

Mountaineer Skies

Volume 13, Issue 1

<http://planetarium.wvu.edu/>

Jan - Mar, 2013

Events of the Quarter

On the night of **January 3/4**, the **Quadrantids Meteor Shower** will reach its peak of up to 40 incidences per hour. It will be best viewed between 2:00 A.M. and 3:00 A.M. on the morning of January 4 looking toward the head of the constellation **Bootes** in the ENE.

Perihelion will occur on **January 2**. This is when the earth is closest to the Sun. **Aphelion**, when the Earth is farthest from the Sun, will happen six months later on **July 5**.

February 8 will be the 185th birthday of **Jules Verne**, perhaps the greatest science fiction writer and visionary of them all.

This year the **Vernal Equinox** or first day of spring, begins on **March 20**. Next comes the first day of summer, the **Summer Solstice**, on **June 21**, the longest day of the year. On **September 22**, the **Autumnal Equinox**, or the first day of autumn, begins. And lastly, the shortest day of the year, the **Winter Solstice**, occurs just four days before Christmas on **December 21**.

In The Sky This Quarter

(All times are local.)

Visible Planets in the Night Sky

Beginning of January, 2013

	Const	Rise	Transit	Set	Mag
Sun		07:41	12:24	17:07	-26.8
Mercury	Sgr	07:08	11:44	16:17	-0.7
Venus	Oph	06:11	10:55	15:37	-3.9
Mars	Cap	09:11	14:05	18:58	1.2
Jupiter	Tau	14:40	21:56	05:12	-2.7
Saturn	Lib	02:43	08:03	13:26	0.6

Beginning of February, 2013

	Const	Rise	Transit	Set	Mag
Sun		07:26	12:33	17:40	-26.8
Mercury	Cap	08:06	13:16	18:28	-1.1
Venus	Cap	06:49	11:40	16:29	-3.9
Mars	Aqr	08:18	13:40	19:01	1.2
Jupiter	Tau	12:33	19:49	03:04	-2.6
Saturn	Lib	00:49	06:07	11:26	0.5

Beginning of March, 2013

	Const	Rise	Transit	Set	Mag
Sun		06:51	12:32	18:12	-26.8
Mercury	Psc	06:45	12:47	18:42	3.8
Venus	Aqr	06:43	12:09	17:35	-3.9
Mars	Aqr	07:21	13:12	19:02	1.2
Jupiter	Tau	10:44	18:05	01:22	-2.3
Saturn	Lib	22:59	04:18	09:36	0.4

Oph	Ophiuchus, The Serpent Holder
Lib	Libra, The Scales
Sgr	Sagittarius, The Archer
Tau	Taurus, The Bull
Cap	Capricornus, The Goat
Aqr	Aquarius, The Water Bearer
Psc	Pisces, The Fishes

INSIDE THIS ISSUE

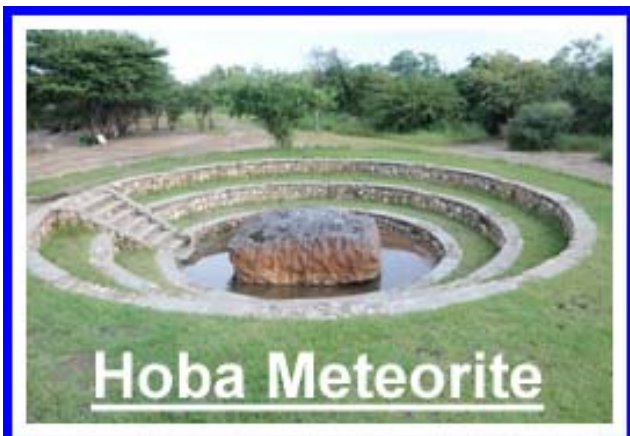
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About: Meteorites, Part 1 of 2

(All photos from Wikipedia with permission.)

One peaceful, full moon lit night, just before the middle of August 2011, during the annual Perseid meteor shower, **Mike Gibson** of Sacramento, CA, had something odd and surprising happen to his house. Soon after retiring for the night, he was suddenly awakened by a very loud boom that seemed to come from somewhere quite close. Being unsure of what had caused such a thunderous noise, he ran outside to see what he could see. There he discovered a large and unwelcomed divot of about 5 feet square and several inches deep in his shingled roof. The only thing that he could imagine that could make such a depression (and impression) on his roof was a meteorite. Wanting to make sure that this was indeed the guilty party, he, with his son's help, searched about his yard and finally found the offending object among his flowers. It was very dark in color and about the size of a fifty cent piece, though weighing much more. After the item was magnetically tested at a local college, it was confirmed that the object was an iron based meteorite that had hit Mike's house going faster than a speeding bullet. Fortunately, the only thing that was hurt was his roof and probably his bank account. I mean, who has meteorite collision insurance?

Millions of meteorites impact the Earth each day. Most are microscopic, a few are the size of BBs, and fewer still are even larger. The largest **intact** meteorite ever found is located in Namibia, Africa, and is called the **Hoba Meteorite**. It weighs a massive 66 tons which, perhaps, is why it has never been moved. It is thought to have impacted the Earth some 80,000 years ago and was discovered by the owner of the land upon which the meteor rests while plowing his field. It is made up of about 85% iron and 15% nickel.



Meteorites are classified by their constituent parts. There are three basic types, **iron meteorites**, **stony meteorites**, and **stony-iron meteorites**.

Iron meteorites are made up primarily of iron (90 – 95%) as you would expect from the name. This is the type that hit Mike Gibson's house and is the prime constituent of the **Hoba Meteorite**.



Stony meteorites or **Chondrites** are essentially rocks with very little iron but up to 10% nickel making them somewhat magnetic.



Stony-iron meteorites are the rarest of them all and, of course, are made up of both stone and iron which will attract a strong magnet.

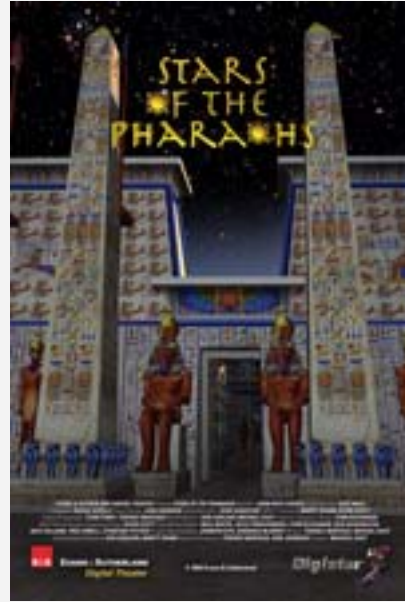
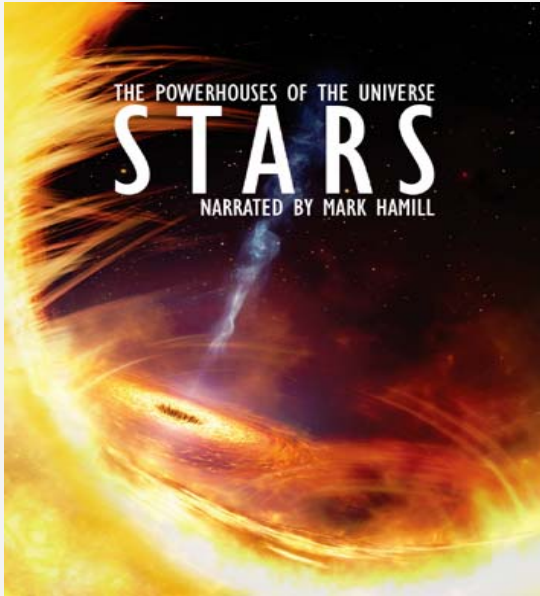


Lunar Meteorites or **lunaites** come from the moon because we know their composition is the same as the rocks brought back from the moon by the astronauts.

There are also **Martian meteorites** from the red planet. These, as you would expect, are very rare. The only way that Mars' atmosphere could have become trapped in a meteorite is if it came from Mars.

Next quarter: **How to prospect for meteorites.**

2013 Planetarium Shows



Jan 11 & 25 7:00 P.M. STARS 8:00 P.M. Stars of the Pharaohs	Feb 8 & 22 7:00 P.M. STARS 8:00 P.M. Stars of the Pharaohs	Mar 8 & 22 7:00 P.M. STARS 8:00 P.M. Stars of the Pharaohs
Apr 12 & 26 8:00 P.M. STARS 9:00 P.M. Stars of the Pharaohs	May 10 & 24 8:00 P.M. STARS 9:00 P.M. Stars of the Pharaohs	Jun 14 8:00 P.M. STARS 9:00 P.M. Stars of the Pharaohs

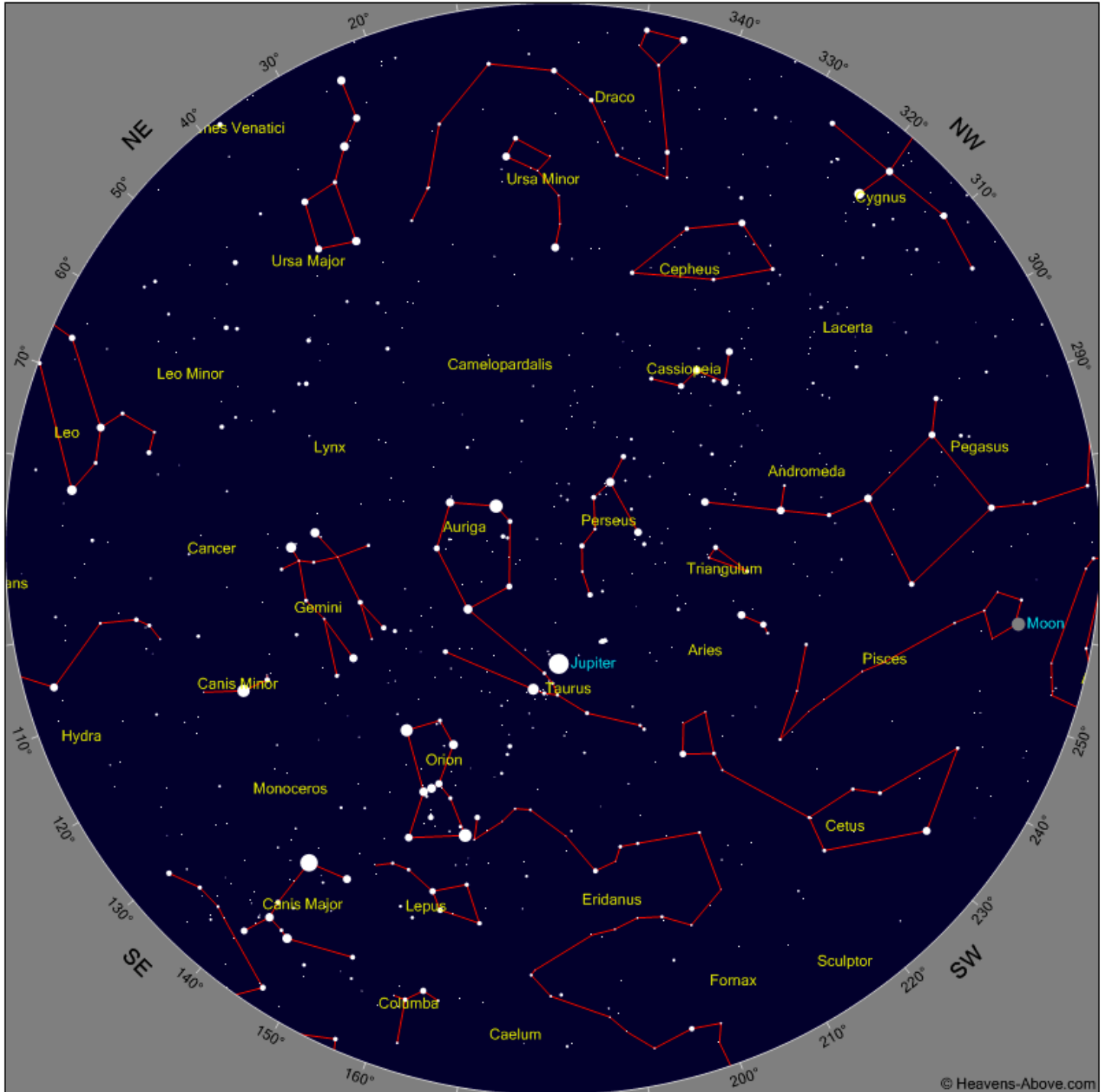
For those who are interested in bringing a group, such as schools or scouts, during the day, please call for more information. These shows are usually given on Tuesday or Thursday mornings.

For further information or reservations, please call John Hopkins at (304)293-4961 or by email at: jghopkins@mail.wvu.edu.

Selected Sunrise/Sunset and Moon Rise/Moon Set Times

Date	Sunrise	Sunset	Moon Rise	Moon Set	Moon Phase
Jan 4	7:41 A.M.	5:08 P.M.	NA	11:25 A.M.	Last Qtr
Jan 11	7:40 A.M.	5:15 P.M.	7:12 A.M.	5:32 P.M.	New Moon
Jan 18	7:38 A.M.	5:23 P.M.	11:17 A.M.	12:11 A.M.	First Qtr
Jan 26	7:33 A.M.	5:32 P.M.	5:57 P.M.	6:50 A.M.	Full Moon
Feb 3	7:26 A.M.	5:41 P.M.	12:52 P.M.	11:19 A.M.	Last Qtr
Feb 10	7:18 A.M.	5:50 P.M.	7:07 A.M.	6:40 P.M.	New Moon
Feb 17	7:10 A.M.	5:58 P.M.	11:03 A.M.	12:52 A.M.	First Qtr
Feb 25	6:59 A.M.	6:07 P.M.	6:20 P.M.	6:28 A.M.	Full Moon
Mar 4	6:49 A.M.	6:14 P.M.	12:55 A.M.	10:57 A.M.	Last Qtr
Mar 11	7:38 A.M.	7:22 P.M.	7:11 A.M.	7:34 P.M.	New Moon
Mar 19	7:25 A.M.	7:30 P.M.	12:15 P.M.	2:16 A.M.	First Qtr
Mar 27	7:12 A.M.	7:38 P.M.	8:21 P.M.	7:02 A.M.	Full Moon

January 2013 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



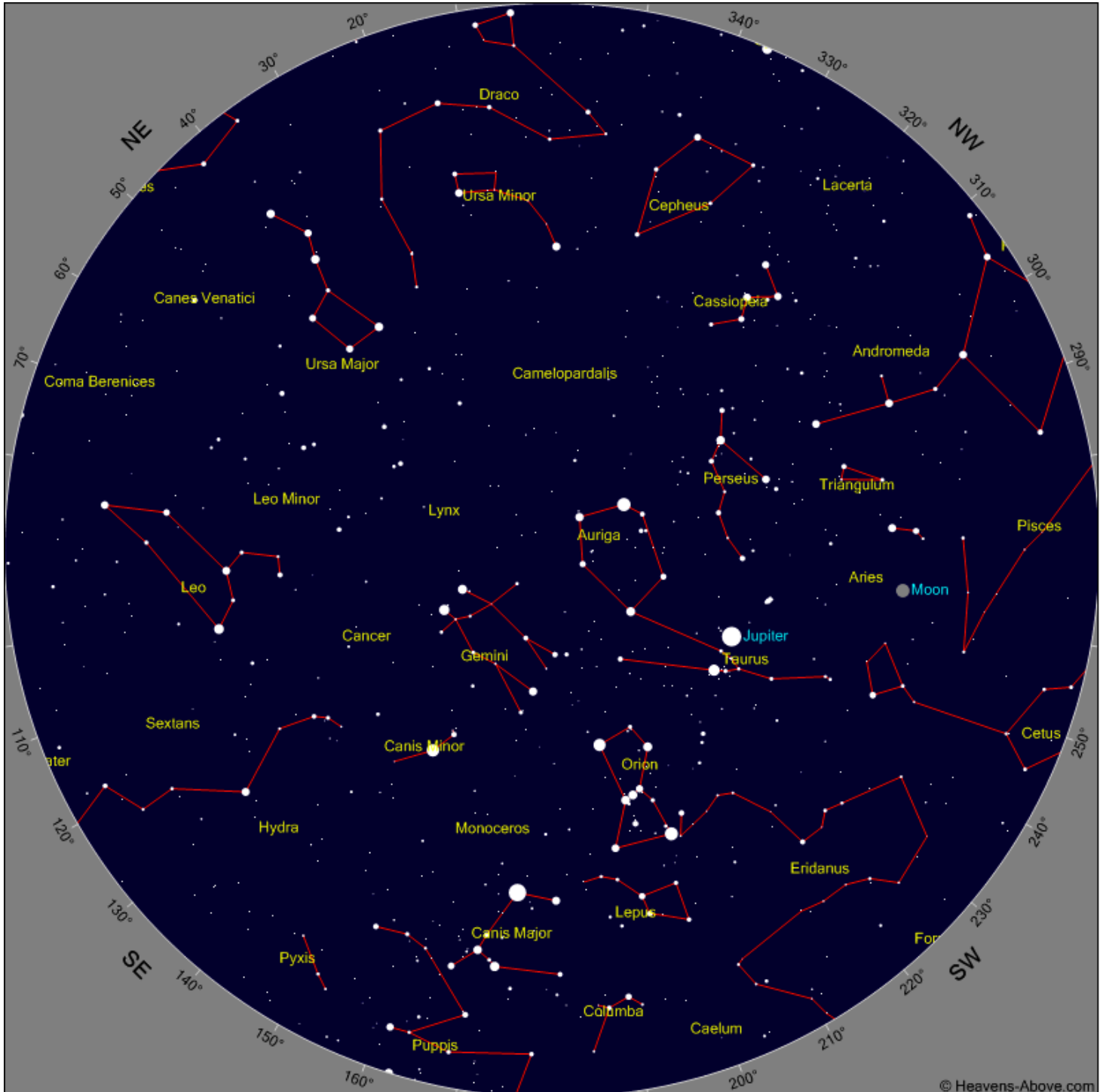
*Sky Chart used with the kind permission of [Heavens-Above](http://www.heavens-above.com/) at <http://www.heavens-above.com/>
 Contributions can be made in support of the planetarium through the [WVU Planetarium Project](#) at the [WVU Foundation, Inc.](#), phone (304)284-4000. Thank You.



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February 2013 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



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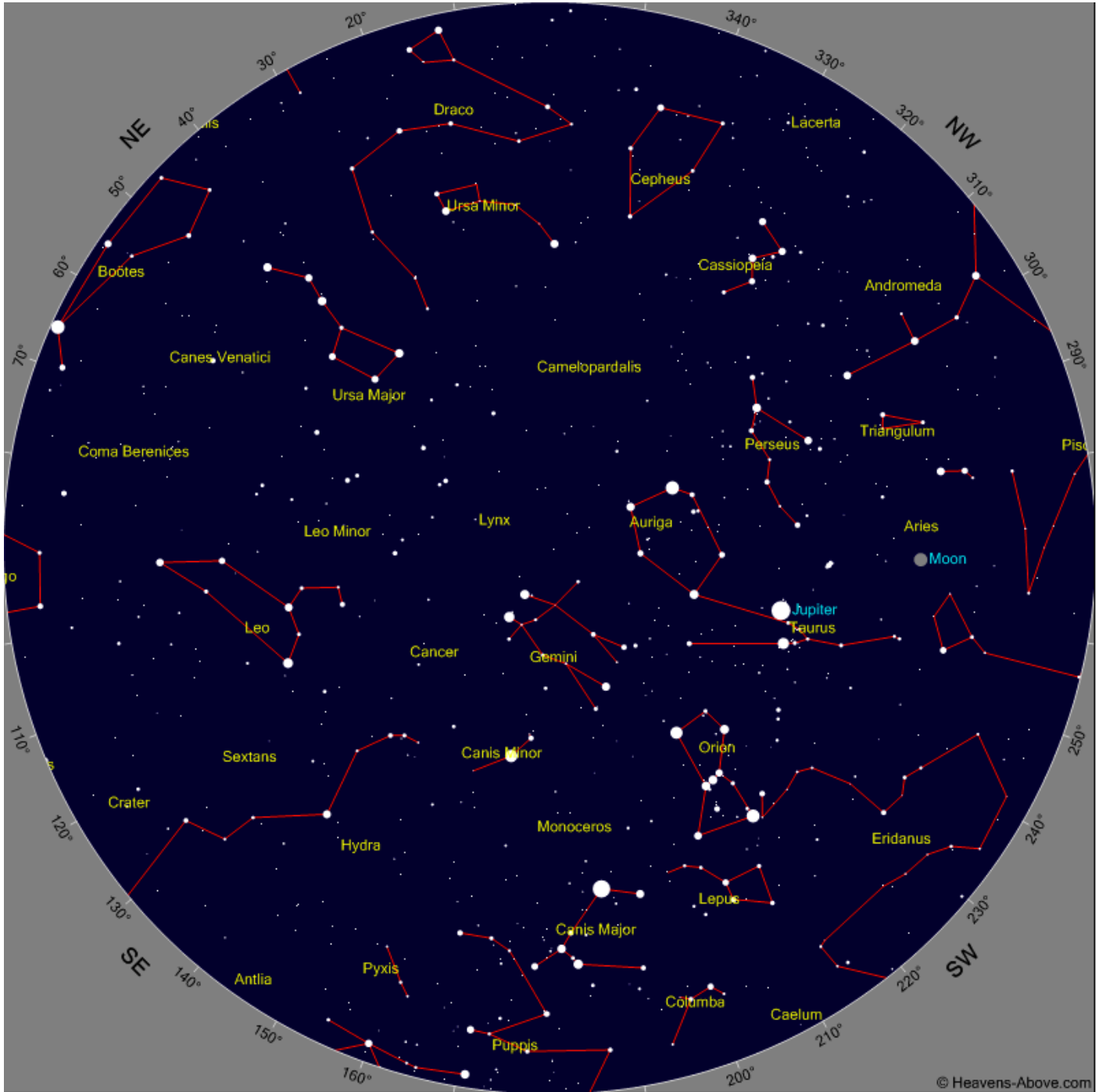
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March 2013 Sky Chart* for:
10:00 P.M at the beginning of the month
9:00 P.M in the middle of the month
8:00 P.M at the end of the month



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