

The Focal Point

The Atlanta Astronomy Club
Established 1947
June 2013

Vol. 26 No. 1

Editor: Tom Faber

Table of Contents

- Page 1...** June Meeting & Elections
Page 2... May Meeting Report & Photos
Page 3... CE Chapter Outreach
Page 4... Woodruff Scouts, Hubble's Proxima Centauri Planet Hunt.
Page 4... AL Con Call for Papers
Page 5-6... The Astronomical League is coming to Atlanta!
Page 7... AAC Online, Memberships, Club Officers & Contact Info
Page 8... Calendar, AAC List Serv Info, Focal Point Deadline

June General Meeting & Elections

Join us for the June meeting of the Atlanta Astronomy Club on Friday, June 21st at 8PM. Our June meeting talk will be about comets. Our speaker will be AAC President Richard Jakiel. We will also have the election of club officers and Board members at the June meeting. The elections were to have been held last month but not enough members were present to hold the elections. The club bylaws require at least 25 members to be present to hold the elections, but only 18 members were present at the May meeting. **Members please try to be present at the June meeting so we can hold the elections.** Most of the officers plan to run for another term but if you are interested in running for an office or Board position please contact club President Richard Jakiel. Our June meeting will take place at the Atlanta Freethought Society (AFS) building in Smyrna. Refreshments will be provided starting around 7:30PM. Directions to the meeting at The Atlanta Freethought Building: Take I-285 to exit # 16. Go south (in towards Atlanta) about half a mile. Turn right on to North Church Lane. The first Building you see on the left is it (Looks like a small brick church). The street address is 4775 North Church Lane S.E., Smyrna 30080.

Our Speaker:

Currently, Richard is a research scientist working for The State of Georgia's Radiation Protection Program. A member of several astronomical organizations, he has contributed over 70 astronomy articles to magazines and professional journals that include Sky & Telescope, Astronomy, Deep Sky Observer (DSO), The Strolling Astronomer (ALPO), Astronomie Heute, Magellan, Amateur Astronomy, plus numerous descriptions and drawings for the book Night Observer's Guide. In 2006, he was a co-author for the Springer publication: *Galaxies: How to Observe Them*. His latest articles (2011/2) were on the Centaurus Galaxy Cluster and Seyfert Galaxies. He has taught astronomy and physics at the University of West Georgia (1997-2002) and was the director of the Webb Society's Galaxy



Photo by Richard Jakiel

Section. For the past 3 years, he has been the Science Director for the rapidly growing Alternate History/Steampunk convention - AnachroCon. Richard is also a review editor for the Association of Lunar and Planetary Observers (ALPO), and a number of his images of the planets and the Moon have graced the pages and covers of their main publication - The Strolling Astronomer. Since joining the AAC in 1987, Richard has held every major position with the exception of treasurer.

His current research interests include the imaging and monitoring the major bodies of the solar system, ancient (Greco-Roman) astronomy, and deep-sky imaging with a DSLR (Canon). He observes and images in the 'wilds' of Lithia Springs, less than 1 mile west of Sweetwater State Park.

Future Programs:

In order to keep our programs interesting and relevant I need your help. Please let me know (Mark Banks at: programs@atlantaastronomy.org) of any subjects you may be interested in for a future program. Also, if you or someone you know would like to do a program for us please contact me.

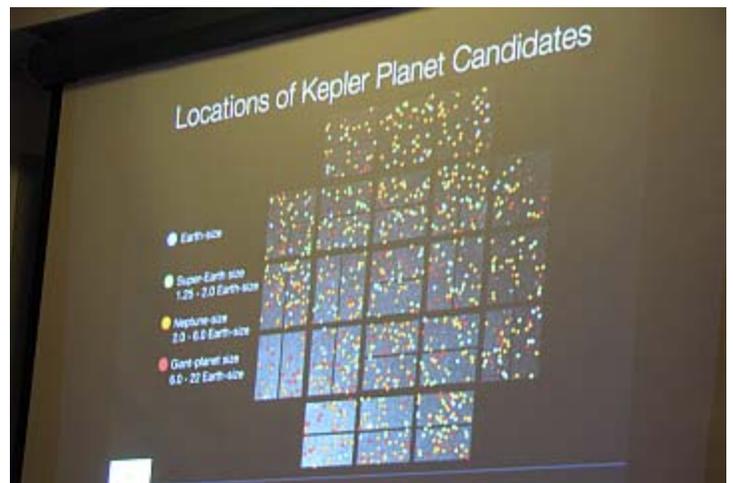
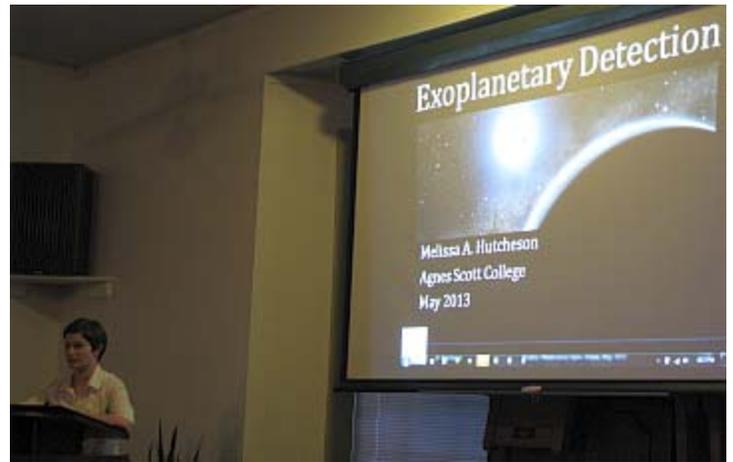
Upcoming AAC Meetings:

Our meetings will usually be held on the 3rd Friday of the month. Future meeting dates are June 21, July 19, Aug 16, Sept 20th, Oct 18th, Nov 15th, Dec 14 for the December meeting and Holiday potluck dinner. Locations TBA.

May AAC Meeting

Photos by Tom Faber unless noted.

The May meeting of the Atlanta Astronomy Club was held on Friday, May 17 starting at 8PM at the Atlanta Freethought Society building. There were 18 members and several guests present. Our speaker was Agnes Scott College student Melissa A. Hutcheson. Melissa presented a talk about methods for the detection of Exoplanetary systems and she talked about the research she is involved with. After Melissa's talk club officers presented reports on the club's activities and upcoming events. We were to have the election of club officers and board members but since there were only 18 members present the elections were delayed until the June meeting. The club's bylaws require at least 25 members be present for elections. Members please attend the June meeting if you can so we can have elections.



Meeting panorama by Daniel Herron.

Charlie Elliott Chapter Outreach

By Theo Ramakers, Outreach Coordinator

<http://ceastronomy.org/tramakers>

May was the last month of the school year so we ended up doing events for schools who came very early with their requests for outreach (last year October), and late. Another day at McConnell Middle school in Loganville started the month, followed by a very busy three day event at Trickum Middle School. Thanks to Frank, Valorie, David, Eric, Marie and Theo for being available for this. All 720 6th grade students got to learn about Mars, its moons and Curiosity. Following the half an hour presentation they observed the Sun and on May 13th, 160 of them got to see the huge leaping prominence which stretched over 120,000 miles above the surface of the Sun. JAKES Day at Charlie Elliott was a great success with about 450 interested individuals learning about, and taking a peek at the Sun (thanks Bruce). We participated at Fernbank's Astronomy Day event, and DeKalb's STEM Festival in Clarkston. The final events were a repeat program at Rock Eagle in Eatonton, an astronomy training session for Charlie Elliott's summer camp counselors, and Marie Lott's event at Deerlick during the Deerlick Potluck dinner party. A great month again! Thanks to everyone who made time available to cover these events for the Chapter!



March was Membership Renewal Month

If have not yet renewed your AAC membership for 2012 please send it to Sharon as soon as possible! Thank You for your support of the AAC!

Woodruff Scout Summer Camp 2013

SUMMER TIME! SUMMER TIME! SUMMER TIME!

Summer Scout Camping season is here again. This is not only our time to “pay the rent” for our use of Woodruff as a Dark Sky site; but also our best opportunity to fulfill our Club mandate to “educate” and “to promote the public knowledge of and interest in astronomy”. Our on-field viewing with the scopes will be on Thursday nights, after dark (from 9:30 - 10 p.m.) Bring your own scope or use the 10” / F6 Discovery Dob in the warm-up shed. We need volunteers to commit to go up on the following Thursday evenings: June 6, June 13, June 20, June 27, July 4, July 11, July 18, and July 25. Please phone or e-mail if you can commit to one or more evenings. Sharon Carruthers scarruthers@AtlantaAstronomy.org 770-941-4640 (h)

Rare Stellar Alignment Offers Opportunity to Hunt for Planets

STScI News Release - June 3, 2013

The nearest star to our Sun, the red dwarf Proxima Centauri, is on a course for a rare conjunction with two distant background stars. This alignment will offer astronomers a unique opportunity to look for planets orbiting close to Proxima Centauri. In addition, astronomers will be able to precisely measure the mass of this isolated red dwarf.

Observations from NASA’s Hubble Space Telescope were used to plot the star’s trajectory across the sky with enough precision that astronomers can predict two “close encounters” of the stellar kind with Proxima Centauri. The red dwarf passes nearly in front of a 20th-magnitude background star in October 2014 and a 19.5-magnitude star in February 2016.

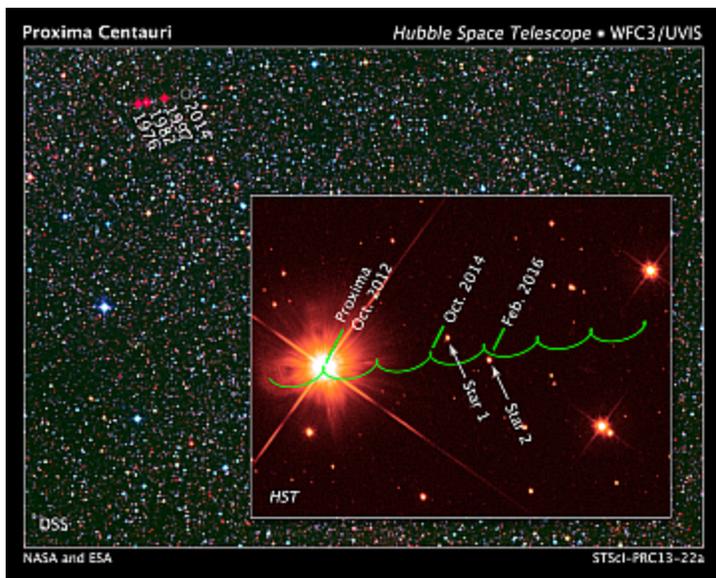


Image Credit: NASA, ESA, K. Sahu and J. Anderson (STScI), H. Bond (STScI and Pennsylvania State University), M. Dominik (University of St. Andrews), and Digitized Sky Survey (STScI/AURA/UKSTU/AO)

The warping of space by Proxima Centauri’s gravitational field will cause the image of each star to be very slightly offset from their real positions on the sky. The amount of offset can be used to measure Proxima Centauri’s mass — the greater the offset, the greater the mass of Proxima. If Proxima Centauri has a planet, it may produce a small second position shift due to the companion planet’s gravitational field.

The stars will shift very slightly in their apparent position, an estimated 0.5 milliarcsecond and 1.5 milliarcseconds, respectively. (A milliarcsecond is the angular width of a nickel in Honolulu, Hawaii, as viewed from the distance of New York City.) Hubble can make measurements as small as

Continued on page 7

ALCon 2013 — Call for Papers

Interested parties are hereby invited to submit papers on the astronomy-related topics of their choice for presentation at the Astronomical League’s 2013 convention, ALCon2013, being held here in Atlanta, Georgia, July 24 through 27. The Atlanta Astronomy Club is working with the Astronomical League in presenting this year’s event. Papers will be presented on Wednesday, July 24, and Thursday, July 25, at the Fernbank Science Center Jim Cherry Planetarium; the location is equipped with a full array of audio-visual equipment. A total of 22 time slots are available. Participants are encouraged to submit research papers, presentations, and experience reports concerning various aspects of Earth-based observational astronomy. Suggested topics for papers and presentations include the following:

- New or ongoing observing programs and studies, specifically, how those programs were designed, implemented and continue to function.
- Results of personal or group astronomical studies.
- New or ongoing activities involving astronomical instrumentation, construction or improvement.
- Challenges faced by Earth-based observers such as changing interest levels, deteriorating observing conditions brought about by possible global warming, etc.

The preferred format is Microsoft PowerPoint, though 35mm slides are also acceptable. The final presentation should not exceed 20 minutes in length, to be followed by no more than five (5) minutes of questions (if any) from the audience. A hard-copy version of the paper should be made available for future web site publication. Two consecutive 20-minute sessions can be scheduled if the subject material so requires.

Please submit by June 15, 2013, the following:

- Title of the paper being presented.
- A four- or five-sentence abstract of each paper.
- The format in which the presentation will be.
- A 100-word biography and a recent photograph of the presenter for posting on the ALCon 2013 website and inclusion in the printed program guide.

Address all materials to:

ALCon 2013

c/o Ken Poshedly

1741 Bruckner Court

Snellville, Georgia 30078 USA

E-mail is the preferred method for contact: ken.poshedly@alpo-astronomy.org

Besides the daily technical presentations, there will several optional side-trips

- A Thursday evening trip to the AAC’s other observing site at the Deerlick Astronomy Village well east of Atlanta.
- A Friday night “Star B-Q” at the nearby Agnes Scott College Bradley Observatory, which is where the AAC was founded.
- A midday Saturday venture to the AAC’s William Barber Observatory site.

Lodging for out-of-towners will be at the nearby Emory Conference Center Hotel, which is lowering its standard room rate considerably for attendees of ALCon 2013. Registration and other fees are included in the event registration form.

The Astronomical League is coming to Atlanta!



ALCON 2013 ATLANTA

Summer Skies, Southern Hospitality July 24-27, 2013 • Atlanta, Georgia

Location: Fernbank Science Center

Host Organizations: Atlanta Astronomy Club, Astronomical League

Partnering Organization: Association of Lunar and Planetary Observers (ALPO) • This year, ALPO presentations will be mainstreamed with League talks



Accommodations...

Emory Conference Center Hotel

- Shuttle service between hotel and presentations at Fernbank Science Center and Agnes Scott College Bradley Observatory for those without transportation
- Be sure to ask for the Astronomical League rate. 1-800-933-6679, emoryconferencecenter.com/index.cfm
- Saturday night's Awards Banquet



Primary Venue: Fernbank Science Center

- Talks held in 70 foot planetarium
- Evening shows with Zeiss Mark V projector coupled with various special effects projector
- 0.9 meter Cassegrain reflector in the Ralph Buice Memorial Observatory
- Vendor displays



Atlanta Attractions

- World of Coca-Cola
- Georgia Aquarium
- Zoo Atlanta
- Inside CNN
- Atlanta Botanical Garden
- Olympic Games venues



Conference Speakers...

Chris Hetlage, Deerlick Astronomy Village, a distinctive dark sky community.

Tim Puckett, Supernovae Research



Saturday night's Awards Banquet Keynote Speaker:

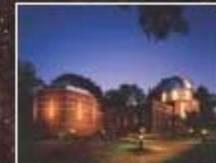
Charles Wood, Sky and Telescope Lunar 100 creator

Star BQ, Friday, July 26, Agnes Scott College Bradley Observatory:

Bradley Observatory Tour; 30-inch Beck Cassegrain; Planetarium Presentation

Other ALCon 2013 Excursions

- Atlanta Astronomy Club's Villa Rica Observatory; Full size roll-off roof observatory with 20-inch Newtonian reflector
- Atlanta Astronomy Club's observing site at the Deerlick Astronomy Village



Check www.ALCon2013.astroleague.org for more information as it becomes available.



The Astronomical League is coming to Atlanta!

ALCon 2013 Registration Information—July 24-27, 2013

Mail completed form with your check made payable to ALCon 2013 to:
Astronomical League, ALCon 2013 Registration,
9201 Ward Parkway, Suite 100, Kansas City, MO 64114

Please use one form for each attendee. One check is acceptable for your group. You may also register online at www.alcon2013.astroleague.org and make remittance with PayPal.

First Name: Last Name:

Name and Title for ID badge:

E-mail Address:

Mailing Address:

Address, Line 2 (if needed):

City, State or Province and ZIP or Postal Code:

Country: ALPO Member?

Daytime Phone Number: Alternate Phone Number:

Astronomical Club, Society, or Organization Affiliation:

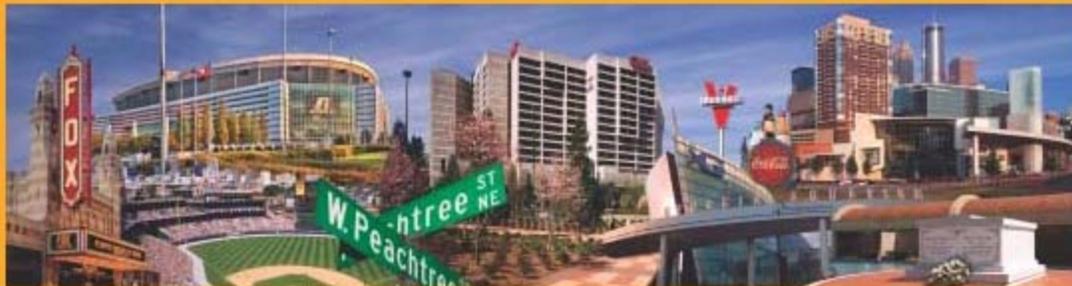
You may make your room reservations at the Emory Conference Center Hotel by calling 800-933-6679. Be sure to ask for the Astronomical League ALCon 2013 special rate before the room block is fully booked. Free parking and free Internet.

The organizers reserve the right to make such changes to the program and speakers as may be necessary due to conditions outside of their control.

Early Registration Fees (after July 8, add \$20)

Please check each item you wish to include in your registration and enter the amount in the box on right.

	Amount
Individual 2 or 3 day registration: \$50	<input type="text"/>
Single day registration: \$35	<input type="text"/>
Couples 2 or 3 day registration: \$75	<input type="text"/>
Students: \$20	<input type="text"/>
Children younger than 15 years of age accompanying adults registering: free	
Shuttle bus from Emory Conference Center Hotel and the Fernbank Science Center (for those needing transportation), 8:15 a.m. to 11:15 a.m. and 2 p.m. to 5 p.m.	
\$20 Wednesday <input type="checkbox"/> \$20 Thursday <input type="checkbox"/> \$20 Friday <input type="checkbox"/>	<input type="text"/>
Boxed Lunches: Choice of Ham and Swiss, Turkey and Cheddar, or Mediterranean Veggie sandwiches with a pickle spear, a half-sized Jumbo Cookie, chips, and water bottle: \$9. Check one for each day. Wednesday: Ham and Swiss <input type="checkbox"/> ; Turkey and Cheddar <input type="checkbox"/> ; or Mediterranean Veggie <input type="checkbox"/> Thursday: Ham and Swiss <input type="checkbox"/> ; Turkey and Cheddar <input type="checkbox"/> ; or Mediterranean Veggie <input type="checkbox"/> Friday: Ham and Swiss <input type="checkbox"/> ; Turkey and Cheddar <input type="checkbox"/> ; or Mediterranean Veggie <input type="checkbox"/>	<input type="text"/>
Friday night Star BQ (Please select one) Pan Roasted Chicken Breast with mushroom ragout \$32 <input type="checkbox"/> Tender Beef Brisket with a caramelized onion jus \$37 <input type="checkbox"/> Grilled Eggplant Steak with chick peas and feta cheese \$32 <input type="checkbox"/>	<input type="text"/>
Shuttle from Emory Conference Center Hotel to Star BQ at Agnes Scott College Bradley Observatory and return: \$20	<input type="text"/>
Saturday night banquet: 1. Vegetarian: Gnocchi with pesto cream, olive oil poached tomatoes, grilled zucchini and shitake mushrooms: \$45 <input type="checkbox"/> 2. Pan seared sage and garlic infused chicken breast served with red onion marmalade on creamy polenta: \$45 <input type="checkbox"/> 3. Grilled bourbon glazed boneless pork loin with mustard braised greens and smoked cheddar mashed potatoes: \$45 <input type="checkbox"/> Please select one	<input type="text"/>
ALCon merchandise Silk-screened T-shirt, White <input type="checkbox"/> ; or Royal Blue <input type="checkbox"/> S <input type="checkbox"/> M <input type="checkbox"/> L <input type="checkbox"/> XL <input type="checkbox"/> XXL <input type="checkbox"/> XXXL <input type="checkbox"/> : \$20 Embroidered polo shirt, White <input type="checkbox"/> ; or Royal Blue <input type="checkbox"/> Mens: S <input type="checkbox"/> M <input type="checkbox"/> L <input type="checkbox"/> XL <input type="checkbox"/> XXL <input type="checkbox"/> XXXL <input type="checkbox"/> : \$25 Womens: S <input type="checkbox"/> M <input type="checkbox"/> L <input type="checkbox"/> XL <input type="checkbox"/> XXL <input type="checkbox"/> XXXL <input type="checkbox"/> : \$25	<input type="text"/>
Help the League help amateur astronomy by making a tax deductible donation	<input type="text"/>
Total Enclosed:	<input type="text"/>



Continued from page 4

0.2 milliarcsecond. The European Space Agency's Gaia space telescope and the European Southern Observatory's Very Large Telescope on Mt. Cerro Paranal in Chile may be able to make comparable measurements. These so-called microlensing events will last from a few hours to a few days.

Because Proxima Centauri is so close to Earth, the area of sky warped by its gravitation field is larger than for more-distant stars, and this makes the observations easier to look for shifts in apparent stellar position caused by this effect.

So far all attempts to detect planets around Proxima Centauri have been unsuccessful. Radial velocity and astrometric observations, which can measure the gravitational wobble of a star due to the pull of an unseen companion, have not detected the presence of planets. Astrometric observations rule out giant planets with anything larger than 80 percent of Jupiter's mass with a period of less than 1,000 days. Likewise, radial velocity observations exclude the presence of any planet the mass of Neptune or larger within an orbital radius equal to Earth's orbit (assuming the orbit is not face-on to Earth or similarly inclined at a steep angle). Nor have planets been found transiting across the face of the star, which would happen if the planet's orbit were edge-on to Earth. But now, by looking for microlensing effects during these rare stellar alignments, smaller terrestrial planets around Proxima Centauri could be detected.

A team lead by Kailash Sahu of the Space Telescope Science Institute, Baltimore, Md., first searched 5,000 stars in the Luyten Half-Second catalogue of stars that have a high rate of angular motion across the sky for possible alignment events. "Proxima Centauri's trajectory turned out to offer one of the most interesting opportunities because of its extremely close passage to the two stars," says Sahu. Because it is so close to Earth, Proxima Centauri also moves across the sky at a comparably high angular rate. It crosses a piece of sky with the apparent width of the full Moon every 500 years.

Red dwarfs are the most common class of stars in our Milky Way galaxy — any such star that has ever been born is still shining today, because they live longer than the age of the universe. Therefore, getting a precise determination of mass is critical to understanding a star's temperature, diameter, intrinsic brightness, and longevity.

This paper has been submitted to the Astrophysical Journal and Dr. Sahu is presenting these results at the meeting of the American Astronomical Society in Indianapolis, Indiana.

The **Atlanta Astronomy Club, Inc.**, one of the South's largest and oldest astronomical society, meets at **8:00 P.M.** on the **3rd Friday of each month** in the Parlor Room - Hitson Center in Sandy Springs, 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/atlastro>.

AAC Officers and Contacts

President: Richard Jakiel President@AtlantaAstronomy.org
Program Chair: Mark Banks Programs@AtlantaAstronomy.org
Observing Chair/BoD Chair: Daniel Herron
Observing@AtlantaAstronomy.org
Corresponding Secretary: Tom Faber
Focalpoint@AtlantaAstronomy.org
Treasurer: Sharon Carruthers Treasurer@AtlantaAstronomy.org
Recording Secretary: Pixie Bruner
Secretary@AtlantaAstronomy.org
Board Chair: Daniel Herron, Observing@AtlantaAstronomy.org
Board: Brigitte Fessele, Contact info TBA
Board: David Lumpkin, Contact info TBA
Board: Steve Phillips sandsphillips@att.net
ALCor: Open - President@AtlantaAstronomy.org
Elliott Chapter Director: Larry Owens director@ceastronomy.org
Elliott Observing Supervisor: John Towne
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 770-788-0843
webmaster@CEastronomy.org
Elliott Outreach Coordinator: Theo Ramakers 770-788-0843
outreach@ceastronomy.org
Georgia Astronomy in State Parks: Sharon Carruthers
Treasurer@AtlantaAstronomy.org
PSSG Chairman: Peter Macumber pmacumber@nightsky.org
PSSG Co-Chair: Joanne Cirincione
starrynights@AtlantaAstronomy.org
Sidewalk Astronomy: Brad Isley
sidewalkastronomy@AtlantaAstronomy.org
Light Tresspass: 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, Observing@AtlantaAstronomy.org

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

AAC Events are listed in BOLD

- June 8th, Saturday: **CE Chapter Meeting, 5 PM DSO at DAV**. New Moon.
- June 9th, Sunday: Very thin crescent moon in west after sunset.
- June 10th, Tuesday: Moon near Mercury & Venus.
- June 12th, Thursday: Mercury at greatest elongation east.
- June 15th, Saturday: **GASP at Tugaloo State Park 9 PM**.
- June 15th-21st: Mercury near Venus.
- June 16th, Sunday: Moon First Quarter.
- June 21st, Friday: **AAC Meeting, 8PM at AFS**. Solstice at 1:40AM.
- June 23rd, Sunday: Full Moon.
- June 30th, Sunday: Moon Last Quarter.
- July 1st, Monday: Pluto at opposition.
- July 5th, Friday: Earth at Aphelion.
- July 8th, Monday: New Moon.
- July 9th, Tuesday: Mercury at Inferior Conjunction.
- July 13th, Saturday: **CE Chapter Meeting, 5 PM**.
- July 15th, Monday: Moon First Quarter.
- July 19th, Friday: **AAC Meeting, 8PM at AFS**.
- July 22nd, Monday: Full Moon.
- July 24th (Wednesday)-27th (Saturday): Astronomical League Convention in Atlanta.
- July 29th, Monday: Moon Last Quarter.
- July 30th, Tuesday: Mercury at Greatest Western Elongation. Delta Aquarid Meteors.
- July 31st, Wednesday: Morning grouping of Moon, Mercury, Mars, & Jupiter.

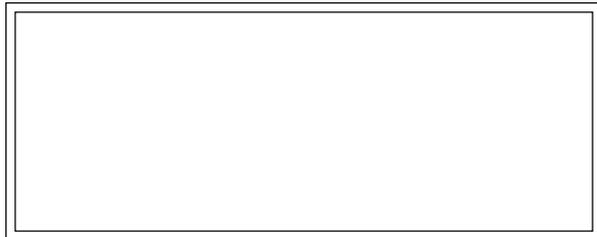
For more event listings see the calendar at www.atlantaastronomy.org

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 .

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 PDF's are okay. You can submit articles anytime up to the deadline. **The deadline for July is Friday, June 28th. Submissions after the deadline will go in the following issue.**



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

FROM: Tom Faber
2206 Tretridge Parkway
Alpharetta, GA 30022

Atlanta Astronomy Club

P.O. Box 76155

Atlanta, GA 30358-1155

www.atlantaastronomy.org

On Twitter at <http://twitter.com/atlastro>