

Mountaineer Skies

Volume 13, Issue 2

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

April – June, 2013

There is a **possibility** of a spectacular comet apparition toward the end of November, 2013. **Comet ISON** is projected to pass about one million kilometers from the Sun on **November 28**, Thanksgiving Day. Should the comet survive this event mostly intact, it could possibly become as bright as the Moon, perhaps even bright enough to be seen during the day. (**Note:** Please remember that it is notoriously difficult to predict the exact visual magnitude of a comet this far ahead.) **This is just to alert you.**

The **Lyrids meteor shower** should peak during the night of **April 21/22** when as many as 10 incidences may occur. Look eastward, above the head of Cygnus, the Swan, from late on the night of the 21st through the early morning of April 22nd.

On the night of **May 5/6** the **Eta Aquarids meteor shower** should reach its maximum display of up to 10 events. Look **ESE** after midnight.

The **summer solstice**, or the first day of summer, will occur this year on **June 21**. This is the day when the sun is out longest.

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In The Sky This Quarter

Visible Planets in the Night Sky

Beginning of April, 2013

	Const	Rise	Transit	Set	Mag
Sun		07:02	13:24	19:44	-26.8
Mercury	Aqr	06:06	11:44	17:21	0.3
Venus	Psc	07:12	13:29	19:46	-3.9
Mars	Psc	07:14	13:38	20:00	1.2
Jupiter	Tau	09:57	17:20	00:40	-2.1
Saturn	Lib	21:50	03:11	08:31	0.2

Beginning of May, 2013

	Const	Rise	Transit	Set	Mag
Sun		06:19	13:17	20:14	-26.8
Mercury	Psc	05:59	12:35	19:13	-1.0
Venus	Ari	06:48	13:52	20:57	-3.9
Mars	Ari	06:13	13:05	19:56	1.3
Jupiter	Tau	08:21	15:47	23:10	-2.0
Saturn	Lib	19:42	01:04	06:27	0.1

Beginning of June, 2013

	Const	Rise	Transit	Set	Mag
Sun		05:54	13:18	20:42	-26.8
Mercury	Gem	07:14	14:49	22:26	-0.3
Venus	Tau	07:01	14:31	22:03	-3.9
Mars	Tau	05:17	12:33	19:48	1.4
Jupiter	Tau	06:46	14:14	21:39	-1.9
Saturn	Vir	17:29	22:54	04:20	0.3

Aqr	Aquarius, The Water Bearer
Lib	Libra, The Scales
Psc	Pisces, The Fishes
Tau	Taurus, The Bull
Ari	Aries, The Ram
Vir	Virgo, The Maid
Gem	Gemini, The Twins

About: Meteorites 2, Prospecting for Meteorites

We all know of the old gold and silver prospectors who wandered the wastelands of the western U.S., Canada, and Alaska in search of these precious metals. Looking for these valuable minerals has a long, colorful, adventurous, and sometimes, quite nefarious history. But there are other intrepid adventurers today who prospect for meteorites. That's right, meteorites – those things that fall to Earth from space and were the subject of last quarter's newsletter.

In general, meteorites that lie on the surface of the Earth are relatively easy to find. If you recall from **Meteorites, Part 1**, all of the types contain varying amounts of iron and/or nickel, which, if you remember from your high school science, makes them from weakly to strongly magnetic. That means the simplest way to prospect for small meteorites found on the surface or just below the surface is to buy a strong magnet, such as those made of neodymium. One that is the size of three stacked dimes is about right. **Use caution when handling them as they are surprisingly strong.** A quick search online will show where they can be purchased. Once you have your magnet, attach it with some very strong glue to the bottom end of a wooden dowel, or similar, about three feet in length and you are ready to prospect.

A small caveat, recall that the magnet does not know a nail from a meteorite, so you must expect many false positives. If you get something on your magnet that is not manmade, how can you tell if it is truly a space traveler? Remember from the last quarter that meteorites contain a high percentage of metal, so you can expect it to be heavier than a normal rock. Lastly, it will have a crust that is dark brown to black. If your object meets these three conditions, **magnetic, heavy, and with a dark crust**, you may have found a meteorite. Is your find valuable? Almost certainly not, but it is still exciting to find and hold an object that has flown through space for maybe millions, perhaps billions, of years.

Obviously, not all meteorites stop at the Earth's surface so a metal detector will give you a chance to locate subsurface specimens. The type of detector that you will want is one that is particularly sensitive to gold. This type of metal detector is especially good at finding small metallic objects. The reason that a normal detector that is used for looking for coins is not good is because they are designed to ignore nickel and iron. This is, of course, what you do not want ignored. Also you will want one with a larger coil as it will allow you to prospect as deep 12" – 15", depending on the density and composition of the soil.

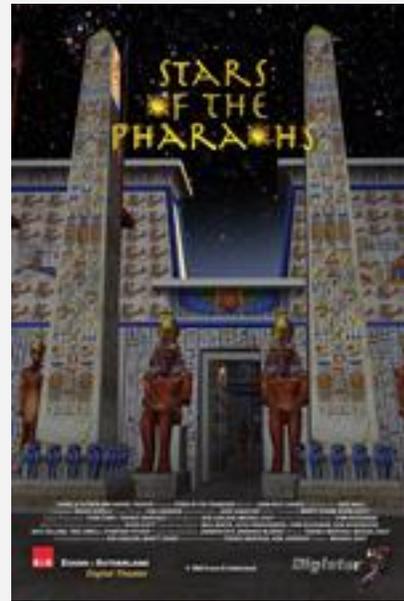
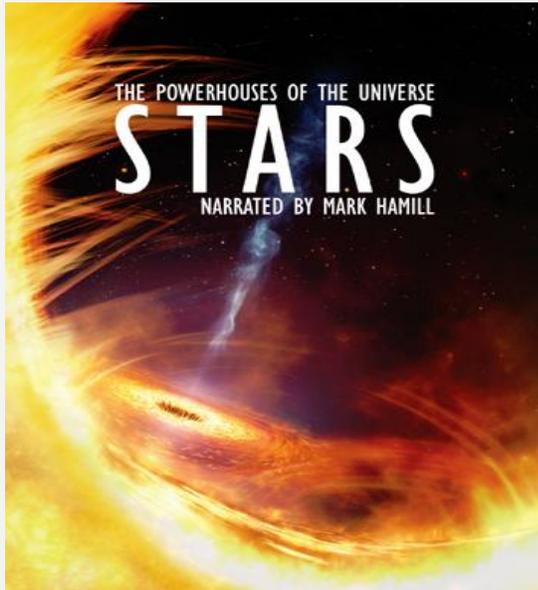
You will also need a good set of headphones, as well as a shovel (which you hopefully will need) and a reliable and accurate **Global Positioning System (GPS)** so you can keep track of where you are on the surface of the Earth. This also allows you to document where your finds occur.

Although there are more gold prospecting clubs, there certainly are clubs for meteorite hunters, so search online for "meteorite prospecting club" in your area. Besides the camaraderie of a common interest, a club is also a great place to learn about your new hobby and helps you avoid the inevitable beginner mistakes. It is also a good place to get advice about where to look and also about the laws you should be aware of.

Television also provides a fertile place to learn about searching for meteorites. The Science Channel had a series called "Meteorite Men". They have a web site at www.meteoritemen.com/. I am not sure if they are still making new shows, but, with persistence, I am sure you could find old episodes online to view.

As with any new hobby, do your homework, find someone who already has experience in hunting meteorites, so that your initial experience will be more enjoyable and safer. Like any new activity, if you have success early on, you are likely to stick with it.

2013 Planetarium Shows



<p>April 12 & 26 8:00 P.M. STARS 9:00 P.M. Stars of the Pharaohs</p>	<p>May 10 & 24 8:00 P.M. STARS 9:00 P.M. Stars of the Pharaohs</p>	<p>June 14 8:00 P.M. STARS 9:00 P.M. Stars of the Pharaohs</p>
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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
April 3	7:01 A.M.	7:45 P.M.	2:39 A.M.	12:58 P.M.	Last Qtr
April 10	6:50 A.M.	7:52 P.M.	6:45 A.M.	8:28 P.M.	New Moon
April 18	6:38 A.M.	8:00 P.M.	12:49 P.M.	2:15 A.M.	First Qtr
April 25	6:29 A.M.	8:07 P.M.	8:20 P.M.	6:10 A.M.	Full Moon
May 2	6:20 A.M.	8:14 P.M.	2:04 A.M.	1:05 P.M.	Last Qtr
May 9	6:12 A.M.	8:21 P.M.	5:55 A.M.	8:16 P.M.	New Moon
May 18	6:03 A.M.	8:29 P.M.	1:34 P.M.	1:53 A.M.	First Qtr
May 25	5:58 A.M.	8:36 P.M.	9:23 P.M.	6:23 A.M.	Full Moon
May 31	5:55 A.M.	8:40 P.M.	1:16 A.M.	1:07 P.M.	Last Qtr
June 8	5:52 A.M.	8:46 P.M.	5:59 A.M.	8:48 P.M.	New Moon
June 16	5:52 A.M.	8:49 P.M.	1:25 P.M.	12:55 A.M.	First Qtr
June 23	5:53 A.M.	8:51 P.M.	9:03 P.M.	6:09 A.M.	Full Moon
June 30	5:55 A.M.	8:52 P.M.	12:53 A.M.	2:06 P.M.	Last Qtr

April 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
 (To use, hold overhead)



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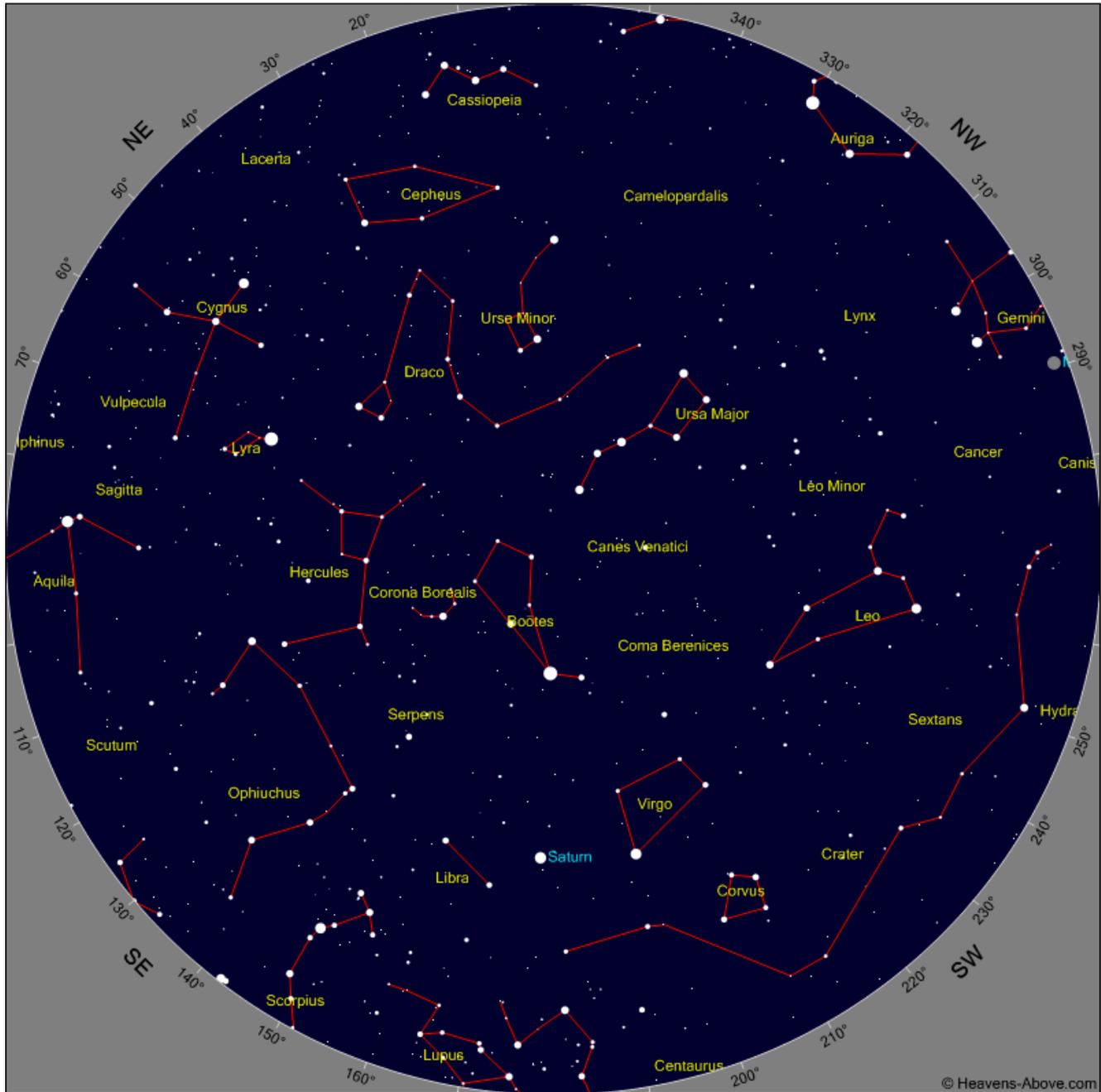
*Sky Chart used with the kind permission of [Heavens-Above](http://www.heavens-above.com/) at <http://www.heavens-above.com/>
 Contributions can be made in support of the WVU Planetarium through the WVU Planetarium Project at the WVU Foundation, Inc., phone (304)284-4000. Thank You.



Edited by John Hopkins
 (304)293-4961
 jghopkins@mail.wvu.edu



May 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
 (To use, hold overhead)



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