

# CONSTELLATION

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Scott Petersen, editor © BMAA 2 015

## Those Ancient Astronomers Were Amazing

– *by Gary Sprague*

I enjoy reading history and especially about some of the historical astronomers. They were truly amazing. I feel incompetent when I consider the tools they had at their disposal, sometimes none, and often only their reason and their logic. The Greeks were especially notable in their logic, even though their measurements were sometimes lacking and imprecise. Aristarchus of Samos was a Greek astronomer whose work inspired Copernicus over 1000 years later. Aristarchus proposed that the Earth rotates on its axis and revolves around the Sun. Only references to his work survived but he was thoroughly denounced by other Greek philosophers of his time “for putting into motion the hearth of the universe.”

Aristarchus used his logic and observations of lunar and solar eclipses to estimate the relative sizes of Sun, Earth and the Moon. Using the same observations, he underestimated the relative distances of the Sun and Moon from the Earth, by about 20 times, but his logic was sound. His measurements were lacking, possibly because of the crudeness of his geometric tools, but I doubt I would be able to match his logic! Many have said the Greeks were the greatest “thinkers” in the history of mankind and I’m inclined to agree with them.

Even after astronomical telescopes were developed, have you considered doing your observations with some of the early ones? Before multiple lens were developed, the only way to reduce effects of chromatic aberration of early refractors was to increase the focal length. Can you imagine trying to observe Venus with a telescope having a 2 inch objective and focal length of 20 feet? Some of these telescopes with larger aperture lens had focal lengths approaching 100 feet? Sir Isaac Newton helped the telescope situation with the advent of his reflector but many of these scopes were also huge and unwieldy. They required multiple people to operate them for a routine observing session.

We take our modern telescopes and cameras out at night and enjoy the sights we see and the photographs we take. Next time, appreciate how far we have come, and consider what Galileo could have done with your telescope!

- *BMAA president Gary Sprague provided this article* [-ed]

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### 2015 BMAA Officers:

Gary Sprague, President

Dwight Dulsky, Vice President

John Urbanchuk, Secretary

Ed Radomski, Treasurer

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# **BucksMont Astronomical Association**

Minutes June 3, 2015

The May 2015 BMAA meeting was held on Wednesday June 3, 2015 at the Upper Dublin Lutheran Church. 19 members and guests were in attendance.

President Gary Sprague led off the meeting at 7:30p with an overview of Club activities in May and upcoming events for the remainder of 2015. Notable events in May were:

- May 13 Star Watch at Council Rock South High School, which was very well attended under very clear skies.
- May 17 Star Watch at Nockamixon State Park. BMAA had 2 telescopes provided by Robert and Gary for a small but reportedly enthusiastic turnout.
- Igor discussed the inter-club astronomy event at the Cheslen Preserve on May 23.
- Dwight reminded the membership about the upcoming NASA solar watch and outreach to be held at the Pocono International Raceway .

Gary held a discussion of observing Jupiter and its Red Spot and the brought the membership up to date on the BMA2 telescope project. He then discussed the upcoming first ever telescope clinic to be held at the July meeting. The purpose of the clinic will be to invite members and non-members to bring in telescopes for assessment of set-up, adjustment, operation, cleaning and maintenance.

Lee Zagar gave a stimulating presentation on planetary and lunar astrophotography with an emphasis on equipment (cameras and filters) and processing with imaging software. The discussion was lively and informative, particularly for those of us who are relatively new to astrophotography.

The meeting was adjourned at 9:00p.

Respectfully submitted,  
John Urbanchuk, Secretary

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## **BMAA at Pocono International Raceway June 6-7, 2015**

BMAA was invited to participate in a solar event with NASA at the Pocono International Raceway on the weekend of June 6th & 7th. NASA visits some of the NASCAR tracks with a public outreach program called “Rockets to Racecars” which highlights some of the physics and developments involved in making the rockets and racecars go fast.

Also highlighted at the event was the heliophysics division from Goddard Spaceflight Center in Maryland. At their request we provided live telescope viewing of the Sun during the pre-race event. Terry Park from BMAA was on hand with his wonderful Lunt solar scope giving folks impressive views of the solar prominences along the limb of the Sun. Dwight Dulsky was using a Thousand Oaks glass solar filter which showed off the sunspots on the solar surface. Working in tandem, folks were able to visit both telescopes and see some great features. Over the course of two days, we got the opportunity to talk to hundreds and hundreds of racefans who stopped by our scopes.

A great big thank you to Carolyn Ng of NASA for the invite and our NASA/NASCAR liaison Bonny Murray for treating us like “rock stars” all during the weekend.



*BMAA member Terry Park and NASCAR fans*



*BMAA members Terry Park [C] and Dwight Dulsky [CR] with more NASCAR fans*

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Tech Tips

## Mirror Fans

– *by Bernie Kosher*

Mirror Fans are wonderful. However . . .

I was observing at Atsion with Joe Steiber on Saturday and we found that having the fan (this was a regular house fan, but a small one) blowing air into the tube from the bottom made a big difference in steadying the image. The air in the tube is heated by the mirror and cell and forms tube currents. The fan dissipates these and makes the air temp more even. needless to say it also improves cooling. It should also help in reducing the chance of dewing , which is rare in a closed tube as the mirror stays warmer than the surroundings.

But, I would recommend thinking about drawing air in from below the tube. If the area is at all dusty it will draw that up into the tube. Also moisture. And bugs.

It seems to me the best way would be to have a lower fan drawing air out of the tube and a fan or two above the mirror drawing air in. Many old timers would drill fairly large holes along the tube to aid in air flow. Please let me know your thoughts and ideas on this. Try it.

When Joe and I were looking at Jupiter the difference was marked. The effect may not be as noticeable in open or truss tubes, but it will still help to cool the mirror. Tube currents tend to hang on the upper wall as they are actually heat rising from the mirror, it's cell and the tube itself. Naturally, an open tube allows these currents to escape.

*- BMAA long-time member Bernie Kosher provided this article and the Venus/Jupiter conjunction image photographed from his backyard, below [-ed]*



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## Robert Burnham Jr

Although his three-volume work entitled "Burnham's Celestial Handbook" is revered throughout the astronomical community, the man himself, Robert Burnham Jr, was virtually unknown outside his immediate circle of friends. In fact he was often confused with another Robert Burnham who for some time was editor of "Astronomy" magazine.

Much of the astronomical content of *Burnham's Celestial Handbook* is now dated, but the books remain cherished possessions of many observers largely because of the accompanying poetical, mythological and historical information that is interspersed throughout them.

Sadly, Robert Burnham Jr. benefited little from the extraordinary success of his books, spending his later years mostly penniless and as a virtual recluse selling paintings of cats in a San Diego park.

A chronicle of the life of Robert Burnham Jr., [Sky Writer](#), was written by Tony Ortega and published in the [Phoenix New Times](#) in September 1997.

He was also honored in this moving tribute, penned by **Alan Pasicznyk**, which was published on the Usenet newsgroup sci.astro.amateur in November 1997 by **P Edward Murray**. *- Alan and Ed are long-time BMAA members [-ed]*

## Starry Starry Night

*- by Alan Pasicznyk*

Starry starry Night,  
Drifting stars are changing Place,  
Gazing out to endless space,  
And life that has no bounds on human minds

All momentous finds,  
Sifting through the endless haze,  
Constellations in a maze,  
And suns for light-years tallied all tonight

Felines in the Night,  
Selling paintings in the Park,  
Diamonds on black lace now mark,  
The memories of what could or might have been

Fading to twilight,  
Pretty girls in White depart  
An image shimmers in the dark,  
All is Lost beyond the edge of Sight

Now I to my chagrin,  
See the things that couldn't be,  
That made you suffer for your sanity,  
And how you wanted to be free

And on that Starry starry Night,  
Beyond the fading of twilight,  
You lost your life as poets often do,  
But I could have told you Robert  
This world was never meant for one  
As beautiful as you.

*- In Memory of Robert Burnham Jr (1931-1993)*

# BMAA Member Registration Form

- Renewal  
 New Member

Name \_\_\_\_\_

\_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Telephone

Home \_\_\_\_\_

Cell \_\_\_\_\_

E-Mail \_\_\_\_\_

Dues are **\$30.00** for an individual or **\$40.00** for a family membership (more than one person at same address).

Make check payable to **BMAA and send to:**

BMAA  
c/o Ed Radomski  
36 Far View Road  
Chalfont PA 18914

If you would prefer to register and pay using **PayPal** do not use this form. On the **PayPal** website send your payment to [treas@bma2.org](mailto:treas@bma2.org). Send it as a "purchase of goods" so that I receive your address. In the email section make the subject "Dues", include your telephone number and your preferred email address in the message area.

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All BMAA meetings are open to the general public. We share observing highlights (including aurora sightings), astrophotographs and experiences. Meetings begin at 7:30p at Upper Dublin Lutheran Church, 411 Susquehanna Ave, Ambler PA 19002. Look for black and yellow BMA2 signs.

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