

# The Spectrum

*The News Letter of the Buffalo Astronomical Association*

Volume 12 Issue 1

January / February 2010



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## Presidents Corner

Happy Happy...

I hope the holidays were peaceful and joy filled and your stockings filled with all sorts of cool astronomy stuff to play with in the new year. I'm writing this in the closing days of the International Year of Astronomy,

reflecting back on a very busy year of programs. I missed Mike's year in review summary at this year's Holiday Party... I hope he'll find time to make it for a future meeting. One day I am going to sit down and watch the hour long video my brother-in-law captured of Cliff Stoll bounding up and down Hamlin Hall at our dinner banquet... will be sure to take some soothing medication first.

Up and coming...

Our January meeting (January 8th) will follow recent tradition as we gather at Williamsville North Planetarium. BAA member and Planetarium Director Mark Percy will present two new programs for the us: Bad Astronomy will debunk common misconceptions about the Universe and help make "good" astronomers of us all. IBEX: Search for the Edge of the Solar System details the IBEX spacecraft's mission to explore the outer realm of the solar system using energetic neutral atom (ENA) imaging to create the first global mapping of the region where solar wind ends and interstellar space begins. Arrive at 7:00pm for hot cider and a good seat - the shows begin promptly at 7:30.

On February 12th we return to our new meeting room at Buffalo State (Classroom building C122). Our speaker will be Peggy Slonicki rare book librarian at the Buffalo and Erie County Public Library who will present Milestones of Astronomy, a talk

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## NASA News

**Bob Hughes**

I have accepted the invitation made by our Spectrum editor Mike Benz at the November BAA meeting to write an article about space exploration. I hope to make this a regular series of articles about manned and unmanned space missions with an emphasis on astronomical space missions.

The year 2010 will mark the end of the space shuttle era with a series of 5 shuttle launches to the International Space Station (ISS). The 2010 NASA launch schedule, which can be accessed at <http://www.nasa.gov/missions/highlights/schedule.html>, lists the 5 Space shuttle launches, STS-130, STS-131, STS-132, STS-134 and the final Space Shuttle mission STS-133.

The best areas to see a shuttle launch from the ground, up into space are along the Indian River at Titusville or the Route 508/A1A Causeway to Port Canaveral south of the Kennedy Space Center (KSC). Please note that tickets to view the shuttle launches from the NASA Visitors Complex or from the NASA Causeway are currently not available.

To determine if the Shuttle launchpad (Complex 39A) can be seen from your vantage point look for the Vehicle Assembly Building (VAB). If you can see this large white cube looking building you should be able to see the shuttle Complex 39A which is 2 miles North of the VAB. A shuttle launch unfolds very quickly like a total solar eclipse. You will only be able to see the shuttle for only a couple of minutes.

The amount of time the shuttle is visible depends on whether there are intervening

clouds and the time of day. A nighttime launch can probably be seen longer than a daytime launch. I was able to observe the nighttime launch of STS-126 into clear skies for almost 7 minutes from a vantage point in Titusville which is 12 miles west of pad 39A. I saw the shuttle light up nighttime sky like a rapid sunrise.

After 1 minute I could hear the loud rumble of the shuttle rocket engines. The solid rocket booster separation could easily be observed at the 2 minute mark after which the shuttle, like a moving Venus, moving Northward and upward for the next 5 minutes till it finally disappeared out of sight.

After the STS-126 launch there were heavy traffic jams in the Titusville area especially on the routes back to Orlando so be prepared for this. Be aware all remaining shuttle launches are missions to the International Space Station (ISS). For each Shuttle ISS rendezvous mission there is only a 10 minute launch "window" with the exact time of the shuttle launch at the midpoint of that window on the scheduled launch day.

If there is a technical problem or a bad weather at the time of the window the launch will be scrubbed till the next available launch window which usually occurs 24 hours plus 20 minutes later the next day. There is no point waiting around if the scheduled launch time has passed.

I highly recommend you bring along a police scanner and program the frequency 146.94 mhz which can be heard in the Cape Canaveral/ Titusville area. Shuttle to Capcom communications and NASA public announcements on the shuttle launch status can be heard on this frequency so

***Continued on page 3***

### **Prez Corner continued...**

centered on the incredible collection of rare books and historic writing that can be found in the collection of our own downtown library. Starting with a work by Aristarchus of Samos republished in 1572, the presentation will touch on major discoveries in astronomy through the 19th and early 20th century as described in first edition publications by Copernicus, Galileo, Kepler, William Herschel and LaPlace.

And while your 2010 calendar is out, be sure to reserve Saturday evening, March 13th for our annual dinner banquet. WIVB weatherman Don Paul will be our special guest speaker.. the details on reservations will follow soon.

#### What's New...

Why... members and more members! Thirty-five have joined the BAA during the International Year of Astronomy and though I've welcomed a few in an earlier column, I am way remiss for many others... hence, apologies and a hearty ahoy to:

Matt & Phyllis Andrews, Dave & Melissa Bogert, Randy Boswell, Carl Byers, Stephanie Carmichael, Robert Cox, Bryan Czerwinski, Katherine Daly, Ron & Delphine Dekanski, Kevin Duggan, Jack Ewing, Steven Hapeman, Patricia Harris, Luai & Daser Ibrahim, Brendan Kilcoyne, Jonathan Kranock, Darand Land, John Marino (welcome back, John), Jerad Marx, James Minter, Malcolm & Renee Oubre, Zachery Pace, Paul Robinson, Douglas Rollain, Christopher Smith, Hugo Tavaréz, Robert Wengewicz, James Wilson and Irene Ziarnowski... we are happy you are here.

To all my BAA friends, good health, clear skies and very best wishes!

Alan

### **Nasa continued...**

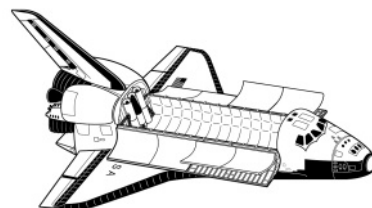
you can be informed if the shuttle launch is scrubbed. There is a lot more I could talk about in relation to the space shuttle launches but I would like to move on to write about 2 upcoming astronomical space missions which will be put into orbit soon.

The first of these missions is the Wide-field Infrared Survey Explorer(WISE) mission which should already be launched 12/14/09 by the time you read this article. The WISE mission will have a sensitive infrared telescope cooled to 30 degrees Kelvin which will be launched into a polar orbit. This telescope will be 500,000 times more sensitive than the Cosmic Background Explorer (COBE) and 1000 time more sensitive than IRAS.

This mission will last 7 months and will generate 1.5 million infrared images over that time period. The other astronomical mission I will discuss is The Solar Dynamics Observatory (SDO). This mission is a high resolution solar observing satellite that is scheduled to be launched 2/3/2010 from Cape Canaveral into a geosynchronous orbit. It will relay what is being described as an avalanche of data to an antenna located in Los Crucis New Mexico. This satellite has state of the art instrumentation and computer power and will be able to study new found solar phenomenon like subsurface solar jet streams.

I covered a lot of space in this article so I will wrap it up. In upcoming articles I will discuss the improvements to the Hubble Space Telescope (HST) and other space missions such as the Spirit and Opportunity Mars Rovers.

See you in the next Spectrum.



## **New Book Publication By BAA Member**

### ***Hubble Space Telescope Identifies Dark Energy***

Cenkner, August A. Jr., B.A., B.S., M.S.,  
Ph.D.,  
ISBN: 978-1-4490-1134-5 (sc)  
LOC Control Number: 2009907731  
B&W  
90 pgs  
8.5x11  
8/3/2009  
www.authorhouse.com  
\$10.70

#### **INTRODUCTION**

Astronomical data that was obtained by the Hubble space telescope, and other observatories, were reviewed for any information that would shed light on the identification of dark energy – the mysterious repulsive force that accelerated far away galaxies.

It is shown that Hubble images actually reveal, what amounts to, a full scale space simulation of dark energy.

The author introduces technology transfer, from known gas dynamic behavior on earth, to the astronomical area -- in order to point the direction for the proper interpretation of this observatory data. Earlier experimentation in a plasma wind tunnel and in a supersonic wind tunnel, by the author, as well as computer modeling of hypersonic flows, indicates that dark energy is actually the kinetic energy contained in a traveling gas-cloud-shock-wave.

This spherical shock wave would originate from violent processes like star explosions, star collisions, etc. When this shock wave

impacts a main sequence star its kinetic energy is transferred to the star, because a low pressure wake is formed on the downstream side of the star.

Using Hubble, and other observatory images, it is shown that the three dimensional pushing behavior of this spherical shock wave results in the acceleration of galaxies (i.e. dark energy) and much more – for example the eventual evolution of: revolving astronomical bodies, galaxies, Galaxy Streams, Voids, Walls, Clusters, colliding galaxies, and galaxies with relative motions away from and toward earth.

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#### **Ken Kimble**

##### **Rowland A. Rupp**

Former BAA member Ken Kimble was very active in club affairs in the late 1970s though the 1980s. He served as Secretary from 1980 to 1986, was elected to the BAA's college of Fellows in 1985, wrote the BAA Annals in the early 1980s and at the same time led the Study Section.

During this period he also co-taught the BAA's astronomy course at the Buffalo Museum of Science specializing in his favorite topic, the Sun. He had a long-term project of building a solar observatory at his home and his last contribution to the BAA was sketching the planned addition to BMO in 1992.

Ken had an artistic flare and it was his sketch that was used to convince the Buffalo Audubon Society to fund our construction project. It is with sadness that we report Ken Kimble has died at age 65 in November.

He will be missed...



## BAA Dinner

It's hard to believe with the holidays and New Years just around the corner that 2009 is about to end! So get out your 2010 date books and mark down Saturday March 13th 2010. This is the date for our annual BAA dinner meeting. There has been a change of venue since it was last announced.

"Banchetti's" Banquet and Grove Facility.

Cash bar from 6:00pm – 7:00pm

Buffet Dinner 7:15pm – 8:30pm

General meeting, awards, and guest speaker 8:45pm – 10:00pm

The buffet will consist of:

Carved roast pork loin with Balsamic Glazed Pears on the side

Bourbon Glazed Chicken

Herb Roasted Haddock

Pasta in Red Sauce

A wide variety of salads

Fruit & Vegetable trays

Roasted Red Smashed Potatoes

Green Beans Almondine

Fruit Cobbler with Ice Cream

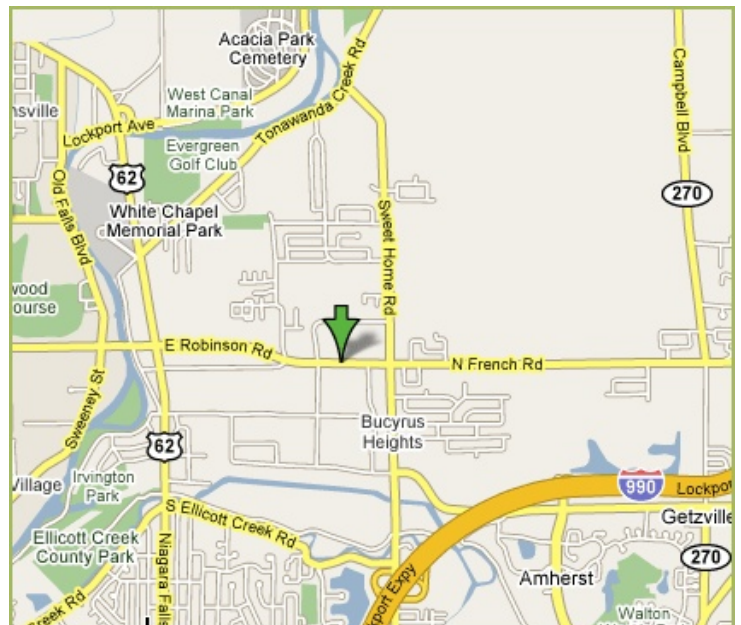
Coffee, Tea , Decaf

\$23.00 per person (adult and/or child)

### Directions

- Take the 90 to the 290 to the 990.
- Get off at the second exit (Sweethome).
- Turn right on Sweethome.
- Go up to North French and turn left.

**550 North French  
Amherst, NY 14228**



## Special Interest Groups

**Frank Pirrone**

A few postings to the BAA "e-group" ([http://groups.yahoo.com/group/buffalo\\_astro\\_assoc/](http://groups.yahoo.com/group/buffalo_astro_assoc/)) were made following conversations that took place during the recent Holiday Party regarding Special Interest Groups (SIGs).

These are meeting sessions separate from a club's general meeting, usually dedicated to a single aspect of the particular hobby supported by that club. Sometimes, a few related aspects or topics will fit naturally and comfortably within a single SIG.

What was kicked around, largely by Dan Marcus, Frank Pirrone, and Anthony Davoli, were these areas of special interest to amateur astronomers:

- 1) Robo-Scope technology
- 2) Digital imaging with CCD devices and digital cameras
- 3) Digital image processing
- 4) Specialized equipment/computer/programming
- 5) An Instrument Section devoted to all observing tools
- 6) A Study Section devoted to an academic approach to the hobby
- 7) NASA events and space-based astronomy
- 8) Cosmology and astrophysics
- 9) Visual astronomy and/or hand-sketched observations
- 10) Telescope accessories design and manufacture
- 11) Lathe and milling machine operation
- 12) Various hobby areas of specialty activities such as:
  - solar astronomy
  - lunar astronomy
  - planetary astronomy
  - deep-sky object astronomy
  - variable star astronomy

This relatively long list was offered without benefit of discussion or brainstorming, so it can be assumed that many more good topics would be identified by any concerted effort.

Should club members be interested in participating in additional monthly meetings devoted to any identified topic, those meetings would be scheduled on the best non-conflicting days possible, and would most likely be held at the home of the SIG's leader, or in rotation at the homes of its members.

Meetings would probably last two hours or less, but could be any practical length upon which the SIG's members agreed. Any given SIG could meet throughout the BAA's meeting year, or for any frequency and duration desired, and some SIGs might choose to meet only a few times to address either a small topic or a normal topic at a more modest level of depth and detail.

These SIGs would serve to provide sharing, social, learning, teaching experiences to tap the great wealth of knowledge and experience, and I might add thinking of our most dynamic club membership - personality, for those long and cold and cloudy nights when "astronomy" would still be a delight, but observing...a daunting challenge



## January BAA Meeting

The January meeting of the BAA will be held at the Williamsville Planetarium located on the corner of Hopkins Rd and Dodge Rd in Amherst NY.

1595 Hopkins Road  
Swormville, NY 14051

<http://www.williamsvillek12.org/planetarium/>

The doors will open at 7pm with a pre-game show for you early birds and the official show starts at 7:30pm so don't be late cuz after 7:30 the price doubles!

The 2 shows that will be shown are:

### **Bad Astronomy**



Learn about the Cosmos while debunking common misconceptions about the Universe! Interesting for astronomers of every age, and this show will make "good" astronomers of us all!

### **IBEX**



"Search for the Edge of the Solar System" details the IBEX spacecraft's exploration of the outer solar system using energetic neutral atom (ENA) imaging to create the first global maps of interactions between the million mile-per-hour solar wind and the low-density material between the stars, known as the interstellar

medium. Using these data, researchers will examine the structures and dynamics of the outer heliosphere and address a serious challenge facing human exploration by studying the region that shields Earth from the majority of galactic cosmic ray radiation.

## **HOLIDAY NEBULA FILTER DEMONSTRATION PROJECT**

**Barlow Bob**

Even though the Holidays are over you can still try this at your next outing or for a school/public demonstration. This is a reprint from Alan's friend Barlow Bob

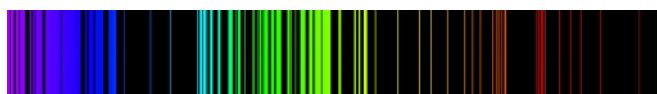
*Please share this holiday project with your club.*

*What do you observe on a snowy holiday season? Observe colored holiday lights through any nebula filter. You will notice that certain color lights disappear, when they are observed through nebula filters. These types of filters only allow certain wavelengths of color light to pass through, blocking others.*

*You can also observe the orange Hanukkah Menorah lights. Please share this demonstration project at your astronomy club meeting or club holiday party, using a string of colored holiday lights.*

*Hold a holographic diffraction grating in back of the nebula filter, and you will see the spectrum of the incandescent colored lights. You can also observe a sodium / mercury street light or fluorescent light.*

*You will notice that certain spectrum emission lines disappear.*



## What's up?

Mike Benz

This is a new column in the Spectrum. In this column I will try to focus in on one constellation that should be visible for that month. All information is researched on the Internet using various sources. I will try to cover January and February 2010.

January 3, 4 - Quadrantids Meteor Shower. The Quadrantids are an above average shower, with up to 40 meteors per hour at their peak. The shower usually peaks on January 3 & 4, but some meteors can be visible from January 1 - 5. Best viewing will be from a dark location after midnight. Look for meteors radiating from the constellation Bootes.

January 15 - New Moon

January 15 - Annular Solar Eclipse. The path of annularity will begin in central Africa and move east through the Indian Ocean, southern India, Sri Lanka, Malabar, and China. A partial eclipse will be visible throughout most eastern Africa and Asia. (NASA Map and Eclipse Information | NASA Eclipse Animation)

January 29 - Mars at Opposition. The red planet will be at its closest approach to Earth and its face will be fully illuminated by the Sun. This is the best time to view and photograph Mars.

January 30 - Full Moon

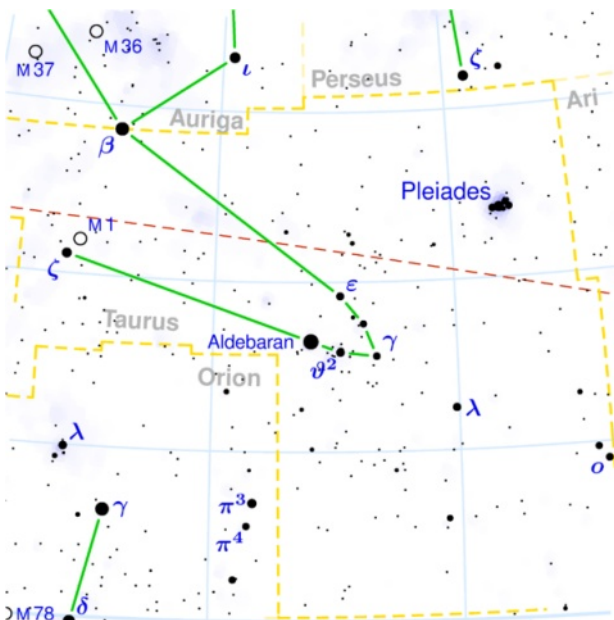
February 14 - New Moon

February 28 - Full Moon

## Taurus - January

[http://en.wikipedia.org/wiki/Taurus\\_\(constellation\)](http://en.wikipedia.org/wiki/Taurus_(constellation))

The brightest member of this constellation is Aldebaran, an orange-hued, spectral class K5 III giant star named after the Arabic phrase for "the Follower". Forming the profile of a Bull's face is a V or A-shaped asterism of stars. This outline is created by prominent members of the Hyades, the nearest distinct open star cluster after the Ursa Major Moving Group. In this profile, Aldebaran forms the bull's bloodshot eye, which has been described as "glaring menacingly at the hunter Orion", a constellation that lies just to the southwest.



In the northeastern quadrant of the Taurus constellation lie the Pleiades, one of the best known open clusters, easily visible to the naked eye. The seven most prominent stars in this cluster are at least visual magnitude six, and so the cluster is also named the "Seven Sisters". However, many more stars are visible with even a modest telescope. The name of the star Aldebaran most likely comes from the fact that it follows the Pleiades during the nightly motion of the celestial sphere across the sky.

To the west, the two horns of the bull are formed by Beta (β) Tauri and Zeta (ζ) Tauri; two star systems that are separated by 8°. Beta is a white, spectral class B7 III giant star known as El Nath, which comes from the Arabic phrase "the butting", as in butting by the horns of the bull. It is the second brightest star in the constellation, and shares the border with the neighboring constellation of Auriga. Zeta Tauri is an eclipsing binary star that completes an orbit every 133 days.

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## What's up continued...

A degree to the northwest of  $\zeta$  Tau is the Crab Nebula (M1), a supernova remnant. This expanding nebula was created by a Type II supernova explosion, which was seen on Earth, July 4, 1054. It was bright enough to be observed during the day, and is mentioned in Chinese historical texts. At its peak the supernova reached magnitude  $-4$ , but the nebula is currently magnitude 8.4 and requires a telescope to observe.

The star Lambda ( $\lambda$ ) Tauri is an eclipsing binary star. This system consists of a spectral class B3 star being orbited by a less massive class A4 star. The plane of their orbit lies almost along the line of sight to the Earth. Every 3.953 days the system decreases in brightness by 1.1 magnitudes as the brighter star is partially eclipsed by the dimmer star. The two stars are separated by only 0.1 astronomical units, so their shapes are modified by tidal interaction. This results in a variation of their net magnitude throughout each orbit.

Located about  $1.8^\circ$  west of Epsilon ( $\epsilon$ ) Tauri

is T Tauri, the prototype of a class of variable stars called T Tauri stars. This star undergoes erratic changes in luminosity, varying between magnitude 9 to 13 over a period of weeks or months. This is a newly formed stellar object that is just emerging from its envelope of gas and dust, but has not yet become a main sequence star. The surrounding reflection nebula NGC 1555 is illuminated by T Tauri, and thus is also variable in luminosity.

This constellation includes part of the Taurus-Auriga complex, a star forming region of sparse, filamentary clouds. This spans a diameter of 30 parsecs and contains  $3.5 \times 10^4$  solar masses of material, which is both larger and less massive than the Orion Nebula. At a distance of 150 parsecs, this is one of the nearest active star forming regions.

Taurus is best seen in the evening sky from November to March. The Hyades spans about  $5^\circ$  of the sky, so that it can only be viewed in its entirety with binoculars or the unaided eye.

## Orion - February

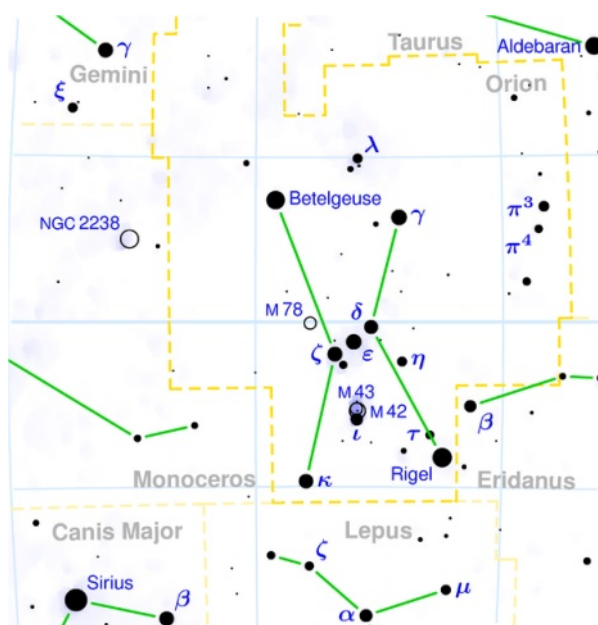
[http://en.wikipedia.org/wiki/Orion\\_\(constellation\)](http://en.wikipedia.org/wiki/Orion_(constellation))

### Stars

Betelgeuse, known alternatively by its Bayer designation "Alpha Orionis," is a massive M-type red supergiant star nearing the end of its life. When it explodes it will even be visible during the day. It is the second brightest star in the Orion constellation, but was mistakenly classified as the brightest because it is a semiregular variable star and was experiencing a tremendous increase in brightness at the time. It serves as the "right shoulder" of the hunter it represents (assuming that he is facing the observer), and is the twelfth brightest star in the night sky.

Rigel, which is also known as "Beta Orionis," is a B-type blue supergiant that is the sixth brightest star in the night sky. Similar to Betelgeuse, Rigel is fusing heavy elements in its core and will pass its supergiant stage soon (on an astronomical timescale), either collapsing in the case of a supernova or shedding its outer layers and turning into a white dwarf. It serves as the left foot of Orion, the hunter.

Bellatrix was designated "Gamma Orionis" by Johann Bayer, but is known colloquially as the "Amazon Star;" it is the twenty-second brightest star in the night sky. Bellatrix is



considered a B-type blue giant, though it is too small to explode in a supernova. Bellatrix's luminosity is derived from its high temperature rather than its radius, a factor that defines Betelgeuse. Bellatrix serves as Orion's "left shoulder."

Mintaka garnered the name "Delta Orionis" from Bayer, even though it is the faintest of the three stars in Orion's Belt. It is a multiple star system, composed of a large B-type blue giant and a more massive O-type white star. The Mintaka system constitutes an eclipsing binary variable star, where the eclipse of one star over the other creates a dip in brightness. Mintaka is the westernmost of the three stars that constitute Orion's Belt.

Alnilam was named "Epsilon Orionis," a consequence of Bayer's wish to name the three stars in Orion's Belt (from north to south) in alphabetical order. Alnilam is a B-type blue supergiant, despite being nearly twice as far from the Sun as Mintaka and Alnitak, the other two belt stars, its luminosity makes it nearly equal in magnitude. Alnilam is losing mass quickly, a consequence of its size; approximately four million years old.

Alnitak was designated "Zeta Orionis" by Bayer, and is the easternmost star in Orion's Belt. It is a triple star some 800 light years distant, with the primary star being a hot blue supergiant and the brightest class O star in the night sky.

Saiph was designated "Kappa Orionis" by Bayer, and serves as Orion's right foot. It is of a similar distance and size to Rigel, but appears much fainter, as its hot surface temperature (46,000°F or 26,000°C) causes it to emit most of its light in the ultraviolet region of the spectrum.

Of the lesser stars, Hatsya (or "Iota Orionis") forms the tip of Orion's sword,

whilst Meissa (or "Lambda Orionis") forms Orion's head. In common with many other bright stars, the names Betelgeuse, Rigel, Saiph, Alnitak, Mintaka, Alnilam, Hatsya and Meissa originate from the Arabic language.

### ***Meteor showers***

Around October 21 each year the famous Orionid meteor shower reaches its peak. Coming from the border to the constellation Gemini as much as 20 meteors per hour can be seen.

### ***Deep sky objects***

Hanging from Orion's belt is his sword, consisting of the multiple stars  $\theta 1$  and  $\theta 2$  Orionis, called Trapezium and the Orion Nebula (M42). This is a spectacular object which can be clearly identified with the naked eye as something other than a star; using binoculars, its swirling clouds of nascent stars, luminous gas, and dust can be observed.

Another famous nebula is IC 434, the Horsehead Nebula, near  $\zeta$  Orionis. It contains a dark dust cloud whose shape gives the nebula its name.

Besides these nebulae, surveying Orion with a small telescope will reveal a wealth of interesting deep sky objects, including M43, M78, as well as multiple stars including Iota Orionis and Sigma Orionis. A larger telescope may reveal objects such as Barnard's Loop, the Flame Nebula (NGC 2024), as well as fainter and tighter multiple stars and nebulae.

All of these nebulae are part of the larger Orion Molecular Cloud Complex which is located approximately 1,500 light-years away and is hundreds of light-years across. It is one of the most intense regions of stellar formation visible in our galaxy.

## **BAA ANNALS**

**Rowland A. Rupp**

**5 YEARS AGO** - "Voyager Encounters and Star Show" was the presentation made by Mark Percy at Williamsville North High School Planetarium in January 2005. In February, Tom Bakowski and Carl Milazzo told us about the "Care and Use of the Telescope." A Spectrum article on atmospheric optics by Cynta de Narvaez covered many of the terms relating to these phenomena and their causes. Bob Kirchgessner's obituary appeared. Bob was particularly interested in extraterrestrial intelligence, and he contributed articles and talks on the subject.

**10 YEARS AGO** - Marilou Bebak was our speaker for January 2000 when she talked about the space station. Next month a panel consisting of Larry Carlino, Bob Hughes, Carl Milazzo and Jack Mack discussed solar activity and auroras. President Gene Witkowski suggested seven observing projects just for the fun of it. Observatory Director Neil Dennis summarized the work being done at the observatory, and commented on the plans for the expansion of the Fred T. Hall building. The BAA was accepting donations to be turned over to the Audubon Society to support their building program. Carl Milazzo wrote an article that gave "Advice to a Beginner Amateur Astronomer", and someone (unidentified) listed twelve reasons for attending outdoor astronomy conventions. That may also have been from Carl. Dave Halbert, living in Germany where he was an operatic performer, wrote an extensive report of his observations there. Rowland Rupp reported on a sundog he observed while driving.

**15 YEARS AGO** - Local resident Jayme

Manning, an expert on CCD imaging and software development, spoke in January 1995. He had worked on software for the space shuttle, the Hubble telescope and the space station. In February, Reon Wadsworth reported on a solar eclipse he observed in Peru. Bob Hughes commented on the recent annular eclipse seen in the Buffalo area. Bill Smith planned to hold another Messier marathon in March. Darwin Christy wrote an article on "Observing Meteorites Through a Microscope." Darwin is a recognized expert in this discipline. He also wrote a short piece on seventeenth century astronomer Jean Picard. There was a plea for more articles and observation reports for The Spectrum from BAA members. I'm told the same request applies today, as I'm sure it has for the fifteen years in between and for long before that.

**25 YEARS AGO** - The January 1985 meeting was held at the Buffalo Museum of Science where Dr. Carl Seyfert from Buffalo State College spoke on "Impact of Meteorites at Cretaceous-Tertiary Boundary, ...." (I've always wondered why academicians often have such lengthy titles for their topics.) We heard from three BAA members in February: Dr. Fred Price on "Lunar Mysteries", Larry Carlino on "Purchasing of a Telescope", Rowland Rupp on the "Hertzsprung-Russell Chart". Ed Lindberg announced that the Niagara Frontier Council of Amateur Astronomical Associations would hold its semiannual meeting in Niagara Falls, Ontario. These meetings featured several speakers followed by a banquet. BAA dues for 1985 were \$10.00. Leslie Martin wrote an article on "Planetary Brightness", and Carl Milazzo provided guidance about how to photograph comets. Carl also wrote about apparent and absolute magnitudes.

***Continued on page 12***

**BAA Annals continued...**

He provided an observation report too, as did Michael Idem.

**35 YEARS AGO** - Dr. Antoinette Mann Paterson presented "Socio-political Aspects of Cosmological Models" at our February 1975 meeting. She was a professor of philosophy at Buffalo State College. The BAA was raising funds for the observatory to be built at Beaver Meadow. We had \$1420 by that time, but had given up on purchasing a dome for the observatory because of the high price. Ernst Both wrote an article entitled "Of Moon Cities and Selenites" in which he discussed observations made by eighteenth and nineteenth century astronomers who interpreted some lunar features as habitats for moon dwellers. There was a meeting of the Instrument Section, reported by Warren Steinberg, at which Bob Mayer suggested methods of mounting a 4 1/4 inch guide scope to the existing 12 1/2 inch main scope destined for the new observatory.

**UNIVERSAL THANKS**

**Rowland A. Rupp**

Irene and I have two grandsons living in New Hampshire. This Thanksgiving our daughter, Patty, asked her family to tell what each was thankful for before engaging in the Thanksgiving Day feast. Patty and her husband gave their lists, and then they came to the older of the boys, Andrew.

He announced that he was thankful for "the Big Bang." Andrew has always had a knack for novel comments, probably unconsciously, so this isn't entirely surprising. I suppose if you're thankful for the Big Bang you don't need to enumerate further.



**EVENING STAR**

**Edgar Allan Poe, 1827**

'Twas noontide of summer,  
And mid-time of night;  
And stars, in their orbits,  
Shone pale, thro' the light  
Of the brighter, cold moon,  
'Mid planets her slaves,  
Herself in the Heavens,  
Her beam on the waves.  
I gazed awhile  
On her cold smile;  
Too cold- too cold for me-  
There pass'd, as a shroud,  
A fleecy cloud,  
And I turned away to thee,  
Proud Evening Star,  
In thy glory afar,

And dearer thy beam shall be;  
For joy to my heart  
Is the proud part  
Thou bearest in Heaven at night,  
And more I admire  
Thy distant fire,  
Than that colder, lowly light.

-THE END-



## BAA Officers and General Information

President: Alan Friedman  
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Vice Pres: Janice Gardner

Secretary: Mike O'Connor

Treasure: Mike Israel

At Large Directors: Jack Mack  
Mike Anzalone

Membership: Alan Friedman  
(716) 881-4310

Observatory Directors: Pat Lannon  
Derek Bill

Star Parties: Dan Marcus  
(716) 773-5015

College of Fellows: Rowland Rupp  
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Spectrum Editor: Mike Benz  
mvbenz@mvbenz.com

BAA Yahoo E Group: Mike O'Connor  
Dennis Hohman

BAA Website: Mike O'Connor  
www.buffaloastronomy.com

BAA Voice Mail Box: (716) 629-3098

### Location/Time of Meetings:

BAA meetings are held on the 2nd Friday of the month from September to June starting at 7:30 P.M. Due to construction, our normal meeting room in the Science Building at Buffalo State College will not be available during the fall semester. Beginning September 2009, our meetings will be held in Classroom Building C122 located just to the north of the Science Building. Follow directions (#35) on the Buffalo State College map.

