

BBAA Astronomy Club September 6, 2018 (TCC JC-13)

Chuck Jagow (President):

Called meeting to order at 7:30 PM.

Members present include: Chuck Jagow, George Reynolds, Shawn Loescher, Jeff Goldstein, Bruce Powers, Matt McLaughlin, Bob Beuerlein, Kenny Broun, Arch Walpole, Richard Huertas, George C. Jarvis, Melvin Spruill Jr., Neill Alford, Samantha Burris, Linda Reynolds, Susan Livingston, Larry Livingston (presenter), Jarec Austin, Kayla Robinson, Linda Mosby, and "Bird" Lawrence Taylor.

Chuck opened the meeting mentioned we would go quickly with our business portion, since we have a presentation by Larry Livingston on the Mars Rover and its chronology.

Vice President Events Report (read by Shawn Loescher):

September:

- 09/06 – BBAA Club Meeting at TCC Room JC-13
- 09/07 – Corn Watch (Cornland Park Private) Sunset – Dawn. Bring BBAA ID & Cornland Permit
- 09/07 – Full Moon-a-Palooza (cancelled)
- 09/08 – Nightwatch Chippokes Plantation State Park (8:30 PM – 6:30 AM)
- 09/14 – Corn Watch (Cornland Park Private) Sunset – Dawn. Bring BBAA ID & Cornland Permit
- 09/15 – Saturday "Sun" Day (Elizabeth River Park, Chesapeake) 10:00 AM – 1:00 PM
- 09/15 – Mt. Trashmore Movie Night (expecting 2,000 people)
- 09/20 – Garden Stars at Norfolk Botanical Garden (7:30 – 9 PM)
- 09/21 – Girl Scouts Encampment
- 09/25 – Boardwalk Astronomy (#5 last one for this year), 24th Street (6:00 PM – 11:00 PM)
- 09/29 – VAAS Conference (Copley Science Center, Randolph Macon College, near Richmond)

October:

- 10/04 – 10/07 – East Coast Star Party (Coinjock, NC)
- 10/04 – BBAA Club Meeting at TCC Room JC-10
- 10/05 – Corn Watch (Cornland Park Private) Sunset – Dawn. Bring BBAA ID & Cornland Permit
- 10/07 – Night Sky Viewing (Ft. Monroe)
- 10/12 – Corn Watch (Cornland Park Private) Sunset – Dawn. Bring BBAA ID & Cornland Permit
- 10/13 – Science Play Day (10:00 AM) TCC Joint Use Library (6:00 – 9:30 PM)
- 10/13 – Skywatch NWRP (6:30 – 10:30 PM) only a 4 hour event + 1 hour before for telescope help
- 10/18 – PTA Family Night STEM & M Greenbriar Intermediate School
- 10/18 – Garden Stars at Norfolk Botanical Garden (7:30 – 9 PM)
- 10/20 – Saturday "Sun" Day (Elizabeth River Park, Chesapeake) 10:00 AM – 1:00 PM
- 10/20 – Family Star Gazing at Joint Expeditionary Base, Little Creek Library

Secretary's Report (Jeff Goldstein)

Jeff started to read the minutes of the last picnic meeting at Red Wing Park... Moved & seconded to waive reading the minutes.

Treasurer's Report (Bruce Powers deferred to a later date) Here is Bruce's report for September

General Fund Income: \$ 7,906.71
General Fund Expenses: \$ 5,043.45
General Fund Balance: \$ 2,863.26
Scholarship Fund Inc: \$ 1,923.52
Scholarship Fund Exp: \$ 1,500.00
Total: \$ 423.52

GJ S'ship Fund Income: \$ 2,062.00
GJ S'ship Fund Exp: \$ 500.00
Total: \$ 1,562.00

BBA Financ. Sum'y \$ 4,848.78
 Pending PayPal Depos. \$
BBA Checkbook \$ 4,851.39
 Checkbook + PP – Fin. \$ 2.61

Membership Data

Honorary Members: 5
 Associate Members w/AL: 14
 Associate Members: 1
Regular Members: 108
 Total Members on Roster: 128

Paid up Members:
 Members' Dues (due this month)
 Delinquent in dues:
 Anticipated 2018 Dues: \$

Anticipated Expenses for 2018

AL Dues	\$ 605.00	Paid June 2018
State Corp. Comm. Fee	\$ 35.00	
Insurance	\$ 320.00	Paid May 2018
Fees PO Box	\$ 102.00	Paid 1/9/18
August Picnic	\$ 125.00	
Mailings	\$ 150.00	Newsletter Snail Mail Mailings
Charitable	\$	
<u>Misc.</u>	<u>\$ 1,000.00</u>	Eyeieces, Legal Fees, Dark Sky Donations, Outreach Supplies, etc.
Total:	\$ 2,487.00	

Alcor Report (Bill McLean) Not present. In New England currently. No report.

Scholarship Committee Report: (Ben Loyola). Not present. No report.

RRRT Report ("Bird" Lawrence Taylor) Bird mentioned that a new camera mount was recently made that adapted the refurbished camera. Currently, we are borrowing Dr. Salgado's camera until the RRRT's refurbished camera arrives.

Old Business:

- BBA Luncheon will be held on December 15th at Stripers (in Norfolk). Thank you, George Reynolds.

New Business:

- Webmaster Awards and accolades to Shawn Loescher and Curt Lambert. Plaques was presented to Shawn.
- ALCon 2019 at Kennedy Space Center and Southern Skies Cruise to the Bahamas (July 25 – 29, 2019).
- The 2018 VAAS is to be held at Randolph Macon College (near Richmond) on September 29th.
- Girl Scouts are requesting a BBA member to volunteer for a space science workshop at NASA's Goddard Space Flight Center.
- We raised a total of \$581.00 at the summer picnic + the family of Georgie June sent us another \$350.00 towards her scholarship fund. Chuck sent thank you cards.
- Chuck has an idea for next year's prize. Chuck will donate his older Canon 40D camera to be converted to a Da model (IR filters removed) and retains autofocus with extra glass window. More details, later.
- Bill McClean traded his scope for Chuck's ETX-125. Chuck is cleaning Bill's scope.
- Sean and Chuck are both picking up another donated scope intended as "loaner scopes".
- November is our election month for new officers: Secretary Office will be open for nominations.

Observing Reports & Announcements:

- Sky Safari VI Pro for Android (latest version of software has been released). Bird mentioned that Sky Safari AR is now free.
- Star Blast Telescope on 17th of the month is the "kickoff" for these new scopes going out.

Program: “Mars Rovers” presented by Larry Livingston and George Reynolds.

Larry was introduced by George Reynolds who brought several 3D images for viewing to the club. He gave an abbreviated presentation on the planet Mars and a list of unmanned explorations. George also showed a short video on Pathfinder and its plans and later successful landing 22 years ago.

George introduced Larry as the NASA’s Senior Trainer. Worked at Johnson Space Center (Houston) training Astronauts and Rover Technicians. In 2002 he began training the first technicians for Opportunity and Spirit were launched.

Larry gave us a tour of JPL via slides. He helped to develop the courses and training in January 2004. The Mars rover consoles were shown on the workstations. Cell phones have more power than these early consoles had. A team of four would support each rover. Data came in from Goldstone, Madrid, and Canberra giving the controllers 24-hour coverage.

Since Mars was at its closest point in 60,000 years, the Spirit and Opportunity rovers were launched in June and July of 2003 to take advantage of this close approach. These landed in January and February of 2004.

Larry showed us a photo of one of the “clean rooms” where the rovers are assembled and later tested.

Larry mentioned that Elon Musk (CEO Tesla and SpaceX) has plans to send manned missions to Mars (50 to 100 years away).

Larry showed us a photo of Goldstone (in the Mojave Desert). But you had to go through Fort Irwin (National Training Center). You had to go through Fort Irwin, get a pass, then drive to Goldstone antenna deep space network. He showed the 70 meter antenna and mentioned that the tarantulas were given full pedestrian crossing rights. He also showed the 26 meter antenna farm for the earth satellites. The 34 meter antennas are used for the Mars rovers. He mentioned that data streaming that these antennas receive and transmit (from only 3 minutes for as long as 22 minutes).

They also put rovers through its paces at the Dumont Dunes. This is where remote testing is happening; similar to conditions on Mars.

The presentation was well received, and a question and answer period followed the presentation.

Meeting adjourned at 9:06 PM.