The Spectrum

Newsletter for the Buffalo Astronomical Association

March/April

Volume 18, Issue 2

Inside this issue:

The Calendar	2
Obs report	3
BAA Banquet	5
Astro Day	9
Mosque and the Moon	11
Astro Events	15
OBAFGKM	16
Star Charts 21	22
Map	23

….In This Issue:

- Your invitation to the BAA Banquet!
- Astro Day is coming – The date has changed so check your calendar.
- OBAFGKM??? See page 16.
- The Mosque and the Moon: Another fascinating article by Randy B.
- The usual charts, calendars,and OBs report.

<u>REMEMBER:</u>
The 2016 BAA elections will be here soon.

BAA Schedule of Astronomy Fun for 2016

Public Nights and Events

Public Nights - First Saturday of the Month

March through October.

2016 Tentative Schedule of Events:

Mar 4/5 Messier Marathon at BMO check e-groups for times
Mar 11: BAA Meeting at 7:30pm Buffalo State College
Mar 19/20 Maple Festival 9am-3pm - Observatory will be open - will need help
April 2 Public Night at BMO
April 9/10 NEAF -- Road Trip Anyone??
April 16 (it is a Saturday) **BAA annual Dinner Meeting**
April 30 (Date Change) Astronomy Day at the Buffalo Museum of Science
May 7 Public Night at BMO
May 9 Mercury Transit visible from Buffalo - trip to clear skies anyone??
May 13 BAA meeting
May 14 Wilson Star Search
June 4 Public Night BMO
June 10 BAA meeting- Elections/party
June 11 Wilson Star Search
July 2 Public Night BMO
July 9 Wilson Star Search
July 30 BAA annual star party at BMO
Aug 6 Public Night BMO
Aug 13 Wilson Star Search- think meteors!
Sep 2/3/4 Black Forest (Rain Fest) Star Party Cherry Springs Pa.
Sep 3 Public Night BMO
Sep 9 BAA Meeting
Sept 10 Wilson Star Search
Oct 1 Public Night BMO
Oct 8 Wilson Star Search
Oct 14 BAA meeting
Nov 11 BAA meeting
Dec 9 BAA Holiday party

Observatory Report

Well it has been a really warm winter this year, so the lake effect clouds have been in full swing. The lake effect snow has canceled several Tues nights at the Obs. We were lucky and had a large sucker hole and managed to image Comet Catalina 2013-US10. We tried out PulseGuides automatic correction calculator and were able to take 5 min exposures nicely tracking the Comet. Only one slight flaw, DeepSkyStacker will not see the stars as stars since they are streaks, and refuses to stack the images. Will have to try Nebulosity and see if we can do a one star alignment on the comet. Chris Elliott made a great movie from all our images showing the comet moving through the star field.

The refrigerator is almost empty, but I will continue to hold "Tues at the Observatory" with the condition that if it is snowing M/T/W we will not have it at the Observatory. If someone wishes to volunteer to have a place to meet that is NOT in the snowbelt we can meet there on snowy weeks.

Humm no one has opted out of my Tues night email list, so I will keep sending it. If you would like to be notified via email about Tues night activities, please send an email to DMa3141551@msn.com and let me know you want to be included. If you want off the list, I can do that too.

I have had no response to my call for a Weekend Observing Group. Must be people have things to do and places to be other than the Obs on weekends??? I will ask again - is there anyone who wishes to start a weekend viewing/imaging group??? I only "hog" the observatory on M/T/W nights for us old retired folks (and young ones who don't need any sleep). Might be nice if someone (I'm not normally available) were to get the Observatory open for those who work Mon-Fri. Just a thought, let me know if you are interested and want to start up a weekend group.

Messier Marathon anyone? If clear the weekend of March 4/5/6 (and if clear for the Tues night group will continue with the marathon) I am planning on having an all night session at the Observatory. Bring food and sleeping bags. Always great fun. I plan to image with the NP101is and leave the C-14 free for visual use. We can bag it with the camera and see it at the same time. Way fun!

NEED HELP on Saturday and Sunday March 19/20the Observatory will be open from 9am to 3pm in conjunction with the Beaver Meadow Audubon Centers Maple Festival. Will need solarscopes if clear and

Observatory Report (cover shot)

people to keep me company if cloudy. I figure to stay late on the 19 for a star party if clear, so if it looks nice bring something for the grill or microwave. We will be doing Solar viewing, and checking out the Moon, Venus, and any bright stars we can find providing it is clear. I will be needing volunteers with Solar Scopes and general traffic control. Always a great time even when snowing.

Beaver Meadow Observatory
Jupiter 2016-02-22 11:07pm EST
RGB image C-14, DMK21 camera
Tues night imaging group

Want to see Comet Catalina?

Click here

(Thanks Chris E.!)

The Buffalo Astronomical Association invites you to join us for

the 2016 BAA Dinner Banquet

guest speaker/ Kimberly Cartier/ Exoplanets, the Future, and You

artwork by BAA Member Anthony Pismarov

The **Buffalo Astronomical Association** invites you to join us for our **2016 Annual Dinner Banquet**

with special guest speaker **Kimberly Cartier**

PhD candidate at The Pennsylvania State University

Exoplanets, the Future, and You

It has been a long road of discovery from the very first extra-solar planet (now, which one was it again?) to nearly two thousand confirmed planets and counting. We've entered an age where it is possible to directly observe exoplanets and study the makeup of their atmospheres. With new telescopes on the horizon, we stride toward answering one of our most fundamental questions: how does our planet fit in to the grand scheme of the cosmos. And through the combined efforts of nearly half a million citizen scientists worldwide, we can revolutionize our understanding of what worlds may be out just waiting for us to discover.

Kimberly Cartier is a PhD student in the Department of Astronomy and Astrophysics at Penn State. She is fascinated by all aspects of extra-solar planets and studies them in all their various shapes and sizes: from habitable rocky planets in binary star systems, to the atmospheres of hot Jupiters, to tiny disintegrating rocky worlds that leave strange signals. Kimberly is passionate about science communication at all interest and experience levels. You can follow her work at www.kimberlycartier.org, on Twitter @AstroKimCartier, and on Universe Today's Weekly Space Hangout.

Saturday, April 16, 2016

Risotto Ristorante

930 Maple Road, Amherst, NY 14221

Cash bar begins at 6:00 pm

Sumptuous buffet dinner served at 7:15 pm

followed by speaker and program

$32 for BAA members and guests.

Reservations must be received by April 5th

click here to register on-line, or return the attached form with payment

contact irene ziarnowski at **i.ziarnowski50@yahoo.com** | 716-941-5902 for more information

Our menu, coordinated by Risotto Ristorante and Irene Ziarnowski:

Salmon
with honey glaze

Chicken Milanese

Hand Carved Beef Tenderloin
with spinach and asiago cheese

Macarancini Pasta with House Red Sauce
baked with mozzarella cheese

Individually served salads with Italian vinaigrette dressing

Assorted Breads with Homemade Spreads

Grilled Vegetables

Roasted Baby Red Potatoes

Homemade Cannoli Cake

Coffee and Tea

dinner price includes one complimentary bar beverage

pay on-line **here**, or return this form **by April 5th** with payment to:

Buffalo Astronomical Association, Inc.
c/o Irene Ziarnowski
9137 Back Creek Rd.
Boston, NY 14025

ticket price/ $32

name(s)

x32.=

# of tickets

total

mail address

total paid

email

phone

For more than seventy years,

The **Buffalo Astronomical Association** has been a meeting place

for Western New Yorkers from all walks of life

who share in common a love for the wonders of the universe.

visit us on the web at www.buffaloastronomy.com

The Buffalo Astronomical Association Proudly Presents:

Astronomy Day 2016

Buffalo Museum of Science

1020 Humboldt Pkwy, Buffalo, NY 14211

Saturday, April 30,2016

11:00 am to 4:00pm

- Telescope Exhibits
- Astronomy AMA
- Solar Viewing (weather permitting)
- Astrophotography
- Demonstrations

All activities are included with Museum admission and free for BMS Members

Everyone of all ages and experience welcome. Come out and have fun learning about the stars, planets, and space

For more information please go to: http://www.buffaloastronomy.com/

Astronomy Day at the

Buffalo Museum of Science.

April 30, 2016

Hi Everyone,

Astronomy Day 2016 will soon be here and we will be coordinating an event at the Buffalo Museum of Science.

To make this event a success, **your help is needed**. We are looking for all members to come out, join in, and participate in various ways. If you have taken part in public events before, it's time to jump in again. If you've never been involved, this is a great way to start. It's more fun that you can imagine.

We Need:

Members with telescopes and equipment: We want to show as many type of equipment as we can. Displays will be setup indoors as well as (weather permitting) outdoors for solar observations. You'll get to answer questions and describe what you use for stargazing.

Volunteers: If you just want to come out to help, Great! We need help moving equipment, setting up, breaking down, and addressing questions. You may also assist with guiding people and running demos. The astro crafts area is usually popular and very busy. No worries– training will be provided.

As we get closer to the date, more information will be provided. If you want to do something but don't know what you can do, let me know and we'll talk. There's a place for everyone and all help is needed.

If you are interested, please send me an email at jetpac@iname.com . Put "astro day" in the subject line.

Clear Skies

Mike Humphrey

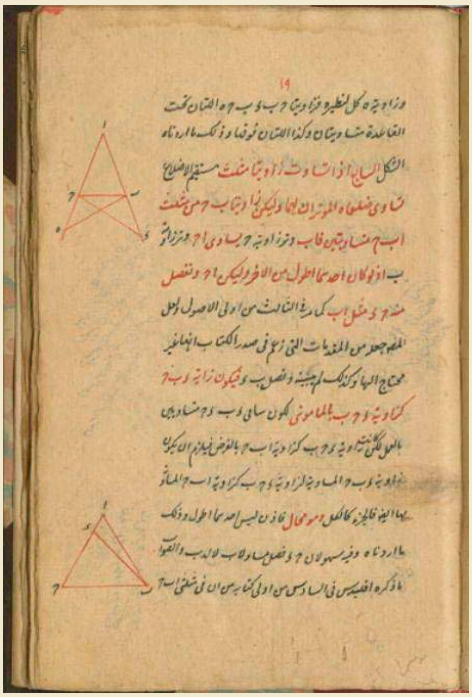
The Mosque and The Moon.
The Islamic Contribution To Astronomy.

By

Randy Boswell

Islam, which means submission to God, was established on the Arabian Peninsula during the seventh century. Subsequently, during the ongoing centuries Islam spread its influence from Arabia to the mountains of Asia and the Pacific Islands to parts of North Africa and at one time to the nations of Portugal and Spain on the doorstep of Western Europe. Comprising 1.3 billion followers, Islam today remains the fastest growing religion in the world. This much is widely known. However, what is little known and understood is that Islamic scholars have made advanced contributions to astronomy while much of Christian Europe lay in ignorance and superstition of the heavens.

The driving force behind the Islamic contribution to astronomy rested on two factors: First, there was the need for time keeping for religious purposes. Islam requires its followers to pray five times a day during specific positions of the Sun. Astronomical calculations of the precise position of the Sun during the hours of the day was therefore a way to accomplish this. A second factor was the need to determine the latitude and longitude of important cities in the Islamic world. This was done by using the positions of the stars. This aided Muslims in traveling to those cities and in providing the direction towards Mecca, Islam's holiest city in Arabia, which Muslims are to pray towards.



Islamic advances in astronomy occurred during its golden age between the years 700 to 1200 A.D. During this same period Europe was entrenched in the Dark Ages. Islam's holy book, the Qur'an encourages knowledge and learning, and following this precept Islamic scholars rediscovered the classical learning of ancient Greece and Rome. They translated many Greek and Roman works into Arabic. Regarding astronomy, Islamic scholars combined the ideas of the Greeks and those of India and improved upon them [1]. E.g., Ptolemy's model of an Earth-centered universe formed the basis of Arab and Islamic astronomy, but several Islamic astronomers

made observations and calculations, which were considerably more accurate than Ptolemy's [1]. This Islamic scholarship is said to have later sparked the Renaissance.

The majority of Islamic pioneering contributions to astronomy occurred during the rule of the Abbasid Caliphates, who took over the Muslim empire in 762 A.D. [2] and who claimed a direct line of descent from the Prophet Muhammad. During this time the capitol of the Muslim world was moved from Mecca to Baghdad in now present-day Iraq. The result is that its great learning center known as The House of Wisdom attracted scholars from all over the known world. Here, in addition to astronomy, advancements were made in medicine, mathematics, and chemistry.

Among the key factors in the Islamic world's astronomical ingenuity were its observatories.

They enabled Islamic astronomers to make highly accurate measurements of the movement of the stars and planets. These included the one on Mount Qasioun in Damascus, Syria, the observatory in Baghdad, and the Maragheh Observatory in Persia, now present-day Iran, which was the most widely known and biggest. Distinguished by their accuracy, these observatories were used by European scientists in their astronomical research during the Renaissance and post Renaissance era [3].

In addition to their observatories another important factor in their study of the heavens was there use of the astrolabe. Used to locate and predict the positions of the heavenly bodies, it is thought to have originated in ancient Greece. Islamic astrono

mers perfected it and it proved highly accurate. Its name comes from the Arabic translation of its

Greek name “star holder” and in

fact it was introduced to Europe in the early 12th century from Islamic Spain [4].

Islamic astronomers also invented a number of sophisticated instruments which enabled them to study the heavens. Al Biruni (973-1048 A.D.) e.g., is considered the inventor of the planisphere, which is used to track the movements of the stars and constellations over the period of a year and which is used widely by amateur astronomers today. Another, Abu Ishaq Ibrahim al-Zarqali (1029-1087 A.D.), otherwise known in the West as Arzachel invented a device known as the equitorium, which allowed astronomers to chart the movements of the Sun, Moon and Planets across the sky. He also invented a device that enabled one to calculate the time of year and the phases of the Moon and which was known as a lunisolar computer.

The work of Al-Hsan Ibn Al-Haytham (965-1039 A.D.) is noteworthy in that he invented the first camera in history [5] and applied it to astronomy. Known in the West as the *camera obscura* it was a box with a hole on one side and coated black on the inside. Opposite the hole was a sanded glass plate onto which were projected images of the Planets and stars. This aided Islamic astronomers in determining their dimensions and in discovering new stars [5]. This is all the more noteworthy in that this was similar to the way modern astronomers determine new objects in the sky. I.e., by comparing a sequence of images projected onto a computer screen of the same area of sky over a period of time and noting the addition of new objects such as stars, comets, etc. Interestingly, Al-Haytham came short of inventing the telescope given his knowledge of optics as was evidenced by his writings on lenses and parabolic mirrors. Ultimately, however, his ideas made it to Europe where it they eventually resulted in the invention of the telescope [6].

Regarding their astronomical measurements, a number of them preceded those made by European astronomers and centuries later proved to be close to the accuracy of modern calculations. Herein are a few examples that are remarkable given the time period:

The Persian scientist, Omar Khayyam (1048-1131 A.D.) devised a calendar more accurate than the Julian and approximated that of the Gregorian. The singular aspect of his calendar was that it marked a year

as being 365.24219858156 days long, which is accurate to the 6th decimal place! [1].

Muhammad al-Bataani (858-929 A.D.), considered the greatest Islamic astronomer and mathematician wrote numerous books on astronomy and mathematics. His most famous book entitled, *Kitabal-Zij*, is noted for correcting the error in Ptolemy's Almagest regarding planetary motion. Al-Bataani's works made it to Europe, where they influenced Tycho Brahe, Kepler, Galileo and Copernicus [2][6]. Al-Bataani calculated that the distance of the Sun from its farthest position or ephemeris equaled 1,146 times the radius of the Earth and its nearest position equaled 1,070 times the radius of the Earth. And, in its middle position, equaled 1,108 times the radius of the Earth. The noteworthy thing about al-Bataani's figures are that they are near those of modern calculations.

In general, other contributions made by Islamic astronomers included the idea that the Earth is oval shaped hundreds of years before NASA determined this; the idea that the Earth rotates on its axis and that its axis is tilted; the concept of universal time based on zero longitude that later formed the basis of Greenwich mean time. And, when you visit a planetarium think about Islamic astronomy because this too was invented by an Islamic astronomer. End.

Notes

[1]. Leslie Welser-Sherrill, "Arab and Islamic Astronomy," *StarTeach Astronomy Education*, 2007. Available at: http://www.starteachastronomy.com/arab.html

[2]. Ivan G. Nassar, "Contributions of Islamic Astronomy," *The Muslim Observer*, n.d. Available at: http://muslimobserver.com/contributions-of-islamic-astronomy/

[3]. Ragheb Elsergany, "Contributions of Muslim Scientists to Astronomy," March 8, 2010. Available at: http://islamstory.com/en/node/27320

[4]. Emily Winterburn, "Using an Astrolabe," 2005. Available at: http://muslimheritage.com/article/using-astrolabe

[5]. "The Muslims' Contributions to Astronomy," *Islam.net*, n.d. Available at: http://www.islamweb.net/kidsen/Kids%20Corner%201,2/subjects/eshamat1.html

[6]. Martyn Shuttleworth, "Islamic Astronomy," *Explorable.com*, January 2, 2010. Available at: http://explorable.com/islamic-astronomy

The Astronomical Events for March/April 2016

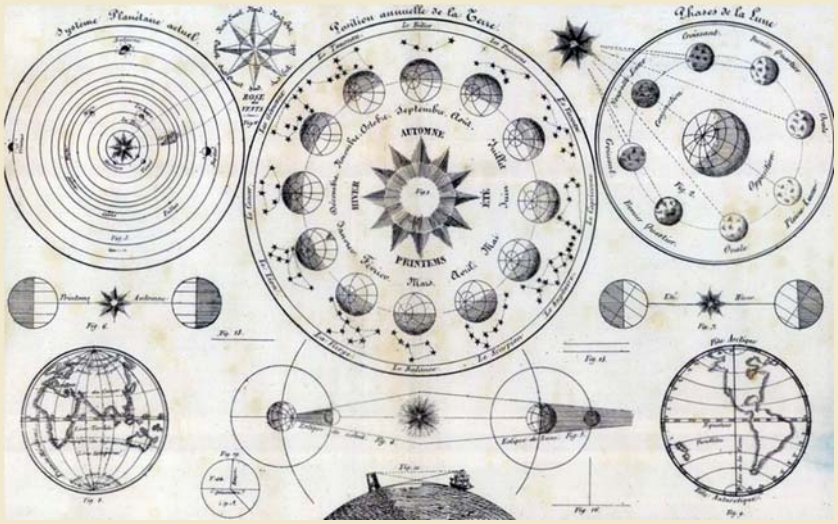
Universe Today (Complete list in January/February Issue)

March

04- Double shadow transit (Io-Europa) occurs from 11:32-12:38 UT.
08- Double shadow transit (Io-Europa) occurs from 00:28-01:56 UT.
08- Jupiter reaches opposition at 10:00 UT/5:00 AM EST.
09- A total solar eclipse spans the Pacific and SE Asia centered on 1:58 UT. **The only total solar eclipse of 2016, and the final one until the 2017 total solar eclipse spanning the United States.**
09- Double shadow transit (Io-Ganymede) occurs from 18:56-19:11 UT.
11- Double shadow transit (Io-Europa) occurs from 13:24-15:15 UT.
14- The 37% illuminated Moon occults Aldebaran at 14:07 UT/10:07 AM EDT for Central Asia.
15- Double shadow transit (Io-Europa) occurs from 2:21-4:34 UT.
16- Double shadow transit (Io-Ganymede) occurs from 20:51-23:05 UT.
18- Double shadow transit (Io-Europa) occurs from 15:19-17:50 UT.
20- The March northward equinox occurs at 4:30 UT, marking GEO satellite flare and eclipse season.
22- Double shadow transit (Io-Europa) occurs from 4:23-7:10 UT.
23- Double shadow transit (Io-Ganymede) occurs from 23:47-0:58 UT (on the 24th).
23- A penumbral lunar eclipse occurs, centered on the central Pacific around 11:48 UT.
25- Double shadow transit (Io-Europa) occurs from 17:41-19:26 UT.
29- Double shadow transit (Io-Europa) occurs from 7:00-8:24 UT.

April

01- Double shadow transit (Io-Europa) occurs from 20:16-21:19 UT.
03- Double shadow transit (Io-Callisto) occurs from 15:09-15:49 UT.
05- Double shadow transit (Io-Europa) occurs from 9:36-10:17 UT.
06- The 1% illuminated Moon occults Venus for Europe in the daytime at ~8:31 UT.
08- Double shadow transit (Io-Europa) occurs from 22:54-23:14 UT.
10- The 17% illuminated Moon occults Aldebaran at 22:27 UT/6:27 PM EDT for eastern North America.
12- Double shadow transit (Io-Europa) occurs from 12:11-12:14 UT.
18- Mercury reaches 19.9 degrees eastern elongation at 12:00 UT/8:00 AM EDT.
21- Minimoon: the most distant Full Moon of the year occurs, reaching apogee 406,350 kilometers from Earth 13 hours after Full.
20- The June northward solstice occurs at 22:34 UT. The International Space Station generally reaches a period of full illumination favoring the northern hemisphere around this time.



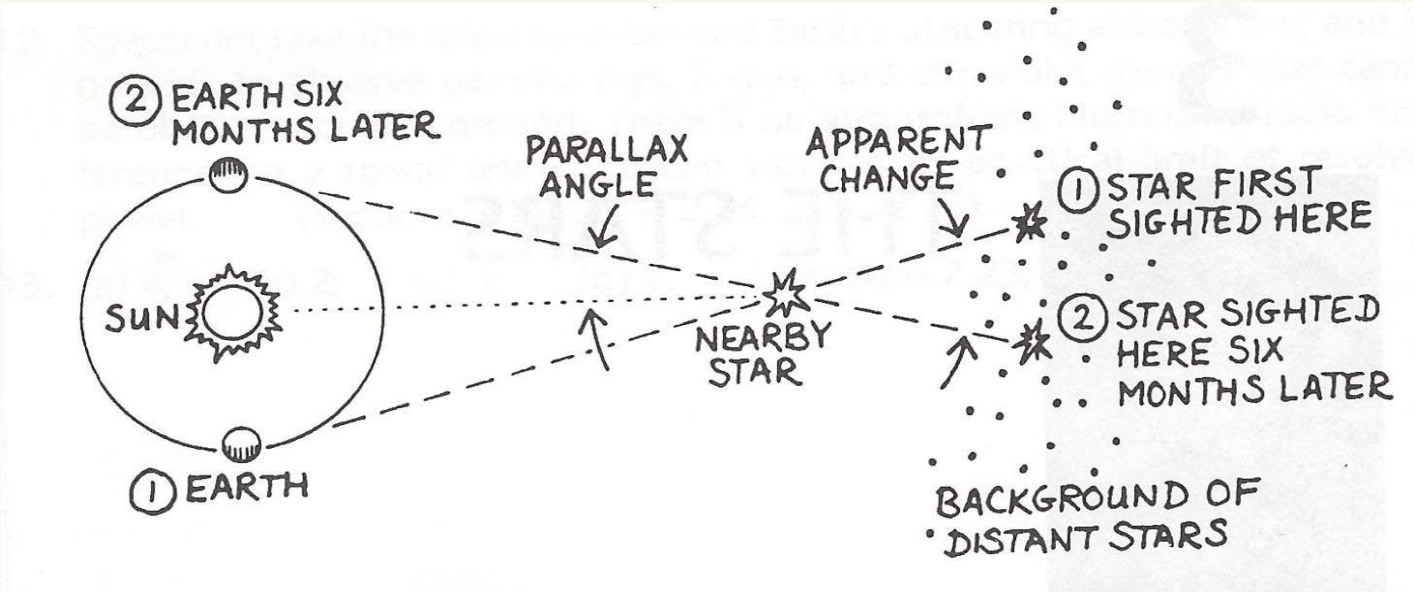
Oh Be A Fine Girl Kiss Me

A follow up on our planetarium show.

Ton Heyer

The apparent magnitude of a star is a measure of how bright it appears to us on Earth. The Greek astronomer Hipparchus established a system of 1 through 6 to identify the brightest to dimmest observed stars. Our modern system uses his established system but expands it from negative -26.72 (the Sun) to +28 for the dimmest stars we see in large telescopes. Using this system, a difference of 1 step means a change of 2.5x in brightness. This works out for us as observers on the Earth, but is it a true measure of the star?

We all know that a dim light close to your eye appears very bright, and a bright light far away appears dim. So distance must play a part in determining how bright a star really is. To measure the distance to nearby stars we use parallax. Parallax is how much a star position in space appears to shift when observed from two different locations. Here on Earth that means taking measurements 6 months apart using Earth's orbital diameter as the base of a triangle. This works for stars that are close to the Earth, but not for the ones in deep space. To determine the true brightness of all stars, they are all measured at a distance of 1 parsec (pc). That is the distance an object would be from the Earth if it has a parallax equal to 1 second of arc. 1 degree divided by 60 to get minutes of arc and then by 60 again to get seconds of arc. One parsec is about 3.26 light years distant.



We also know that a large light is brighter than a small one. So, size must also be considered.

Oh Be A Fine Girl Kiss Me (cont.)

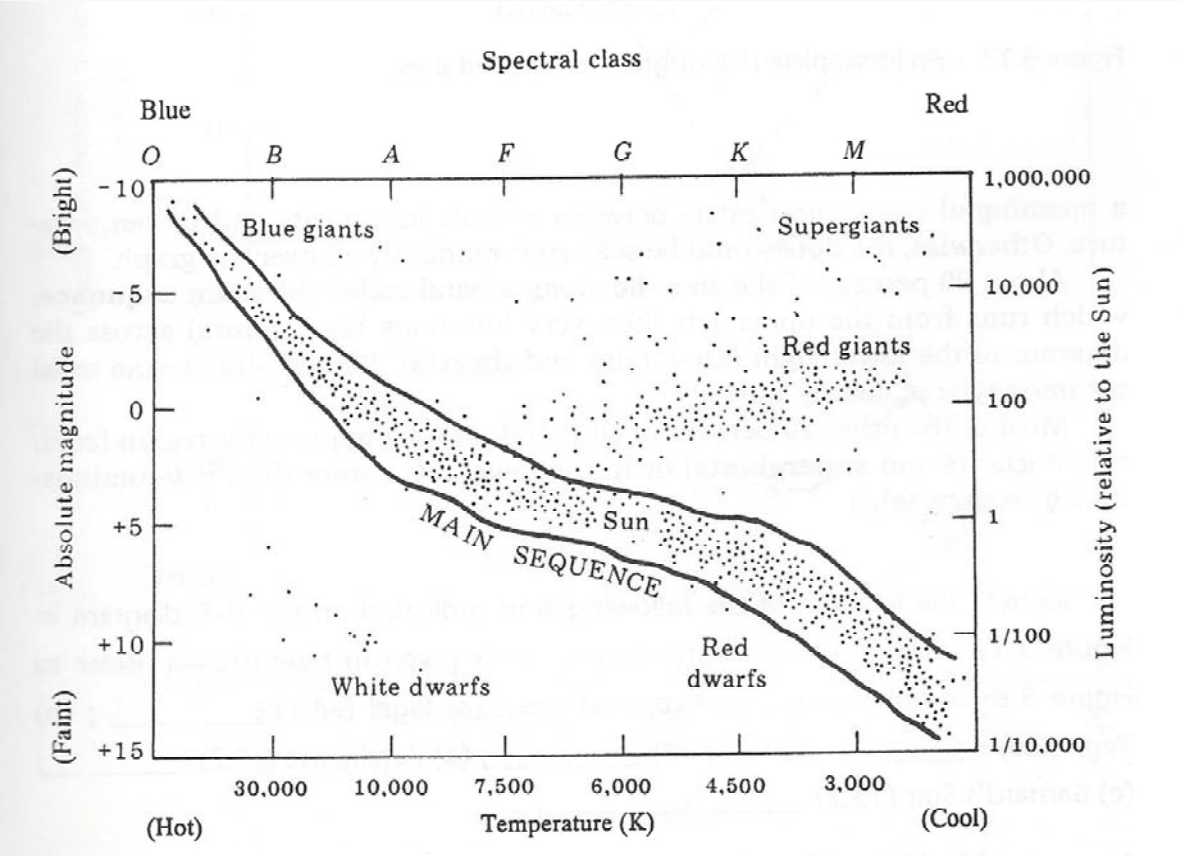
The absolute visual magnitude is how bright a star would be if we see it at a distance of 10 parsecs. At that distance a large dim star may produce the same amount of energy as a small

bright star. That measurement is called a star's luminosity.

When determining absolute magnitude, we determine the size of a star by using its spectral signature. When we look at the spectrum of the Sun when it passes thru a prism, we see a pretty rainbow. When an astronomer magnifies that image they see that it's not a continuous band of color. The spectrum is broken by lines that help identity the gasses that make up the star's atmosphere. Commonly called the Fraunhofer Lines, they help to identify the chemical composition and density of a star's atmosphere.

At the turn of the 20th Century, Annie J Cannon classified the spectra of over 250,000 stars. She classified them into seven spectral classes we label O, B, A, F, G, K and M (thus the lyric title of this article). These classes became a temperature sequence from hottest to coolest (violet to red) or 40,000K to 3,000 K. Later these classes were subdivided by a scale that goes from 0 to 9. Our Sun is a G2 star according to this scale.

In the early 20th Century, Ejnar Hertzsprung and Henry Russell plotted a graph comparing luminosity to temperature, the famous H-R diagram, which now allows us to classify stars according to size.



Dim red stars fit in the bottom right corner and bright violet stars fill the top left. Most of the stars that we see fill in the diagonal line from left to right, the Main Sequence, a logical pattern. Smaller ones in the bottom right (dwarfs) and larger in the top left (giants). The diagram also allows us to identify the stars that don't fit the pattern. White dwarfs give off tremendous amounts of energy (high luminosity), but are very dim (positive absolute magnitudes). The logical conclusion as to their size is that they have a very small diameter (dwarf). The opposite must also be true for the Giants and Supergiants.

The true identity of a star is determined by its color and the amount of energy it gives off. We see the Sun as that yellow ball in the daytime sky, not as a G2 Main Sequence average star- lucky for us because our star will exist for many millions of years in the future.

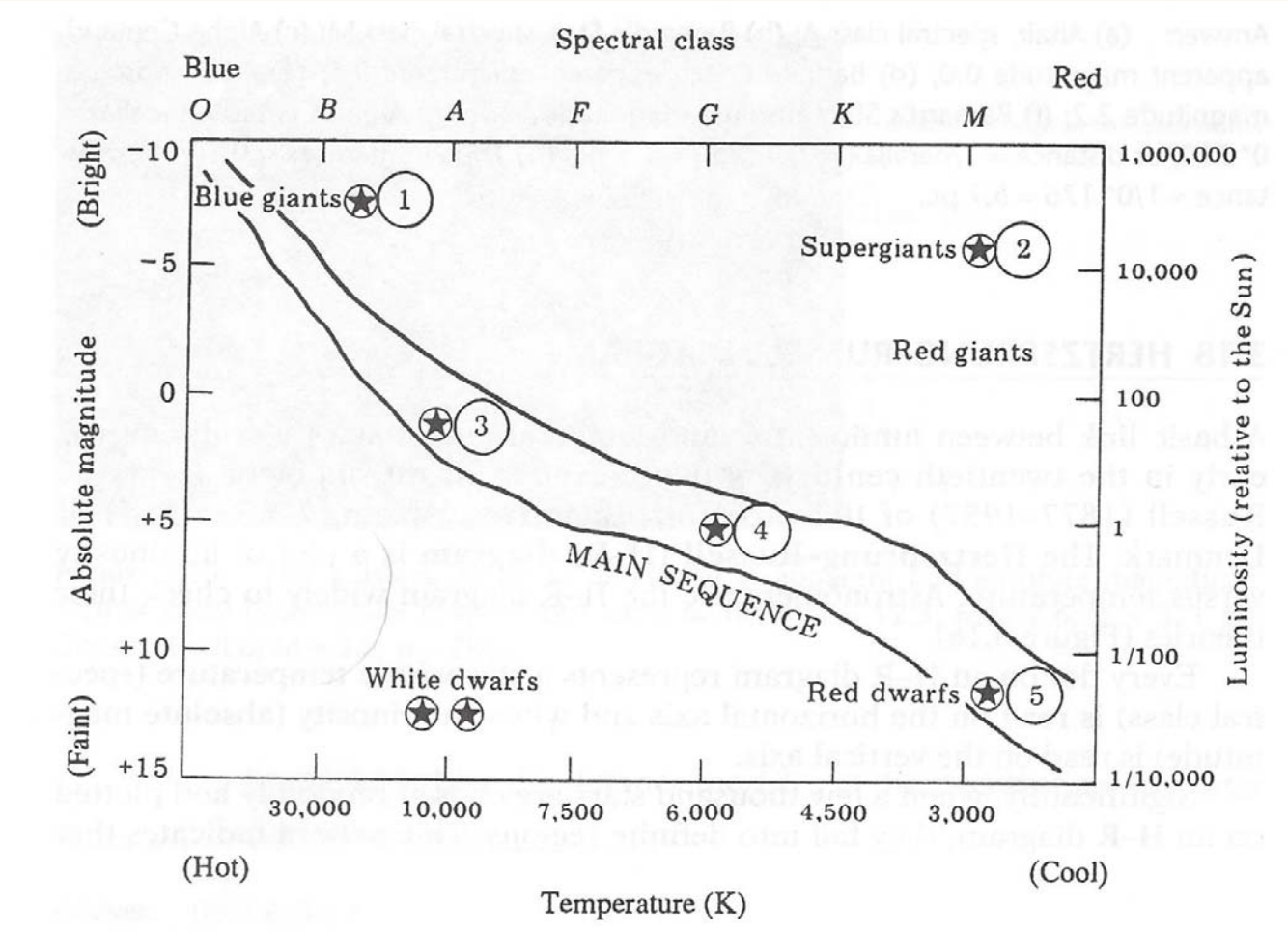


Diagram #2

Oh Be A Fine Girl Kiss Me (cont.)

Identify the location of these stars. Their absolute magnitude is given. Refer to diagram 2 (see page 18) and identify their locations and their spectral class.

Star	location #	spectral class
Rigel (-6.9)	_____	_____
Vega (0.6)	_____	_____
Sun(4.8)	_____	_____
Betelgeuse(-5.47)	_____	_____
Barnard's Star(13.2)	_____	_____

Nearby Stars

Star	apparent magnitude	absolute magnitude	spectral class	parallax (")
Alpha Centauri	-0.03	4.1	G	0.75
Thuban	4.7	5.9	K	0.176
Barnard's star	9.5	13.2	M	0.545
Altair	0.8	2.3	A	0.202

Notice

The College of Fellows will meet at my house at 7:30 PM on Wednesday, March 16th. Please let me know if you can, or cannot attend. I can be reached at: rarupp@verizon.net or 839-1842

Rowland Rupp

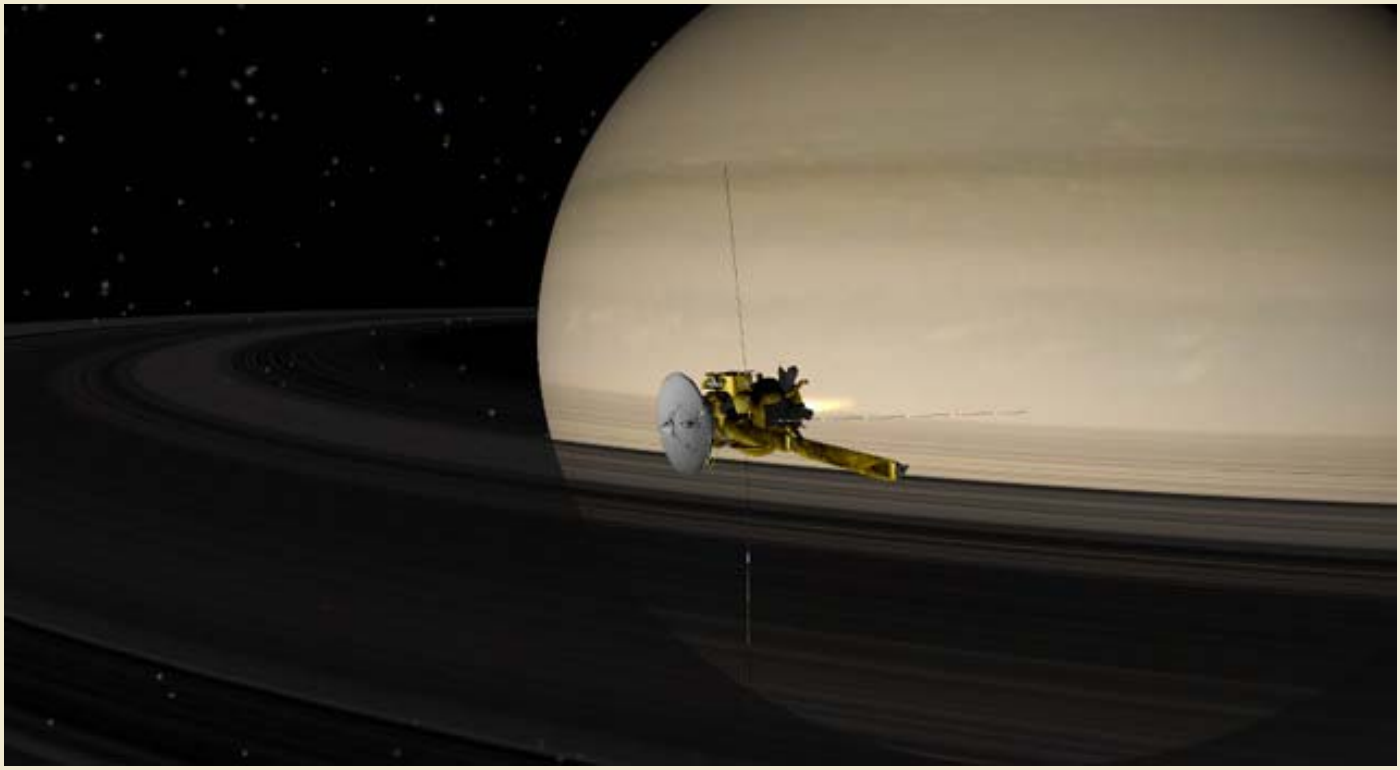
Eyes on the Solar System

Eyes on the Solar System lets you explore the planets, their moons, asteroids, comets and the spacecraft exploring them from 1950 to 2050. Ride with the Curiosity Rover as it lands on Mars or fly by Pluto with the New Horizons spacecraft all from the comfort of your home computer.

Using real trajectory data you can recreate famous moments in solar system exploration, or preview exciting adventures yet to come. Fly with the Voyager spacecraft on their grand voyage, orbit Mars with MAVEN, fly by a comet with Deep Impact or Stardust, and observe our home planet alongside the spacecraft that keep track of Earth's climate.

Want a quick dose of exciting exploration? Try the 'Simple' mode of Eyes on the Solar System to explore exciting destinations and missions and learn about the people involved in making it all happen. Interested in more details? Eyes on the Solar System has modules that focus on specific places or missions. Recreate the New Horizons flyby of Pluto or learn about the Dawn spacecraft as it orbits Ceres.

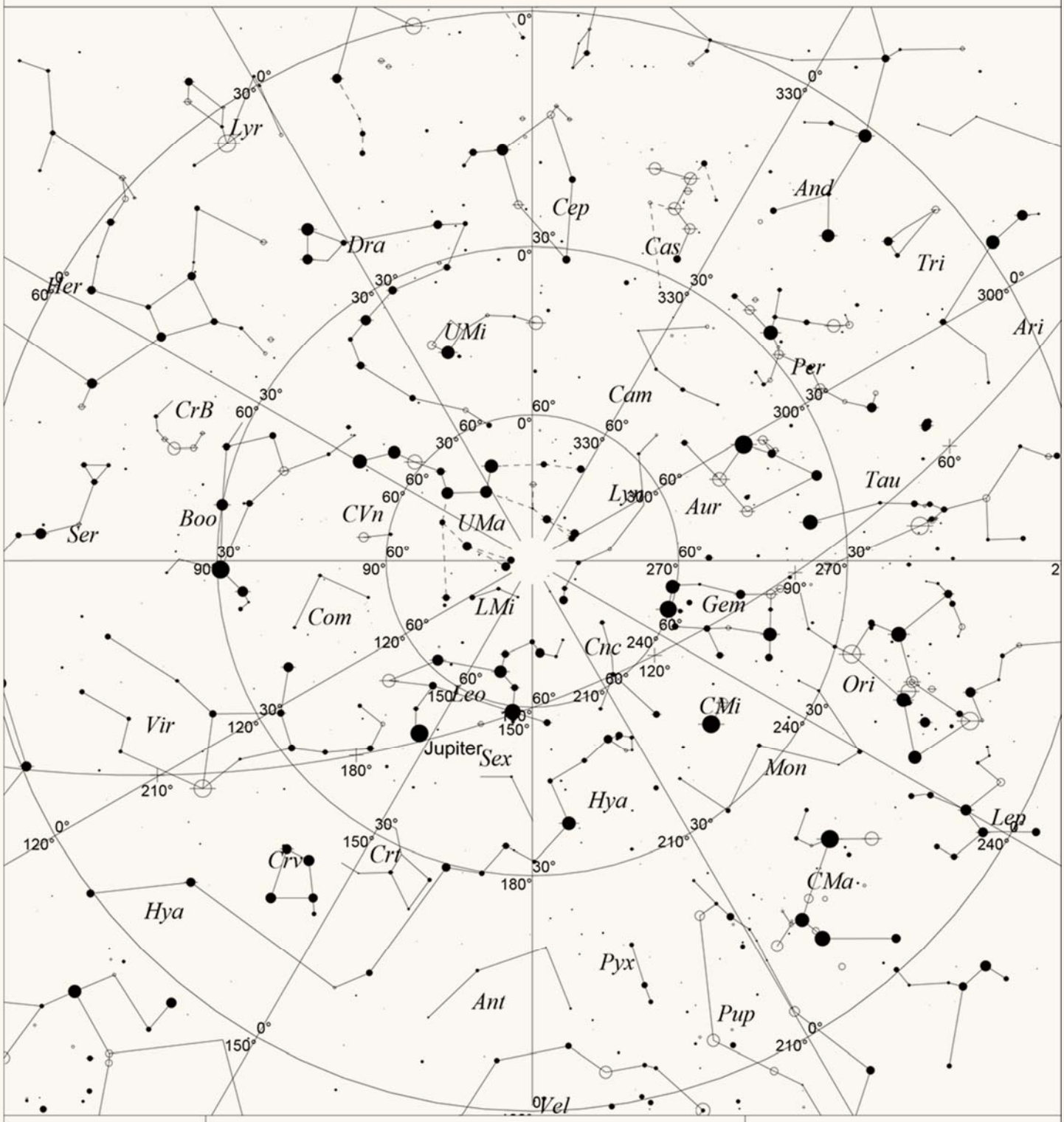
All these experiences are available on a Mac or PC by downloading NASA's Eyes.



Jet Propulsion Laboratory
California Institute of Technology

http://eyes.nasa.gov/eyes-on-the-solar-system.html

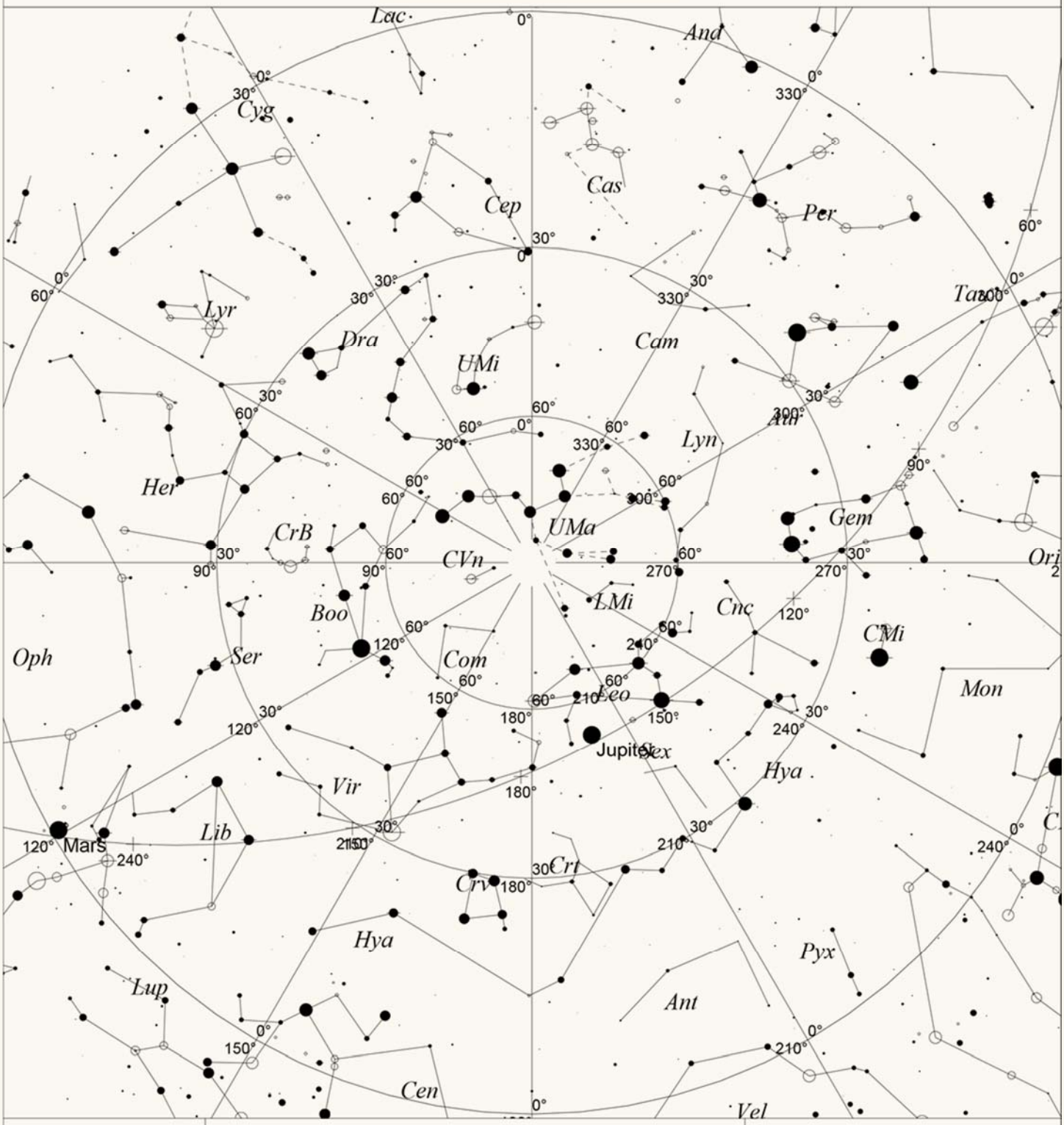
Mar 8,2016 23:00:00



STARS	SYMBOLS		
<1	Multiple star	Dark nebula	Radio source
1.5	Variable star	Globular cluster	X-ray source
2	Comet	Open cluster	Other object
2.5	Galaxy	Planetary nebula	
3	Bright nebula	Quasar	
3.5			
4			
4.5			
>5			

Local Time: 23:00:00 8-Mar-2016 UTC: 04:00:00 9-Mar-2016 Sidereal Time: 09:53:38
Location: 42° 52' 48" N 78° 52' 12" W RA: 9h53m38s Dec: +42° 52' Field: 182.0° Julian Day: 2457456.6667

Apr 7,2016 23:00:00



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3	Bright nebula	Quasar	
3.5			
4			
4.5			
>5			

Local Time: 23:00:00 7-Apr-2016 UTC: 04:00:00 8-Apr-2016 Sidereal Time: 11:51:54

Location: 42° 52' 48" N 78° 52' 12" WRA: 11h51m55s Dec: +42° 52' Field: 182.0° Julian Day: 2457486.6667

BAA Officers and General Information

President: Mike Anzalone

AstronomyRocks@roadrunner.com

Vice President: Irene Ziarnowski

Secretary: Jan Zehr

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Location / Time of Meetings: BAA meetings are held on the 2nd Friday of the month from September to June starting at 7:30pm. Our meetings are held in room C122 of the Classroom Building at the Buffalo State Campus. See map below, building 35.