

The Focal Point

The Atlanta Astronomy Club
Established 1947
November 2011

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Editor: Tom Faber

Table of Contents

- Page 1...** November Meeting, Dec. Meeting & Potluck, Next BoD
Page 2... Oct Meeting Minutes & Photos
Page 3... Charlie Elliott Mtg Minutes, Bradley Open House Series
Page 4... CE Chapter Outreach Report, AL Information
Page 5... PSSG 2011 Photo Gallery - Part 1
Page 6... PSSG 2011 Photo Gallery - Part 2
Page 7... AAC Online, Memberships, Club Officers & Contact Info
Page 8... Calendar, AAC List Serv Info, Focal Point Deadline

November General Meeting

Join us for the November meeting of the Atlanta Astronomy Club on Friday November 11th at 8PM. Refreshments will be provided starting around 7:30PM. The location of the meeting is in Lecture Room 5 at the Howey Physics Building on the Georgia Tech campus. The Howey Physics Building is located on the corner of Ferst Street and State Street. Parking is available next to the building on the corner of Ferst and State Streets. There is a small fee to park here. The street address is 837 State Street NW. A campus map is at: <http://gtalumni.org/map/> and driving directions are available at: <http://capella.physics.gatech.edu/Observatory/Directions.pdf>

The meeting will run for about 2 hours. If you have any announcements that you want to make during the meeting please contact our President, Mark Banks, so that he can schedule the time for you during the meeting. His contact information is on page 7.

The Program:

Our guest speaker will be Les Johnson, Deputy Manager for the Advanced Concepts Office at the NASA George C. Marshall Space Flight Center in Huntsville, Alabama. Les will present a talk titled "Solar Sails - How We Will Explore the Solar System on a Beam of Light."

Our Speaker:

Les is the Deputy Manager for NASA's Advanced Concepts Office at the Marshall Space Flight Center in Huntsville, Alabama. He is the co-author of three published



popular science books, *Living Off the Land in Space*, *Solar Sails*, and *Paradise Regained: The Regreening of Earth*. His first science fiction novel, *Back to the Moon*, was published in December by Baen Books. He is editing an anthology for Baen called, "Going Interstellar" that will be released in May 2012. Les was the technical consultant for the movie *Lost in Space*. NPR, CNN, Fox News, The Science Channel, and The Discovery Channel have all interviewed him. He appeared on the Discovery Science Channel in three episodes of their "Exodus Earth" series and the "How to Build A Starship" episode of Michio Kaku's 2010 Discovery Science Channel Series "Physics of the Impossible." He was the Chief Scientist for the ProSEDS space experiment, twice received NASA's Exceptional Achievement Medal, and holds 3 space technology patents. He has numerous peer-reviewed publications and was published in *Analog* magazine. His website is: www.lesjohnsonauthor.com

December Meeting and Potluck Dinner

By Sharon Carruthers, AAC Treasurer

Once again, it is time to plan for our "Yummiest Meeting of the Year" - our Holiday Potluck! This year it will be on Saturday December 10th. Our new location will be the Parlor Room, at the Hitson Center, in the Sandy Springs Methodist Church, 86 Mt Vernon Hwy, NE, Sandy Springs, GA 30328.



We will start serving at 6:30PM and run until 8PM, followed by our two guest speakers. Club members Chris Hetlage and Daniel Herron will present their images of the last few Space Shuttle launches.

The AAC will provide the main courses of turkey and ham, and also provide coffee, tea, and soft drinks. We ask for contributions of appetizers, side dishes, or desserts - items that will provide 6-8 servings. Family and ethnic favorite dishes are especially welcome!

PLEASE let me know the dish you are bringing by email at: Treasurer@AtlantaAstronomy.org or phone at 770-941-4640 so I can keep track of what is being brought and what we still need. I will update the list on the AstroList regularly. (You non-cooks may consider bringing things that don't need cooking, such as cheese and crackers, chips and dip, dinner rolls, pickles or mixed salads.)

The Next AAC Board Meeting

The next Board meeting of the Atlanta Astronomy Club is scheduled for Saturday, December 3rd at 3PM at the Atlanta Freethought Society (AFS) building in Smyrna. Contact President Mark Banks or Board Chair Daniel Herron for more information about the meeting agenda.

October General Meeting Minutes

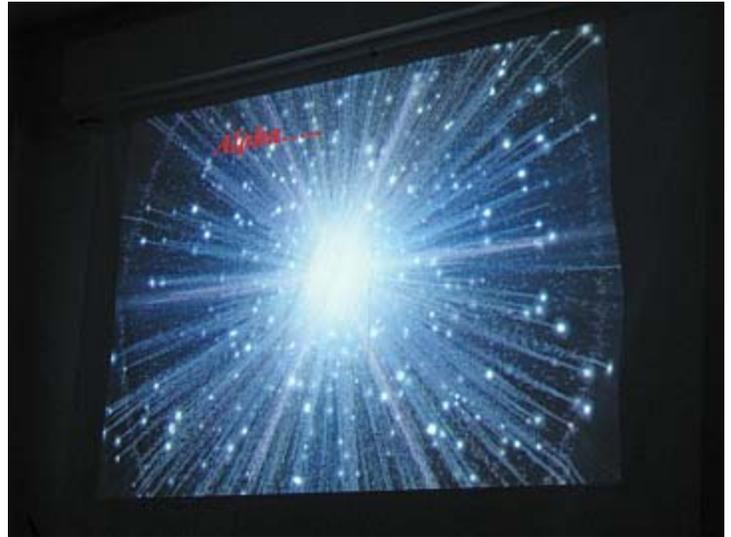
by Pixie Bruner, AAC Recording Secretary

Meeting Photos by Tom Faber

The last general meeting of the AAC took place at AFS Hall on Friday, October 14th. 30 people were in attendance. The guest speaker was Astronomical League President Carroll Lorg. After he gave a short talk about the Astronomical League, he presented a "Certificate of Appreciation" to the AAC for "Long time Support of the League." This certificate was accepted on behalf of the AAC by President Mark Banks (photo below). Mr. Lorg also awarded Art Zorka his Master Observer Award (bottom photo). Standing with Art when he received the award was his friend and mentor, Bill Warren, president of the Flint River Astronomy Club. Congrats Art! Then Richard Jakiel presented his talk "Alpha and Omega of the Universe" (photos right top & center). After Rich's talk Art Zorka presented Certificates of Appreciation from the AAC to club members Alton Leonard (bottom photo right) and Mark Dove (bottom photo left) for recognition of service for all the outreach they have done.

Next month, Les Johnson of NASA Huntsville is our presenter and that meeting will be on the 11th of November in the Physics Building at GA Tech (see pg 1). Parking for that event will be \$2/car or free parking can be found in the area. December 10th is the annual Holiday Banquet. To start off our partnership with the city of Sandy Springs, the banquet will be in

the Parlor Room, at the Hitson Center of the Sandy Springs Methodist Church according to Sharon. Sharon is food coordinator so please contact Sharon to name your dish so there are not 80 green bean casseroles and nothing else but a bag of stay-puffs, lol!. December 3rd is the next board meeting and that will be at AFS Hall from 3-6pm.



Charlie Elliott Chapter Minutes

by Marie Lott, CE Chapter Recording Secretary

The September 24th meeting of the Charlie Elliott Chapter of the Atlanta Astronomy Club was held in the CEWC Visitor Center in Mansfield, GA at 5 PM with thirty people in attendance for our quarterly potluck dinner.

Clay Turner gave the feature presentation "Astrophotography: Tips, Tricks and Techniques". The topics explored ranged from afocal and piggy back photography to seeing, sampling, tracking, stacking, flats, darks & biases.

Art Zorka gave an overview of Astronomical League observing programs and Theo Ramakers gave an update on chapter outreach events. Since the last meeting, the club had three school events reaching over 540 students. There will be nine events in October. Please check the chapter calendar at ceastronomy.org for details and let Theo know if you can help at any of the events.

Observing supervisor Steven Philips gave the monthly "Observing 101" talk, a highlight of current sun, moon and planet rise & set times, and observing targets.

Notable events visible during October 2011: Zodiacal light visible in the east before dawn until mid-month; supernova 2011fe in M101 begins to fade; asteroid Ceres travels through southeastern Aquarius; comet Garradd moves slowly through the constellation Hercules.

Small Telescope/Binocular Target List for October: double stars Albireo (gold/blue), gamma Delphinus (lemon/lime); galaxy: M31 (Andromeda); globular clusters M2, M15 & M22; planetary nebulas M27 (Dumbbell) & M57 (Ring); open clusters NGC6633, M11 (Wild Duck) & M39; and the diffuse nebula NGC7000 (North America Nebula).



North America Nebula (left) and the Pelican Nebula (right) from atlasoftheuniverse.com

As a bonus presentation for October, Steve gave an overview of binocular basics & how to select and use them.

Why use Binoculars? Binoculars are a great tool for beginners - A good "1st scope". Binoculars are versatile - also good for bird watching, looking at sailboats, sporting events, etc. Binoculars are more intuitive and act like a natural extension of the user's eyes. Images seen in binoculars are not "upside down" or reversed left to right. A pair of binoculars can help familiarize a novice observer with the night sky with a minimal investment.

Binocular Basics - Selecting the right pair. The best choice for hand held is no smaller than 50mm for adequate light gathering and no larger than 60mm due to weight considerations. Magnification should be 10 power or less for hand held use. Fixed magnification binoculars are preferred and provide a field of view 50% greater than zoom binoculars. BAK4 prisms (Barium Crown Glass) are the highest quality available. Optical coatings, eye relief, and exit pupil are always important considerations

Binocular Basics - Coatings. Coatings reduce light scatter and flares from bright objects. They also increase image contrast. The best binoculars have "fully multi-coated" optics - this means that every optical (glass) surface is coated with multiple layers of magnesium fluoride. "Fully coated" optics have a single layer of magnesium fluoride on every optical surface. "Fully multi-coated" optics have a green hue while "fully coated" optics have a light blue hue. Binoculars with ruby red objective lenses filter red from the color spectrum to compensate for poor quality optics. They also give astronomical objects an unnatural greenish cast - buy a better pair.

Binocular Basics - Eye Relief. Eye relief is the distance you need to hold the binoculars away from your eye in order to see the full field of view. Eye relief values range from 8mm to 23mm. If your binoculars have short eye relief you cannot see the full field of view with eyeglasses. Users who do not wear glasses are usually comfortable with 12-13mm of eye relief. Users with eyeglasses should choose binoculars with at least 19-20mm of eye relief. The design of the rubber eyecups should also be considered.

Binocular Basics - Exit Pupil Diameter. Exit pupil is the diameter of the light shaft entering your eye and is measured in millimeters. Exit pupil size roughly equals the size of the objective lens divided by magnification. (A pair of 10 x 50mm binoculars will have a 5mm exit pupil.) A larger exit pupil is generally more desirable for astronomical binoculars since our eyes dilate in the darkness. A wider shaft of light makes the image appear brighter because more light hits your retina. Caveat: Your age is also a consideration because as we get older the pupil will dilate less. People under 30 can usually achieve 7mm of dilation. People in their 50's or 60's have a maximum dilation of about 5mm.

Skies were beautifully clear after the meeting and lots of scopes and binoculars made it to the new "Jon Wood Astronomy Field" where a large group of students and parents of the Stone Mountain Middle School joined us for observing.

The next CE Chapter meeting is Saturday, November 5th at 4PM.

Bradley Observatory Open House Series 2011-2012

Return of the Alumnae

Graduates of the Department of Physics & Astronomy have gone on to a wide range of graduate studies and careers. This year, our speakers are all returning alumnae who will tell us about their journeys since they have left Agnes Scott College, and the work or research that they are now doing. All Open Houses run from 8:00 - 10:00 PM unless noted.

November 11 - Open House Lecture Series: Exploring the Most Energetic Phenomena in the Universe

December 9 - Open House Lecture Series: Active Galactic Nuclei

February 10 - Open House Lecture Series: Considering Human Factors in the Design of Multimodal Displays for NASA

March 23 - Spring Equinox and Open House Series

April 13 - Open House Lecture Series: Science Writing and Writing Science

May 11 - Open House Lecture Series: En Route to Smart Materials

For more information and updates see: <http://www.agnesscott.edu/academics/bradleyobservatory>

CE Chapter Outreach Programs

by Theo Ramakers - <http://ceastronomy.org/tramakers>

The last update of the Chapter's outreach was in the August Focal Point. This does not mean that we have not been active. In the last three months we did 16 outreach events. Stone Mountain Middle asked us for the 3th year back to their school and came also to visit us at Jon Woods field for a DSO :-). The Children's School of Atlanta had their fourth year with us, and we went for the third year in a row to Morgan County Middle School.



And not to forget the schools that visit the Outdoor Discovery School at CE who keep coming back and Chamblee Middle, who asked us back again for an event last month. Other schools in the region are hearing about us



and are asking us to come and help to get students get inspired about astronomy and space exploration. The most exciting events in this period were the two days we participated in the Georgia Department of Education's STEM Festival. 700 Students were bused in to participate in the first day's event. And the second day over 350 students, parents, and

teachers came for more. And boy, did they put us to work explaining some of the astronomical concepts, NASA missions, as well as observing the Sun through our H-a and visible light telescopes! It is so great to be able to have this little impact in the future of so many individuals. Thanks to all that helped showing these kids that the astronomy and space exploration field has a very wide variety of job opportunities for them in the future.



The Astronomical League

As a member of the **Atlanta Astronomy Club** you are automatically also a member of the **Astronomical League**, a nation wide affiliation of astronomy clubs. Membership in the AL provides a number of benefits for you. They include:

- * You will receive *The Reflector*, the AL's quarterly newsletter.
- * You can use the Book Service, through which you can buy astronomy-related books at a 10% discount.
- * You can participate in the Astronomical League's Observing Clubs. The Observing Clubs offer encouragement and certificates of accomplishment for demonstrating observing skills with a variety of instruments and objects. These include the Messier Club, Binocular Messier Club, the Herschel 400 Club, the Deep Sky Binocular Club, and many others.

To learn more about the Astronomical League and its benefits for you, visit <http://www.astroleague.org> You may also contact the AAC's Astronomical League Correspondent Art Zorka for more information about the AL's Observing Clubs at artzorka@yahoo.com or by phone at 404-633-8822.

The PSSG 2011 Photo Gallery - Part 1

Another great Peach State Star Gaze is in the history books. We had hot weather and partly cloudy skies early in the week, but for the last few days the weather cooled off and clear skies ruled! A big thanks to PSSG Chair Peter Macumber, Sharon Carruthers, Co-Chair Joanne Cirincione (who was only able to attend the last 2 nights this year), the PSSG staff, and volunteers for organizing and running another great Peach State! On the next few pages are photos from this year's Peach State. Next month there will be more photos including photos of the speakers and door prize winners. See you at the 2012 PSSG!!

Photos by Tom Faber unless otherwise noted.



The PSSG Staff setting up the dining tent in front of Micki's kitchen on Saturday afternoon. From l-r: Kat Sarbell, Mark Banks, Frank Marchese, and Peach State Chair Peter Macumber.



A view of the field looking toward the northeast on Saturday afternoon as the staff was doing set-up activities before the opening of the PSSG at noon on Sunday, September 25. In the center are Micki's kitchen, the dining tent, and the pavillion. On the left is the enclosure for the club's 24-inch Dobsonian.



Kat Sarbell getting the check-in office set up on Sunday morning.



Vendor Astrogizmos set up shop near the pavillion.



Hanging out and waiting for sunset on Tuesday afternoon. L-R: Paul Tankersley, Tom Crowley, and Ray Major.

Continued on next page



A panoramic view of the Peach State field looking toward the northeast on Thursday afternoon.



Alex Langoussis setting up his 24-inch Dob.



Lining up for lunch at Micki's Kitchen. Photo by Frank Marchese.



Pat Sammons sets up his scope to do imaging next to Alex.



Steven Yood with his 8-inch refractor.

Chuck Painter sets up his scope. Photo by Frank Marchese.



Photo Gallery continued on next page.



The crescent moon about to set into the trees on Thursday evening.



Kat viewing Comet Garradd with Alex's 24-inch Dob with the crescent moon behind her head. The tail of Scorpius and part of Sagittarius are visible to the left of the scope.

Check back next month for more photos from the PSSG 2011!

The **Atlanta Astronomy Club, Inc.**, the South's largest and oldest astronomical society, meets at **8:00 P.M.** on the Friday closest to full moon of each month at Emory University's White Hall or occasionally at other locations or times. Membership fees are **\$30 (\$42)** for a family or single person membership. College Students membership fee is **\$15 (\$27)**. These fees are for a one year membership (\$12 per year extra charge to receive a printed *Focal Point* by mail).

Magazine subscriptions to *Sky & Telescope* or *Astronomy* can be purchased through the club for a reduced rate. The fees are **\$33** for *Sky & Telescope* and **\$34** for *Astronomy*. Renewal forms will be sent to you by the magazines. Send the renewal form along with your check to the Atlanta Astronomy Club treasurer.

The Club address: Atlanta Astronomy Club, Inc., P.O. Box 76155, Atlanta, GA 30358-1155.

AAC Web Page: <http://www.AtlantaAstronomy.Org>. Send suggestions, comments, or ideas about the website to webmaster@AtlantaAstronomy.org. Also send information on upcoming observing events, meetings, and other events to the webmaster.

Atlanta Astronomy Club Online

While this newsletter is the official information source for the Atlanta Astronomy Club, it is only up to date the day it is printed. So if you want more up to date information, go to our club's website. The website contains pictures, directions, membership applications, events updates and other information. <http://www.atlantaastronomy.org> You can also follow the AAC on Facebook by joining the AAC group, and on Twitter at <http://twitter.com/atlaastro>.

AAC Officers and Contacts

President: Mark Banks President@AtlantaAstronomy.org

Program Chair: Richard Jakiel Programs@AtlantaAstronomy.org

Observing Chair/BoD Chair: Art Zorka

Observing@AtlantaAstronomy.org

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Focalpoint@AtlantaAstronomy.org

Treasurer: Sharon Carruthers Treasurer@AtlantaAstronomy.org

Recording Secretary: Pixie Bruner

Secretary@AtlantaAstronomy.org

Board Chair: Daniel Herron, Contact info TBA

Board: Brigitte Fessele, Contact info TBA

Board: David Lumpkin, Contact info TBA

Board: Theo Ramakers 770-464-3777

webmaster@CEastronomy.org

ALCor: Art Zorka 404-633-8822 (H) 404-247-2474 (C)

artzorka@yahoo.com

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Elliott Observing Supervisor: Steven Phillips 770-601-9816

observing@ceastronomy.org

Elliott Recording Secretary: Marie Lott mtlott@comcast.net

Elliott Coordinator: Alesia Rast Alesia_Rast@mail.dnr.state.ga.us

Elliott Webmaster: Theo Ramakers 770-464-3777

webmaster@CEastronomy.org

Georgia Astronomy in State Parks:

PSSG Chairman: Peter Macumber pmacumber@nightsky.org

PSSG Co-Chair: Joanne Cirincione

starrynights@AtlantaAstronomy.org

Sidewalk Astronomy: Brad Isley

sidewalkastronomy@AtlantaAstronomy.org

Light Trespass: Open - Contact Mark Banks if you would like to volunteer for this position

Woodruff Observ. Coordinator: Sharon Carruthers

Treasurer@AtlantaAstronomy.org

AAC Webmaster: Daniel Herron, Contact info TBA

Calendar by Tom Faber (Times EDT/EST unless noted)

AAC Events are listed in BOLD

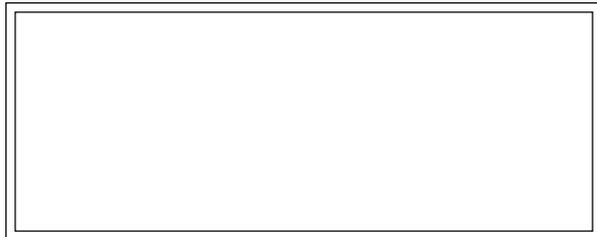
- October 28th, Friday: Jupiter at Opposition.
- November 1st, Tuesday: Mercury near Venus.
- November 2nd, Wednesday: Moon First Quarter.
- November 5th, Saturday: **Charlie Elliott Chapter Mtg - 4PM.**
- November 6th, Sunday: Daylight Saving Time Ends - 2AM.
- November 10th, Thursday: Full Moon.
- November 11th, Friday: **AAC Meeting at GA Tech Physics Building, 8PM.** Bradley Observatory Open House.
- November 13th, Sunday: Mercury at Greatest Elongation East.
- November 17th, Thursday: Leonids Meteor.
- November 18th, Friday: Moon Last Quarter.
- November 18th, Friday: **"How To Buy A Telescope" at Morgan Falls Overlook Park 7:30PM.**
- November 25th, Friday: New Moon.
- December 2nd, Friday: Moon First Quarter.
- December 8th, Thursday: Earliest Sunset in Atlanta: ~5:27PM.
- December 9th, Friday: Bradley Observatory Open House, 8PM - see pg 3.
- December 10th, Saturday: Full Moon, Lunar Eclipse - partial at Atlanta.
- December 10th, Saturday: **AAC Meeting and Holiday Potluck Dinner, 6PM.**
- December 13th, Tuesday: Geminid Meteors.
- December 17th, Saturday: Moon Last Quarter. **Charlie Elliott Chapter Mtg - 3PM.**
- December 22nd, Thursday: Solstice at 12:30AM.
- December 23rd, Friday: Mercury at Greatest Elongation West.
- December 24th, Saturday: New Moon.
- January 1st, Sunday: Moon First Quarter.
- January 4th, Wednesday, Latest Sunrise in Atlanta: ~7:42 AM.

Atlanta Astronomy Club Listserv

Subscribe to the Atlanta Astronomy Club Mailing List: The name of the list is: AstroAtlanta. The address for messages is: AstroAtlanta@yahoogroups.com . To add a subscription, send a message to: AstroAtlanta-subscribe@yahoogroups.com . This list is owned by Lemmy Abbey.

Focal Point Deadline and Submission Information

Please send articles, pictures, and drawings in electronic format on anything astronomy, space, or sky related to Tom Faber at focalpoint@atlantaastronomy.org. Please send images separate from articles, not embedded in them. Articles are preferred as plain text files but Word documents or PDFs are okay. You can submit articles anytime up to the deadline. **The deadline for December is Friday, November 18th. Submissions will not be accepted after the deadline.**



FIRST CLASS



www.beclage.com



We're here to help! Here's how to reach us:

Newsletter of The Atlanta Astronomy Club, Inc.



The Focal Point

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Alpharetta, GA 30022

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