WEST VIRGINIA UNIVERSITY
EBERLY COLLEGE OF ARTS AND SCIENCES
THE DEPARTMENT OF PHYSICS
TOMCHIN PLANETARIUM AND OBSERVATORY

Mountaineer Skies

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Editors Desk

Again it is time to reset your clocks as Daylight Saving Time (DST) ends at 2 A.M. on the last Sunday of this month, that is on October 26, 2003. You set your clocks back one hour.

Daylight Saving Time begins at 2 A.M. on the first Sunday of April and ends at 2 A.M. on the last Sunday of October when we return to Standard Time (Eastern Standard Time).

This is also a good time to change the battery in your smoke detectors as well.

On October 01, NASA will be 45 years old. It became active on October 1, 1958 as a direct response to the Soviet Union's launch of Sputnik 1 on October 4, 1957. The space race was on.

The Orionids Meteor shower, which will come from the direction of the constellation Orion, The Hunter, will be at its maximum on the evening of October 21st. You can expect up to 20 – 30 per hour.

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In The Sky This Month

Visible Planets in the Night Sky

Beginning of October, 2003

	Const	Rise	Transit	Set	Mag
Sun		7:13	13:10	19:06	- 26.8
Mercury	Leo	5:51	12:11	18:34	- 0.9
Venus	Vir	8:14	13:55	19:38	- 3.9
Mars	Aqr	17:42	22:54	4:06	- 2.1
Jupiter	Leo	4:37	11;15	17:56	- 1.8
Saturn	Gem	0:07	7:32	15:00	2.3

Middle of October, 2003

	Const	Rise	Transit	Set	Mag
Sun		7:27	13:06	18:44	- 26.8
Mercury	Vir	6:55	12:42	18:34	- 1.2
Venus	Lib	8:47	14:05	19:25	- 3.9
Mars	Aqr	16:47	22:06	3:24	- 1.6
Jupiter	Leo	3:56	10:30	17:07	- 1.8
Saturn	Gem	23:14	6:39	14:07	2.2

End of October, 2003

	Const	Rise	Transit	Set	Mag
Sun		6:45	12:03	17:23	- 26.8
Mercury	Lib	7:09	12:19	17:32	- 1.0
Venus	Lib	8:26	13:21	18:19	- 3.9
Mars	Aqr	14:51	20:20	1:49	- 1.2
Jupiter	Leo	2:07	8:38	15:11	- 1.9
Saturn	Gem	21:12	4:36	12:04	2.1

Leo	The Lion
Vir	Virgo, the Maiden
Aqr	Aquarius, The Water Bearer
Gem	Gemini, The Twins
Lib	Libra, The Scales

About: Martian Meteorites

A meteorite is a small particle of interplanetary material, usually made of iron, stony-iron, or stone, that survives the trip through our atmosphere and makes it to the ground.

So far over 20,000 meteorites have been found on Earth. Of those, only 28 have been identified as coming from Mars. To date, Martian meteorites have been found in France, India, Egypt, the United States, Brazil, Nigeria, Antarctica, Libya, Oman, Morocco, and Algeria.

How do we know that they come from Mars instead of Venus or even mother Earth? They do not look much different than any other rock.

Martian Meteorite

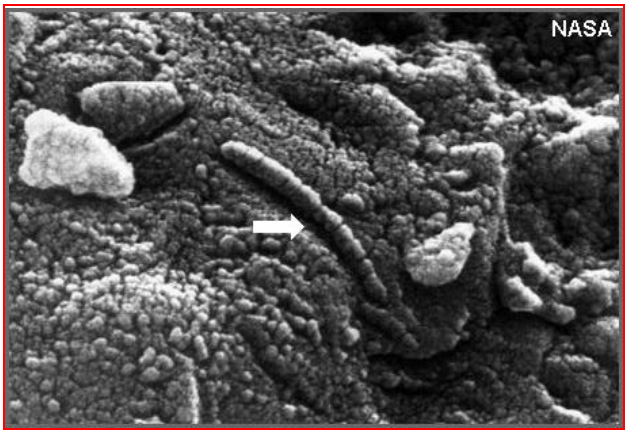
Very few, if any, rocks are completely solid. They have tiny bubbles of gas imbedded within them. When an analysis was done of the gases found in these meteors, there was considerable surprise when the gases did not match atmospheric gases on Earth, but rather they were composed of the same gases and in the same proportion as have been found on Mars. Hence the assumption was made, and almost certainly correctly, that these meteorites came from Mars. This, of course, begs the question "How did these fragments from Mars get to Earth?"

Mars, like all of the planets, including Earth, has been bombarded by various interplanetary materials since the solar system was born. Most were very small, but a few were much larger. It is thought that an asteroid size body hit the planet Mars, and in doing so, a lot of debris was thrown up, high into Mars' thin atmosphere. Some were thought to have been thrown so high that they escaped the Martian gravitational pull and drifted into interplanetary space. Eventually, a few got close enough to Earth to be pulled by our gravitational field into our atmosphere, and fewer still were able to stand the journey through our atmosphere without completely burning up or melting. This is how we think they got here.

Life on Mars?

Long has been the debate about whether life even existed on Mars, and if it had, would we be able to identify its remains?

An electron microscope of particularly high resolution took this photograph of the Mars meteorite ALH8400. The white arrow points toward a cylindrical object that might be the fossil remains of a very small Martian inhabitant.



While compelling, it is not definitive. Hopefully, we will know a lot more after January 2004 when we should start receiving new information about the red planet from the space craft or rovers then in residence there.

2003 – 2004 Planetarium Shows

October 10 & 24, 2003 Midnight's Canvas	November 14 & 21, 2003 Midnight's Canvas	December 5, 12, & 19, 2003 'tis The Season
January 9 & 23, 2004 Midnight's Canvas	February 13 & 27, 2004 Midnight's Canvas	March 12 & 26, 2004 Midnight's Canvas
April 9 & 23, 2004 Midnight's Canvas	May 14 & 28, 2004 Midnight's Canvas	June 11, 2004 Midnight's Canvas
	July, 2004 Closed	

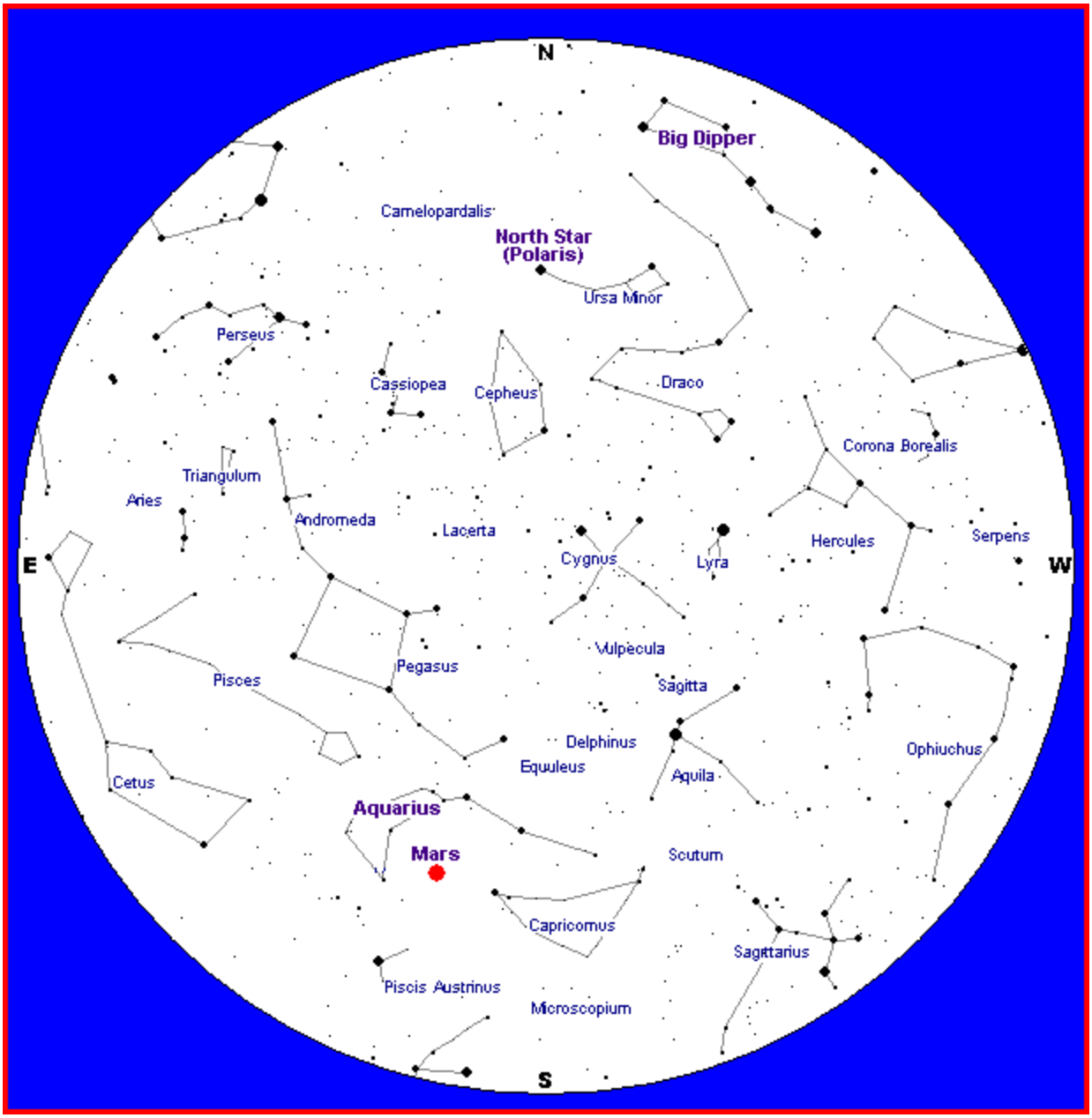
For those who are interested in bringing a group, such as schools or scouts, during the day, please call for more information. These shows are usually given on Tuesday or Thursday mornings.

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
Oct 2	7:15 A.M.	7:02 P.M.	2:56 P.M.	11:57 P.M.	First Qtr
Oct 10	7:23 A.M.	6:49 P.M.	7:14 P.M.	7:33 A.M.	Full Moon
Oct 18	7:31 A.M.	6:37 P.M.	None	3:09 P.M.	Last Qtr
Oct 25	7:39 A.M.	6:28 P.M.	7:38 A.M.	6:43 P.M.	New Moon
Oct 31	6:45 A.M.	5:20 P.M.	1:35 P.M.	11:03 P.M.	First Qtr

October 2003 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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