

Bays Mountain Astronomy Club

☞ *Next Meeting: Nov. 7* ☞

REFLECTIONS

Greetings fellow amateur astronomers! November is upon us, which means we say good bye to StarFest until next year. It also signals the start of the last month of StarWatches. Hope you will come out and be a part of the StarWatch program that we co-host with the park staff. I have said it before, however it bears repeating, we need you! The success of this outreach program depends on all of us. StarWatch starts at dusk on each Saturday night. Please be at the observatory about 30 minutes before to set up.

Recapping an amazing event like the 2014 StarFest, which just ended, gets harder each StarFest I attend. I felt like I was wowed, entertained, enlightened and inspired all in one. We had 99 people register, I think everyone felt like it was worth it. All the keynote speakers were awesome. Of course the food was wonderful. If you missed this you really missed out on a wonderful weekend. Talk to anyone that attended.

October's meeting was good. Jon Peters shared with the group the progress on his observatory using pictures and talked about some of

BY WILLIAM TROXEL

the work currently being done. His presentation was very informative to the ins and outs of building one's own observatory from the ground up. Jon promised to keep the club updated with progress.

November's constellations for consideration are Perseus and

Andromeda, which should be high overhead. This should give a better view of the Andromeda Galaxy and the star Algol in Perseus. Algol is a eclipsing binary - two stars that exist together and orbit each other. Depending on where you are you may still be able to see the Milky Way, it too will be overhead somewhat. There are many celestial delights to see during November, I am only offering a few for your consideration.

The November meeting will feature Matt Connon (ETSU Grad Student) will speak on "Observation of BE Stars" as our Keynote presentation. We will offer a short demonstration on how to set up your telescope for the amateur astronomer corner. The meeting will be at 7 p.m. on November 7. Hope you can come out and be a part of this meeting.

I want to leave you with a thought from StarFest. This year's



Calendar

Special Events

Jan. ? Annual club dinner. Date, time, and place TBA.

SunWatch

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

Mar. - Oct., weather permitting.

BMACers are always welcome to help.

StarWatch

Oct. 25, Nov. 1 7 p.m.

Nov. 8 15, 22, 29 6 p.m.

BMACers are always welcome to help with this nighttime viewing program for the public. Please show up about 30 min. prior to help set up.

BMAC Meetings

7 p.m., Discovery Theater:

Nov. 7 Matt Connon (ETSU Grad Student) will speak on "Observation of 'BE' Stars." Amateur Ast. Corner will be "Setting Up Your Telescope."

Dec. 5 Christi Whitworth; Dir. of Education Outreach, PARI will speak on "Radio Astronomy & Smiley as an Outreach Tool."

Feb. 6 Program TBA.

theme showed me just how close art, music, literature and astronomy are tied together. The time has come to break down the things that keep these four apart. The more we learn the more we need to understand the roles that each play and how they are connected. This connection is not of modern making. I see that as an alliance that was formed from the start. I think we as humans just did not open our minds to see the connection. I can only hope that future astronomers will embrace this connection and forge ahead.

Until next time, clear skies.

STARFEST IN REVIEW

BY ADAM THANZ

StarFest 2014 has come and gone. Based on the numerous positive comments, I feel that this year's event was a success.

I was happy to chair the event to represent the club as well as Bays Mountain Park and the City of

Kingsport. I want to thank all the BMAC members in attendance that helped with some part of the event. Some helped with check-in, some with meal clean-up, some with observing.

Attendance reached 99, which is capacity for us! We had five great keynote speakers that inspired, enthralled, and educated us all. We also had five great meals that sated us all. I'll let the photos tell the story. I already have some plans for next year's event with a theme that I think will be just as well received as this year's.



photo by Ken Perry

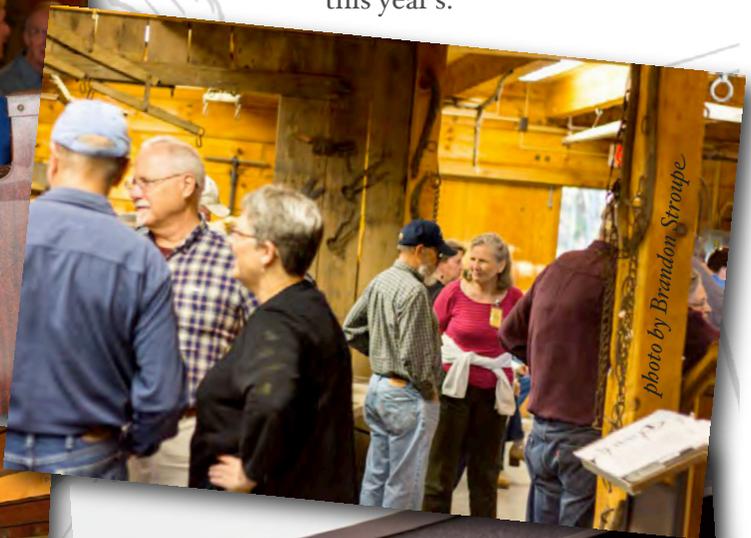


photo by Brandon Stroupe



photo by Ken Perry



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Bays Mountain Park & Planetarium
Kingsport, TN USA
October 17-19, 2014

HAPPY BOOK REVIEW: PROMISED THE MOON

BY ROBIN BYRNE

Promised the Moon

by Stephanie Nolen

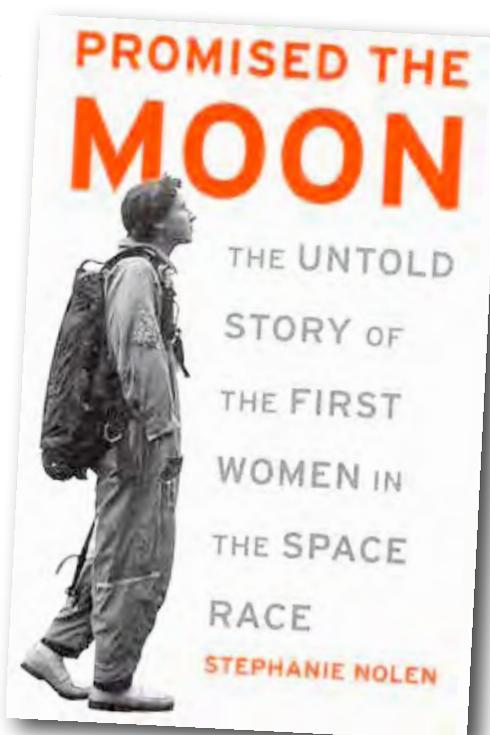
Once again, we return to ye olde bookshelf to review a book. This time, I read “Promised the Moon: The Untold Story of the First Women in the Space Race” by Stephanie Nolen. As a fan of anything to do with the history of the space program, and as a raving feminist, this looked to be right up my alley. I was not disappointed.

The story begins in September of 1959 while Geraldyn “Jerrie” Cobb was attending the Air Force Association annual meeting with her boss, Tom Harris. She worked for Aero Design and Engineering Company as a pilot and manager. While strolling on the beach with Harris, he introduced her to two men coming from the other direction: Donald Flickinger and Randy Lovelace. When Flickinger and Lovelace discovered that Jerrie was a pilot with over 7000 hours of flight time, her destiny was met. Lovelace was interested in putting women through the same tests the original Mercury astronauts had to endure to be chosen. He felt that women were even better suited for some of the stresses encountered in spaceflight, and he wanted to prove it. Jerrie was more than willing to be a guinea pig.

After Jerrie successfully completed the tests, Lovelace wanted to test other women. He sought help from his longtime friend, Jackie Cochran. Jackie made a name for herself as a competitive pilot, ran her own business, and was a millionaire whose donations helped Lovelace set up his clinic. During

World War II, Jackie organized and ran the Women AirForce Service Pilots (WASPs) program. With her political connections and ties to other female pilots, Lovelace asked her to help recruit other women to be test subjects. Of those contacted, 12 answered the call.

All of the women were under the impression that they were being tested by NASA, since it was well



known that the Lovelace Clinic was used by NASA to test the original astronaut candidates. They truly believed that they had a chance to go into space. That did not happen. The tests were being conducted by Lovelace primarily as a research project. When he contacted the same military base where Jerrie Cobb had completed some of her tests, with the request to test the other women, he was denied permission when they

discovered that NASA was not backing the program. That’s when things got ugly.

The remaining 12 women weren’t notified until they had already made plans to go to Florida for 3 weeks of tests. Three of the women had to quit their jobs. Now they were left hanging with no explanation. Jerrie Cobb was furious and ready to fight. She contacted every person she could think of from NASA to congress, and all the way to the White House. She met with administrators, senators, and Vice President Johnson. After enough publicity hit the newspapers, the House Committee on Science and Astronautics had a hearing about the issue of women going to space. On July 17, 1962, the hearing convened. Representing the women along with Jerrie was one other candidate, Janey Hart, who knew her way around Washington since her husband was a senator. On behalf of NASA were George Low, John Glenn, and Scott Carpenter. The NASA line was that only military jet test pilots could be astronauts. If a qualified woman applied, they would consider her. The women pointed out that only men were allowed in the military, so the requirements automatically excluded women unfairly. Then Jackie Cochran took the stand. Much to the shock of Jerrie and Janey, Jackie supported the decision to not include women. Between Jackie’s testimony and the statements made by Low, Glenn, and Carpenter, the case was lost.

(Continued on page 5)

NASA SPACE PLACE

Where does the sun's energy come from?

Every 1.5 millionths of a second, the sun releases more energy than all humans consume in an entire year. Its heat influences the environments of all the planets, dwarf planets, moons, asteroids, and comets in our solar system.

National Aeronautics and Space Administration



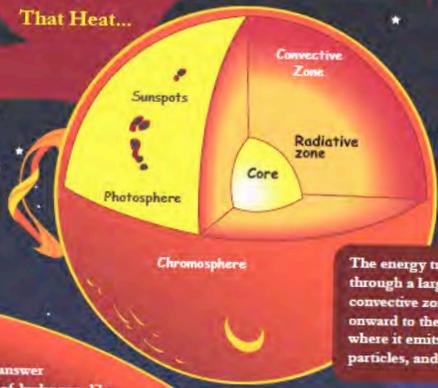

And that light travels far out into the cosmos—just one star among billions and billions.

Create a 'solar wind' that pushes against the fabric of interstellar space billions of miles away.

Allows gases and liquids to exist on many planets and moons, and causes icy comets to form fiery halos.

Powers the chemical reactions that make life possible on Earth.

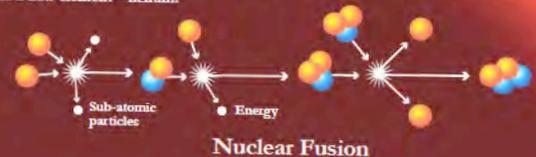
That Heat...



The energy travels outward through a large area called the convective zone. Then it travels onward to the photosphere, where it emits heat, charged particles, and light.

How does a big ball of hydrogen create all that heat? The short answer is that it is big. If it were smaller, it would be just a sphere of hydrogen, like Jupiter. But the sun is much bigger than Jupiter. It would take 433,333 Jupiters to fill it up!

That's a lot of hydrogen. That means it's held together by a whole lot of gravity. And THAT means there is a whole lot of pressure inside of it. There is so much pressure that the hydrogen atoms collide with enough force that they literally meld into a new element—helium.



Sub-atomic particles

Energy

Nuclear Fusion

This process—called nuclear fusion—releases energy while creating a chain reaction that allows it to occur over and over and over again. That energy builds up. It gets as hot as 15 million degrees Fahrenheit in the sun's core.

Space Place In a Snap!

www.nasa.gov

For more articles, games, and activities, visit spaceplace.nasa.gov

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

*MISCELLANEOUS***Happy Birthday***(continued from page 3)*

So much of the story of the Fellow Lady Astronaut Trainees (FLATs) is also a story of the attitudes towards women during the 1950's and 1960's. This was an era when married women had to have their husband's signature to open a bank account or make a large purchase. These women were already anomalies just by the fact that they chose to fly airplanes, either as a hobby or as a career. Much was made of the effort to appear feminine when participating in the various flight competitions or when flying for different businesses. They didn't want anyone to think the female pilots were lesbian. Meanwhile, the early space program was simply an old boy network of men primarily from the military. They took for granted that it was a boys-only group. NASA didn't change that attitude until the 1970's when the first women were recruited for the shuttle program.

For Jerrie Cobb, Janey Hart, Jean Hixon, Wally Funk, Irene Leverton, Jan Dietrich, Marion Dietrich, B Trimble, Sarah Gorelick, Rhea Hurre, Gene Nora Jessen, Jerri Truhill, and K Cagle, they were just doing what they felt they were born to do. Although a disappointing story that the women were never given the opportunity to fly to space, they are still an inspiration. They followed their dream in the face of much criticism, discrimination, and harassment. Whether referred to as the FLATs or the Mercury 13, these women are best described as heroes.

Reference:

Promised the Moon: The Untold Story of the First Women in the Space Race by Stephanie Nolen; Thunder's Mouth Press 2002

Regular Contributors*WILLIAM TROXEL*

William is the current chair of the club. He is currently a deliverer for Little Debbie products.

TERRY ALFORD

Terry is a founding member since 1980 and has been chair many times. 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 all but a number of months since 1992. He is the Planetarium Director at Bays Mountain Park as well as an astronomy adjunct for NSCC.

The Bays Mountain Astronomy Club



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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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