the other end.



It is measured by its primary mirror's diameter, so that a telescope whose primary mirror is 6" in diameter is called a 6" reflector.

The reflecting telescope is cheaper per square inch than the refracting telescope, is excellent for lunar and planetary observation, and can be used for deep sky photography.



Unlike refracting telescopes, reflecting telescopes are not well suited to terrestrial observation.

2001 – 2002 Planetarium Shows

<p>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.</p>	<p>'Tis The Season – 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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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

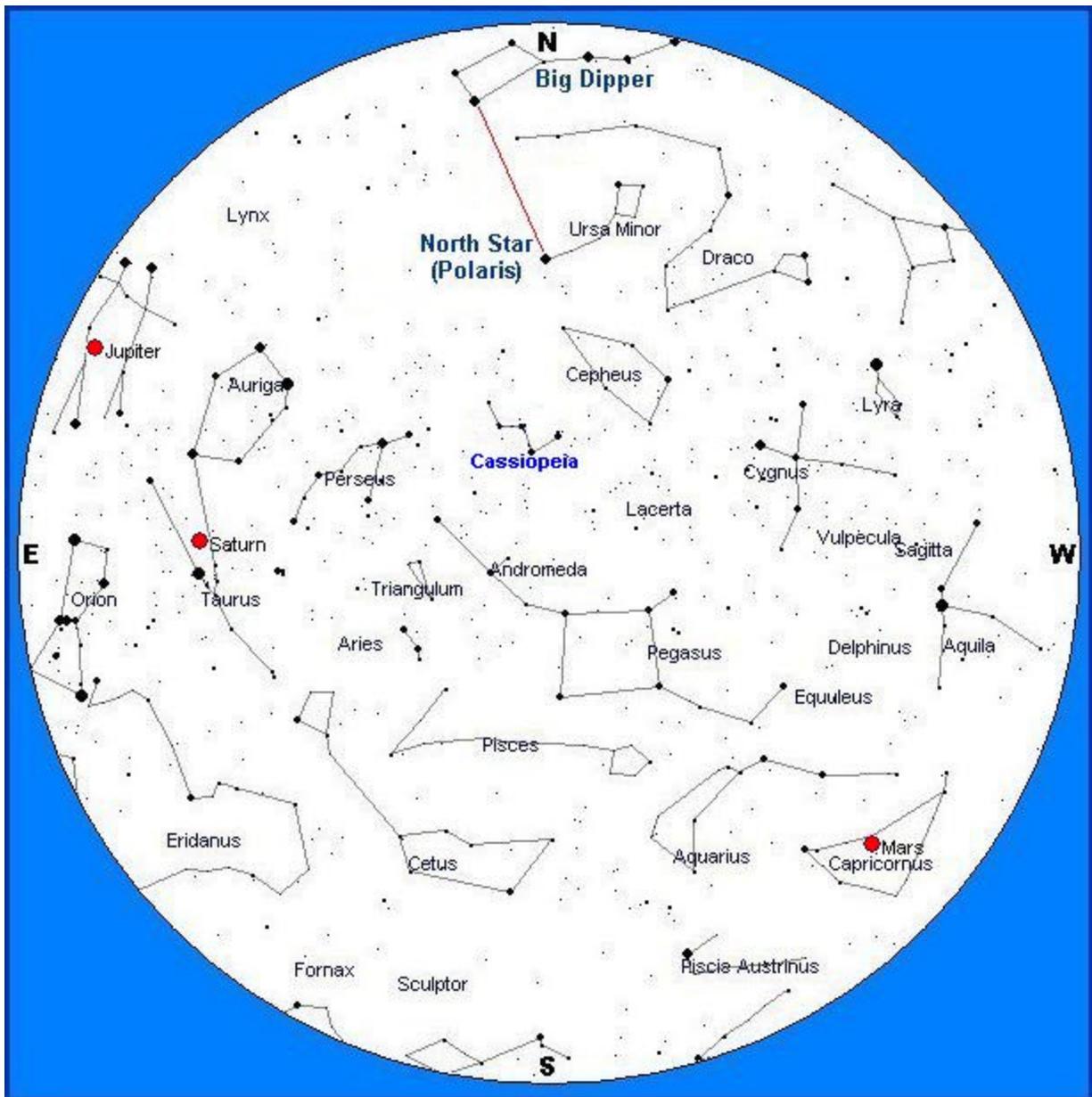
For those who are interested in bringing a group, such as schools or scouts, during the day, please call for more information. These shows are usually given on Tuesday or Thursday mornings.

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

Selected Sunrise/Sunset and Moon Rise/Moon Set Times

Date	Sunrise	Sunset	Moon Rise	Moon Set	Moon Phase
Nov 1	6:48 A.M.	5:18 P.M.	5:53 P.M.	6:59 A.M.	Full (Beaver) Moon
Nov 8	6:56 A.M.	5:10 P.M.	-----	1:47 P.M.	Waning Crescent
Nov 15	7:04 A.M.	5:04 P.M.	7:18 A.M.	5:37 P.M.	New Moon
Nov 22	7:12 A.M.	5:00 P.M.	1:18 P.M.	1156 P.M.	1 st Quarter
Nov 30	7:21 A.M.	4:56 P.M.	5:02 P.M.	6:56 A.M.	Full (Blue) Moon

November 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.



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

