

Mountaineer Skies

From the Editor's Desk

The **winter solstice**, the first day of winter, this year is on December 22. This is also the shortest day of the year and the day when the sun is lowest in the southern sky at noon.

Perhaps this season can be best summed up by quoting Dr. Martin Luther King, Jr, "**Life's most persistent and urgent question is: What are you doing for others?**"



Have a
happy
Holiday



And a
joyous
New
Year

And finally, I want to take this opportunity to thank all our planetarium donors for your generosity, large or small. It is sincerely appreciated and will only be used to improve the quality of our shows.

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In The Sky This Month

Visible Planets in the Night Sky

Beginning of December, 2003

	Const	Rise	Transit	Set	Mag
Sun		7:18	12:09	17:00	- 26.8
Mercury	Sgr	9:01	13:32	18:05	- 0.5
Venus	Sgr	9:28	14:05	18:43	- 3.9
Mars	Aqr	13:17	19:09	1:02	- 0.4
Jupiter	Leo	0:26	6:51	13:20	- 2.1
Saturn	Gem	19:04	2:29	9:54	2.0

Middle of December, 2003

	Const	Rise	Transit	Set	Mag
Sun		7:30	12:15	17:00	- 26.8
Mercury	Sgr	8:53	13:37	18:18	0.1
Venus	Sgr	9:42	14:25	19:10	- 4.0
Mars	Psc	12:38	18:42	0:47	- 0.1
Jupiter	Leo	23:36	6:00	12:28	- 2.1
Saturn	Gem	18:04	1:30	8:55	1.9

End of December, 2003

	Const	Rise	Transit	Set	Mag
Sun		7:37	12:23	17:09	- 26.8
Mercury	Sgr	6:35	11:30	16:31	2.0
Venus	Cap	9:43	14:45	19:47	- 4.0
Mars	Psc	11:53	18:13	0:32	0.2
Jupiter	Leo	22:36	4:59	11:23	- 2.2
Saturn	Gem	16:55	0:21	7:47	1.8

Sgr	Sagittarius, The Archer
Aqr	Aquarius, The Water Bearer
Leo	Leo, The Lion
Gem	Gemini, The Twins
Psc	Pisces, The Fishes
Cap	Capricornus, The (Sea) Goat

About: (mostly) Free Astronomy Software and Useful Astronomy Sites

Planetarium programs need to know where on the Earth the user is located in order to display the night sky correctly for that location. Morgantown is located at:

Longitude = 79° 57' 22" W (-79.9533°)
Latitude = 39° 38' 04" N (+39.6317°)

I. The first four programs can be found at ZDNET.COM

- A. Go to ZDNET.COM
- B. Select Downloads from the top of the page
- C. Enter **Astronomy** in the search window.
- D. Scan down the page until the program you want is found.

1. **WinStars** excellent free planetarium program.
2. **Sidereal Clock 1.0**
Real time sidereal clock for your desktop
3. **Adastra Freestar 4.0**
Another good planetarium program.
4. **Starry Night Backyard ESD 3.1.2**
Excellent, maybe the best planetarium software available. Free to try, \$35 to buy. Try it. I gave this to my daughter for her birthday. There are several other levels for purchase, up to \$180 for Starry Night Pro.

II. The next are from **Sky and Telescopes' Internet Links to Public Domain, Freeware, and Shareware Astronomy Programs**. They are located at

http://skyandtelescope.com/resources/software/article_329_1.asp

1. **Planets' Orbits v1.6**
<http://www.alcyone.de/POrbits/english/>

Digital orrery that is said to be accurate for dates between 2000 B.C. and 6000 AD, includes all planets except Pluto

2. **AstroPlanner**

<http://www.ilangainc.com/astroplanner/index.html>

This software application is for both Macintosh and Windows computers. It facilitates astronomical visual observation planning and logging as well as control of various popular telescopes

III. Some Useful Sites

1. **Custom Sunrise Sunset Calendar**

<http://www.sunrisesunset.com/usa/>

You can get a custom sunrise/sunset calendar for any month and year for most of the world and all of the USA. It knows Morgantown. Also includes, by user's choice, Civil Twilight, Nautical Twilight, Astronomical Twilight, moon phases, moon rise, moon set and can be displayed in 12 or 24 hour time. Knows when standard time or daylight saving time is in effect. Can be printed.

2. **Sky and Telescope's Interactive Sky Chart**

<http://skyandtelescope.com/>

Scan down the home page until you see the Interactive Sky Chart. Select **Change Location** and enter the requested information and press **SUBMIT**. Use **Eastern Time** as the time zone and select **SUBMIT**. You should now see the sky chart now. It is printable.

For help in using the sky chart, go to
http://skyandtelescope.com/help/article_202_1.asp

3. **SkyMaps** (monthly)

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

You will need **Adobe Acrobat Reader** to view and print the chart. It is free and can be found at

<http://www.adobe.com/products/acrobat/readstep2.html>

These are superior, free, printable sky charts. You first download it and then you can print it. To find the current month,

A. Scan down the home page (skymaps.com) until you see **Download Now**. Select it. Scan down this second page until you find the month you seek.

B. Either left click on the month, to display and print or right click, select **Save Link as** and download it. The file will be saved as **PDF**.

2003 – 2004 Planetarium Shows



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	

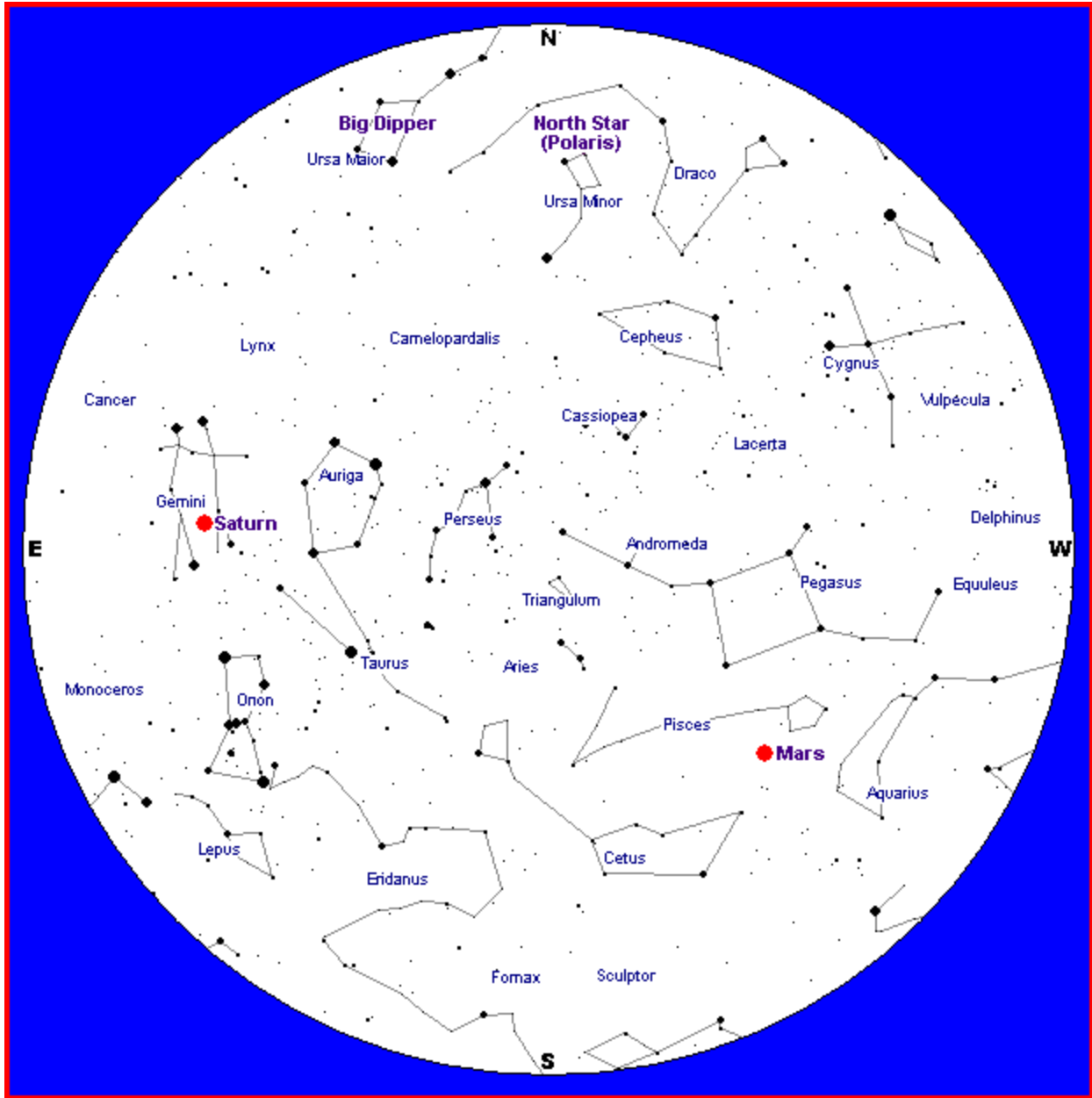
For those who are interested in bringing a group, such as schools or scouts, during the day, please call for more information. These shows are usually given on Tuesday or Thursday mornings.

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
Dec 8	7:26 A.M.	4:55 P.M.	4:42 P.M.	7:21 A.M.	Full Moon
Dec 16	7:33 A.M.	4:56 P.M.	None	12:45 P.M.	Last Qtr
Dec 23	7:37 A.M.	4:59 P.M.	8:08 A.M.	5:10 P.M.	New Moon
Dec 30	7:39 A.M.	5:03 P.M.	12:29 P.M.	12:10 A.M.	First Qtr

December 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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