

Mountaineer Skies

Volume 2, Issue 11

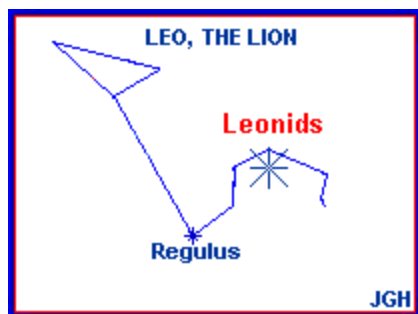
<http://www.as.wvu.edu/~planet/index.html>

November 2002

From the Editor's Desk

The **Leonid Meteor Shower**, associated with Comet Tempel-Tuttle and named for the constellation **Leo, the Lion**, the location in the sky where the meteors appear to originate, is due in the middle of November and predictions are that **this may well be a particularly impressive display.**

The shower dates are from November 15 through November 20, with an estimated maximum on November 17 at 8:00 P.M. On that night up to 60 per hour may be expected, perhaps more.



In The Sky This Month

Saturn is visible high in the eastern sky in the middle of the month by 8:00 P.M. and is fairly bright.

Also in midmonth, **Jupiter**, even brighter than Saturn, is visible in the east before midnight.

Visible Planets in the Night Sky

Beginning of November

| | Const | Rise | Transit | Set | Mag |
|---------|-------|-------|---------|-------|--------|
| Sun | | 6:46 | 12:03 | 17:21 | - 26.8 |
| Mercury | Vir | 6:08 | 11:37 | 17:05 | - 1.1 |
| Mars | Vir | 4:23 | 10:17 | 16:13 | 1.8 |
| Jupiter | Cnc | 23:48 | 6:50 | 13:56 | - 2.2 |
| Saturn | Ori | 20:04 | 3:28 | 10:53 | 2.1 |

Middle of November

| | Const | Rise | Transit | Set | Mag |
|---------|-------|-------|---------|-------|--------|
| Sun | | 7:02 | 12:04 | 17:08 | - 26.8 |
| Venus | Vir | 5:09 | 10:29 | 15:52 | - 4.5 |
| Mars | Vir | 4:12 | 9:55 | 15:39 | 1.8 |
| Jupiter | Cnc | 22:58 | 5:59 | 13:04 | - 2.2 |
| Saturn | Ori | 19:06 | 2:30 | 9:54 | 2.0 |

End of November

| | Const | Rise | Transit | Set | Mag |
|---------|-------|-------|---------|-------|--------|
| Sun | | 7:18 | 12:08 | 17:00 | - 26.8 |
| Venus | Vir | 4:11 | 9:40 | 15:11 | - 4.7 |
| Mars | Vir | 4:01 | 9:32 | 15:04 | 1.7 |
| Jupiter | Leo | 22:02 | 5:02 | 12:07 | - 2.3 |
| Saturn | Tau | 18:03 | 1:27 | 8:51 | 1.9 |

| | |
|-----|-------------------|
| Tau | Taurus, The Bull |
| Leo | Leo, The Lion |
| Cnc | Cancer, The Crab |
| Ori | Orion, The Hunter |
| Vir | Virgo, The Maiden |

INSIDE THIS ISSUE

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About: Ramadan

Starting at sunset on November 5, Moslems around the world will be looking for the new crescent moon to return to the evening sky. Its sighting ushers in the Holy Month of Ramadan, the ninth month of the Islamic year.

But since the Moon will be so close to the horizon and will set so soon after sunset, the Moon's sighting on this date is by no means assured. If it isn't seen this evening, the start of Ramadan will wait till the crescent moon is first seen on the evening of November 6. Ramadan, the month of fasting from sunrise to sunset, lasts until the appearance of the next new crescent moon.

The month of Ramadan can start on different dates, depending upon your geographical location. On November 5, you're much more likely to see the whisker-thin crescent moon in South America than in the United States or Canada. In Bolivia, for instance, the Moon at sunset stands twice as high as it does here in Morgantown, West Virginia; and furthermore, it stays out considerably longer before setting. So Ramadan might very well start on the evening of November 5 for Moslems in South America, but not till November 6 for their counterparts in the United States or Canada.

The Islamic calendar is strictly lunar. The lunar month represents the time between successive new crescent moons: twenty-nine to thirty days. The lunar year, consisting of twelve lunar months, totals 354 or 355 days. That's roughly eleven days shorter than the SEASONAL year on which our Gregorian calendar is based.

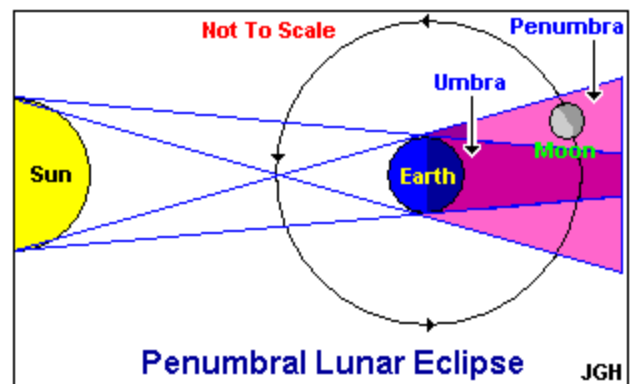
Because of this difference between lunar and seasonal reckoning, the date of Ramadan comes about eleven days earlier every year. Not a fixture of any particular season, Ramadan backtracks through all twelve calendar months in cycles of thirty-three years.

Bruce McClure

<http://www.idialstars.com/>

Penumbral Lunar Eclipse of November 19

A **penumbral eclipse**, unlike a partial or total, is a subtle event and occurs when the Moon passes through Earth's penumbral shadow. About the only change you will be able to see will be a dimming of the Moon's upper left side.



| | | |
|----------------------|-------------|-------------|
| Moonrise | November 19 | 16:58 EST |
| Moon enters penumbra | November 19 | 18:32 EST |
| Middle of eclipse | November 19 | 20:46.5 EST |
| Moon leaves penumbra | November 19 | 23:01.1 EST |
| Moonset | November 20 | 07:38 EST |

(Data for Morgantown from the US Naval Observatory)

2002 – 2003 Planetarium Shows



Narrated by Patrick Stewart

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

Coming in November



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

THIS IS OUR MOST POPULAR SHOW.

| | | |
|---|--|---|
| NOVEMBER 8 & 15, 2002 <i>'TIS THE SEASON</i> | DECEMBER 13 & 20, 2002 <i>'TIS THE SEASON</i> | JANUARY 10 & 24, 2003 <i>MarsQuest</i> |
| FEBRUARY 14 & 28, 2003 <i>MarsQuest</i> | MARCH 14 & 28, 2003 <i>MarsQuest</i> | APRIL 11 & 25, 2003 <i>MarsQuest</i> |
| MAY 9 & 23, 2003 <i>MarsQuest</i> | JUNE 13, 2003 <i>MarsQuest</i> | July, 2003 <i>Closed</i> |

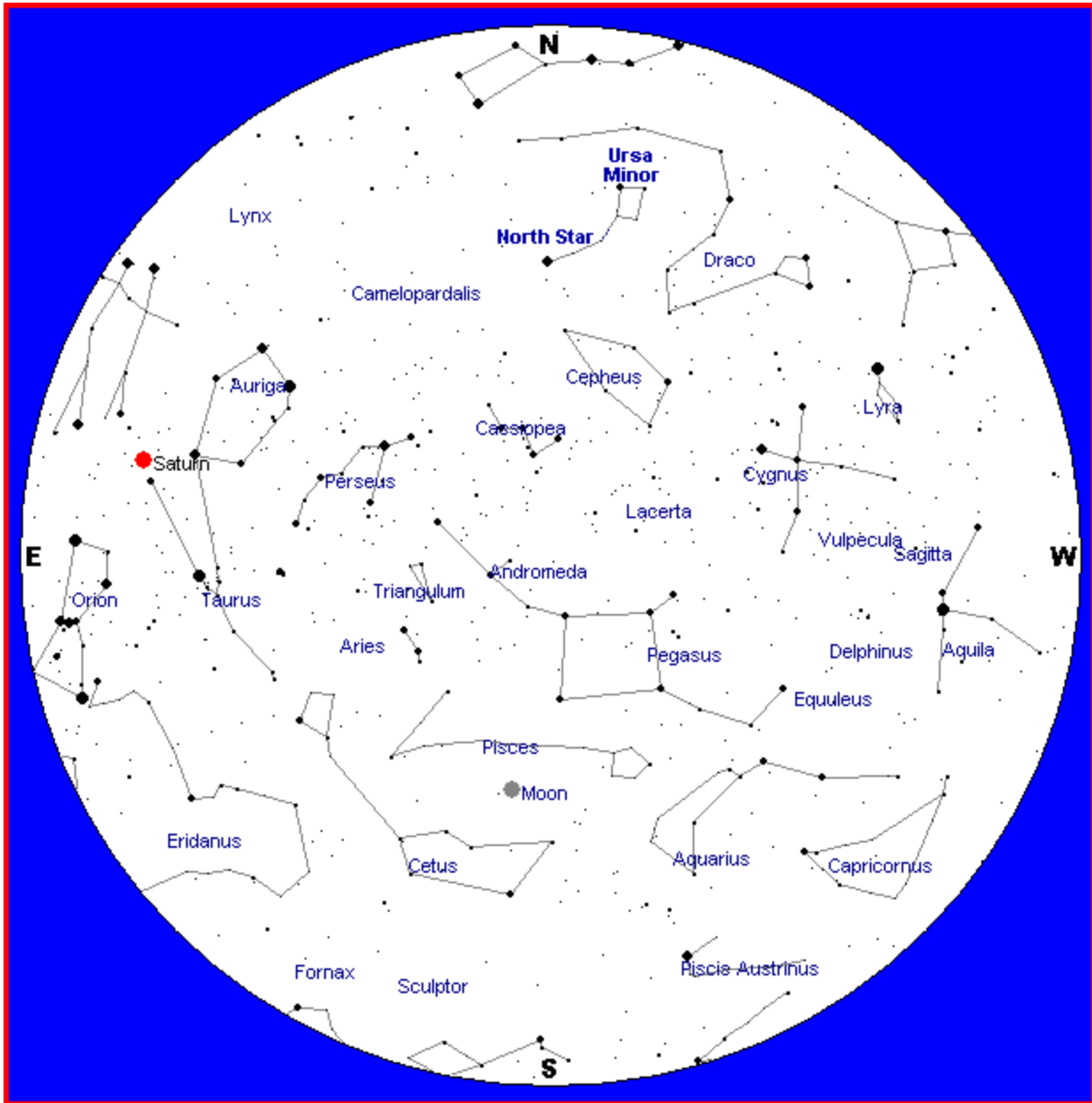
For those who are interested in bringing a group, such as schools or scouts, during the day, please call for more information. These shows are usually given on Tuesday or Thursday mornings.

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 |
|--------|-----------|-----------|-----------|------------|------------|
| Nov 4 | 6:50 A.M. | 5:15 P.M. | 6:23 A.M. | 5:22 P.M. | New Moon |
| Nov 11 | 6:58 A.M. | 5:08 P.M. | 1:37 P.M. | 11:40 P.M. | First Qtr |
| Nov 19 | 7:07 A.M. | 5:02 P.M. | 4:57 P.M. | 6:36 A.M. | Full Moon |
| Nov 27 | 7:16 A.M. | 4:57 P.M. | NA | 1:21 P.M. | Last Qtr |

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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