Bays Mountain Astronomy Club

☞*Next Meeting: Aug. 2*☜

REFLECTIONS *BY WILLIAM TROXEL*

Greetings fellow star watchers,

Another month is upon us bringing us closer to this year's StarFest. The registration form will be available in the next week or so, so please consider attending the 30th anniversary StarFest!

I think our annual picnic at Natural Tunnel State Park was very successful. The attendance was good with 15 club members along with their families and friends. We had about 30 campers and park visitors come up for the star party. I was a little afraid that the weather would not break for us again, but in the end it turned out to be a good night. Several members told me that they thought it was one of the better annual picnics. I want to thank everyone for coming out. A special thanks goes out to our chef Greg Love for the great job cooking the burgers and dogs. If you were not there you missed a very good event.

Looking forward to the coming months, I want to start some conversations about ways to help our membership grow. Some of which include ideas like community involvement, more club events and reference/educational resources. Last year I opened the conversation, but did not seem to get the interest of our club members. I would like to try again this year and see what we can get started. Let me explain what my thought process has been in these areas, maybe that will help the conversation moving forward.

I think having our membership grow is important because we must have new members to keep us young. While I think all of our efforts so far have been good, I am hoping that we can explore new ways to attract interested people into visiting us.

Some of you have told me that you would like to see more observing offered. The question then becomes when do we offer and where do we go? This also depends on the weather and, while we can't do anything about it, maybe we can find some locations we can go as a club. This would involve advance planning to make it happen especially if we hope to attract new members. Observing is only one way to attract membership. I am sure there are others, I just have not thought of them yet.

Community involvement is one that I think we can do a little easier because Adam and Jason have told me that they receive lots of requests for someone to come and work with scout groups but the requests are turned down because they do not have the staff to do them. This could be an area the club could help. Please let me know your thoughts about this idea. The requests are there, we would just have to see if we could work these requests into our personal time. I know everyone is very busy with our day-to-day lives, but it is a good way to be involved in the community.

I'm still working on the additional references and education items that we could add to the web site. I'm also working on some hand outs that could be given to people who visit the park or to groups that we may visit. I am also looking into logistics to sending out information on requests.

(Continued on page 5)

Calendar

Special Events

Oct. 11-13 StarFest 2013, our 30th Anniversary! You must register in advance with payment to attend this fantastic astronomical convention/star party. See the club's website for details and registration form.

SunWatch

Every Sat. & Sun., 3 - 3:30 p.m.,

Mar. - Oct., weather permitting.

BMACers are always welcome to help.

BMAC Meetings

7 p.m., Discovery Theater

Aug 2 Dr Joseph Pollock, Appalachian State University Astronomy Department. "Specifically Paired & Binary Asteroids / PROMPT Telescope." Const. Quest: Terry Alford: Perseus.

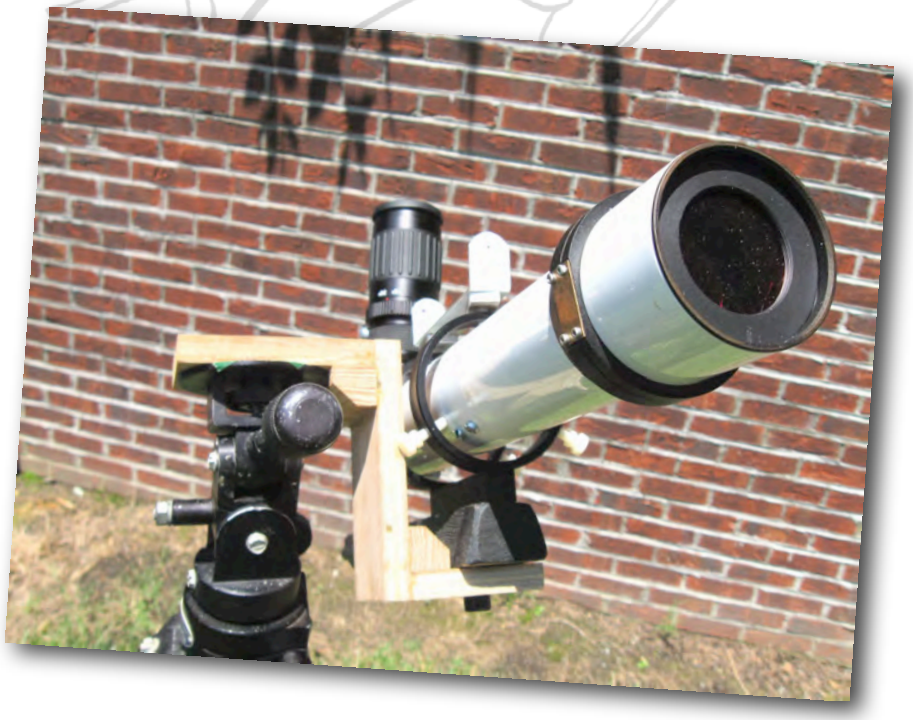
Sep. 6 ETSU Observatory Field Trip; "Remote Astronomy." We'll be using the remote access to far away observatories to make some scientific observations.

Oct. 4 6:30 p.m.! Observatory cleanup and observing.

STAR STUFF *BY TERRY ALFORD*

A few months ago I wrote about a mod I made to my venerable Leitz tripod to more easily use it with my Lunt 35 Hydrogen-alpha scope. When we reached the solstice last June it became apparent that something else needed to be done. When looking at the sun anywhere near solar noon, the scope would become "tilt happy." That is, when pointed at that high an elevation, the scope wanted to fall back on it's altitude axis. This meant that more friction was needed and the tripod altitude axis was more difficult to use.

I remembered a couple of years ago that Sky & Telescope had an ATM article about lowering the axis of the altitude movement to make the scope more balanced. This can simply be done with a small board that attaches to the tripod head with a T-nut and the scope is mounted upside down to that board. Well, I did not want my scope mounted upside down so I made a simple "Z" board that did the same thing. The picture is pretty self-explanatory. 1/2-inch plywood is glued up so that the center of gravity of the scope is very near to the center of the motion of the altitude axis. This way the altitude axis can be left loose and the scope motions are very much easier to use. Just "point and view." I have since painted the Z board semi-gloss black to match the tripod. All in all, a simple ATM project that WORKS!



StarFest 2013 - 30th Anniversary!

October 11-13, 2013

Six keynote speakers, 5 fantastic meals, all StarFest activities plus free access to the Park's activities, observing, planetarium shows, a commemorative fleece jacket, a special filter worth $80 (a gift from Burgess Optical), free sleeping in the Park and more! $85/person; $75 for full-time students and those ≤21.

We've also arranged for a special rate at the Marriott MeadowView Resort. Follow the link on the website or call 423-578-6600.

Registration for this annual astronomical convention/star party will be open by the beginning of August or earlier. You must pre-register with payment to attend.

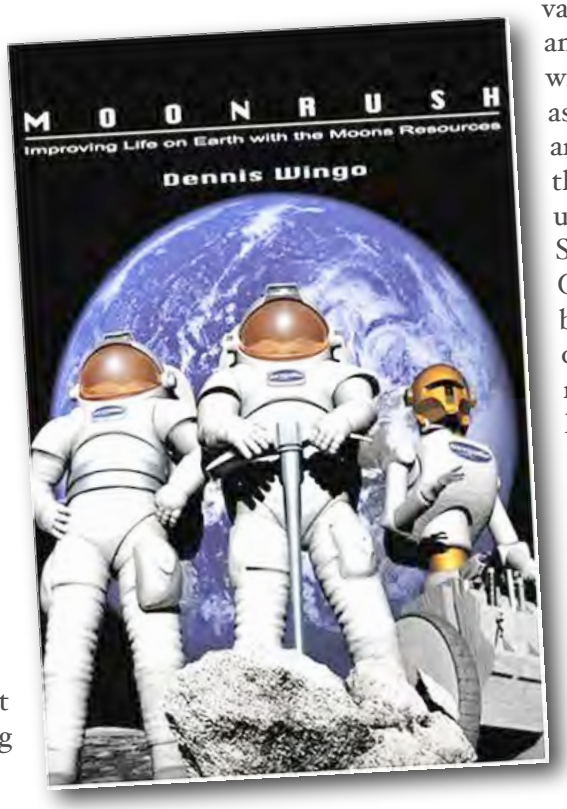
The registration form is on the website at: http://www.baysmountain.com/astronomy/astronomy-club/.

HAPPY BOOK REVIEW: MOONRUSH *BY ROBIN BYRNE*

I'm not sure how I came to have a copy of "Moonrush: Improving Life on Earth with the Moon's Resources" by Dennis Wingo, except that I know I didn't buy it, which is a good thing. Not that it is a horrible book, but it certainly has its flaws.

Wingo begins by describing how Earth's resources are in short supply, especially for energy production. While dismissing efforts to reduce energy consumption, and completely ignoring some alternative energy supplies such as solar and wind power, Wingo bases his entire argument for returning to the moon on the need for hydrogen fuel cells. Why do we need to go to the moon for hydrogen fuel cells? Platinum. Platinum is used in fuel cell production and is scarce on earth, making fuel cells expensive to mass market. Instead of suggesting research to find a way to make efficient fuel cells with materials that are more abundant, or pursuing advances in solar and wind power, Wingo is convinced that vast stores of platinum are on the moon just waiting to be mined, and that this, and this alone, is what will save our planet. It is interesting that while Wingo criticizes environmentalists for their single-minded approach to solving Earth's problems, he is equally single-minded in his approach. Although, he does have one other energy source in mind: fusion of Helium 3. But where to get Helium 3? While the moon has some from interactions with the solar wind, the logical choice would be to mine the atmosphere of Uranus, of course! Never mind the small problem of not having the technology to create a fusion reaction.

Next Wingo takes us on a history of the U.S. space program, in particular, the politics of it. Wingo's assessment of how NASA is at the mercy of the whims of each administration and congress is correct. Funding comes and goes without any true vision. Once we beat Russia to the moon, there were no big goals to keep the program on track. While manned spaceflight has floundered, unmanned exploration has flourished. However, Wingo is not impressed. All those space probes were only pursuing science, when they could have been assessing where resources were that could be exploited.



Lastly, Wingo lays out a variety of ways we can set up permanent travel to and from the moon and how to establish a moon base. It is interesting to note that, while he criticized government involvement in the space program, and praised private industry, one of the key components of his plan includes using the International Space Station as a location to manufacture the various spacecraft needed to go to and stay on the moon. I wonder who would be doing the actual assembly? [Ed.: And who paid for and runs the ISS?] Continuing in the realm of Wingo's reality, setting up the moon base would include Segway driving robots, obviously. Once established, let the mining begin! Without any actual data concerning the resources on the moon, Wingo extrapolates that huge amounts of platinum and other resources are just waiting for easy extraction from the lunar soil. Granted, several tons of lunar soil will be needed to produce relatively small amounts of materials, but there's the entire moon to make use of. Plus, Wingo is certain that impact sites will have even higher concentrations, so don't you worry.

Most of the information in this book, Wingo readily admits, came from other books and sources, with very few original ideas. So as I read "Moonrush," I kept thinking, "This sounds like some guy with a blog who decided to write a book."

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NASA SPACE PLACE

Inventing Astrophotography: Capturing Light Over Time

By Dr. Ethan Siegel

We know that it's a vast Universe out there, with our Milky Way representing just one drop in a cosmic ocean filled with hundreds of billions of galaxies. Yet if you've ever looked through a telescope with your own eyes, unless that telescope was many feet in diameter, you've probably never seen a galaxy's spiral structure for yourself. In fact, the very closest large galaxy to us, Andromeda's M31wasn't discovered to be a spiral until 1888, despite being clearly visible to the naked eye! This crucial discovery wasn't made at one of the world's great observatories, with a world-class telescope, or even by a professional astronomer; it was made by a humble amateur to whom we all owe a great scientific debt.

Beginning in 1845, with the unveiling of Lord Rosse's 6-foot (1.8 m) aperture telescope, several of the nebulae catalogued by Messier, Herschel and others were discovered to contain an internal spiral structure. The extreme light-gathering power afforded by this new telescope allowed us, for the first time, to see these hitherto undiscovered cosmic constructions. But, there was another possible path to such a discovery: rather than collecting vast amounts of light through a giant aperture, you could collect it over time, through the newly developed technology of photography. During the latter half of the 19th Century, the application of photography to astronomy allowed us to better understand the Sun's corona, the spectra of stars, and to discover stellar and nebulous features too faint to be seen with the human eye.

Great Nebula in Andromeda, the first-ever photograph of another galaxy. Image credit: Isaac Roberts, taken December 29, 1888, published in A Selection of Photographs of Stars, Star-clusters and Nebulae, Volume II, The Universal Press, London, 1899.

Working initially with a 7-inch refractor that was later upgraded to a 20-inch reflector, amateur astronomer Isaac Roberts pioneered a number of astrophotography techniques in the early 1880s, including "piggybacking," where his camera/lens system was attached to a larger, equatorially-mounted guide scope, allowing for longer exposure times than ever before. By mounting photographic plates directly at the reflector's prime focus, he was able to completely avoid the light-loss inherent with secondary mirrors. His first photographs were displayed in 1886, showing vast extensions to the known reaches of nebulosity in the Pleiades star cluster and the Orion Nebula.

But his greatest achievement was this 1888 photograph of the Great Nebula in Andromeda, which we now know to be the first-ever photograph of another galaxy, and the first spiral ever discovered that was oriented closer to edge-on (as opposed to face-on) with respect to us. Over a century later, Andromeda looks practically identical, a testament to the tremendous scales involved when considering galaxies. If you can photograph it, you'll see for yourself! Astrophotography has come a long way, as apparent in the Space Place collection of NASA stars and galaxies posters at http://spaceplace.nasa.gov/posters/#stars.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

MISCELLANEOUS

Reflections

by William Troxel

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Like costs, sponsorships, donations, etc. for the postage, supplies and paper to reproduce items.

I hope you are starting to get excited about the upcoming StarFest. I know I am. October will be here before you know it. Our programs leading up to the big event are already set. In August, we will have Dr. Pollock talking about binary stars and his work in South America. In September, we are planning to go to ETSU to the Powell Observatory for some live remote viewing. Then in October, we will focus on an outside observing meeting as well as a final cleanup prep for StarFest. I ask you to keep watching the web site for updates and new items. I am looking for members who would like to lead the Constellation Quest. It is easy and fun. Until next time... Clear skies.

Happy Book Review

by Robin Byrne

(continued from page 3)

I waited until I had finished to find out more, and, behold, he's a guy with a blog! Wingo has written a few books, all of them geared toward returning to the moon. His profession is software engineering and his scientific knowledge is sketchy at best (he wrote that fusion involves overcoming the electrical repulsion of the electrons, rather than the protons). I seriously doubt the book had an editor, because there were several typos, and some word choices that made this grammar Nazi cringe. As you might have already deduced, I was not impressed by "Moonrush." However, if you're interested in this topic and want to learn more, save your money and read his blog.

Moonrush: Improving Life on Earth with the Moon's Resources by Dennis Wingo, Apogee Books, 2004

For Sale:

18" Obsession telescope - "Classic" model

Well taken care of and in near original condition. Includes light shroud, Telrad finder and NGC Max setting circles. Asking $4500.

The current model with Argo Navis setting circles goes for $8124.

Contact Frank Reed
502-331-0175
frhankjemleyass@gmail.com

3603 Donna Way
Bardstown, KY 40004

Regular Contributors

WILLIAM TROXEL

William is the current chair of the club. He serves as activities coordinator for a local retirement living community.

TERRY ALFORD

Terry is also a founding member since 1980 and has been chair many times, as well. He has worked as an astronomy lab instructor at ETSU since 2001.

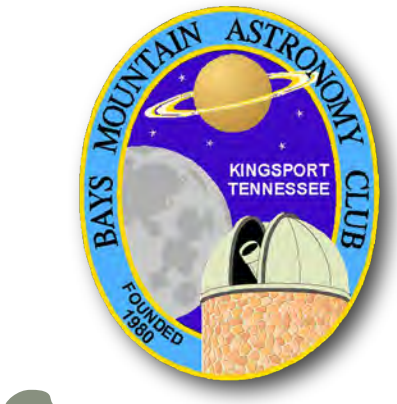
ROBIN BYRNE

Robin has been writing the science history column since 1992 and was chair in 1997. She is an Associate Professor of Astronomy & Physics at Northeast State Community College (NSCC).

ADAM THANZ

Adam has been the Editor for almost all of the years since 1992. He is the Planetarium Director at Bays Mountain Park as well as an astronomy adjunct for NSCC.

The Bays Mountain Astronomy Club



Edited by Adam Thanz:
thanz@kingsporttn.gov

Dues:

The Bays Mountain Astronomy Club requires annual dues for membership. It covers 12 months and is renewable at any time.

Rates:

$16 /person/year

$6 /additional family member

If you are a Park Association member, a 50% reduction in fees is applied.

Find out more at our website:
http://www.baysmountain.com/astronomy/astronomy-club/

Made on a Mac!

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Kingsport, TN 37660