

The Focal Point

The Atlanta Astronomy Club
Established 1947
September 2010

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Editor: Tom Faber

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September General Meeting

By Keith Burns, A-V Coordinator

Join us for the September meeting of the Atlanta Astronomy Club which will be held on Friday September 17th at 8PM. Location is the room 207 of White Hall on the Emory University Campus. The meeting will run for 1½ to 2 hours. Before the meeting starts, we run the monthly PowerPoint presentation that gives you all the latest information on up coming meetings, sidewalk astronomy events, and club observing events.

If you have any information you want to put into the pre meeting announcement PowerPoint, please let me (Keith Burns) know. You can contact me at keith_b@bellsouth.net. If you have any announcements 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:

When the president calls the meeting to order, we start the meeting with our featured speaker of the night, AAC Program Chair Rich Jakiel, who will give a talk entitled, “Ain’t What you Learned in School.” The talk covers ancient innovations and technology. There are surprising revelations of ancient Greek and Roman science and technology. Rich will talk about ancient Greek and Roman astronomers and scientists. After Rich is finished with his talk, we move on to the business portion of the meeting. We will then adjourn and head to one of the local eateries for food and conversation.

Speaker Bio:

Here is a little about Rich in his own words. “I grew up in small college town (Fredonia) located in Western New York, about 40 miles southwest of Buffalo. Though I lived within the village, my backyard was blessed with good dark skies that were often better than 6.5 mag. (visual). I got my first telescope in 1974, when I was a junior in high school. It was a 4 ¼” f/10 Edmund Newtonian on a steel pedestal German Equatorial mount

(GEM). Within a year, I had seen all the “Messiers” and hundreds of other deep-sky objects. Two years later, after much scrimping and saving, I bought an 8-inch Cave OTA mounted on a massive, homemade GEM, plus a small domed observatory. It would become my main instrument and it was used extensively to observe nearly 2000 objects until I moved to Atlanta, GA in August of 1987.

“In a very short time I became an active member of the AAC serving a dozen times as a club officer or

on the Board of Directors since late 1987. I spent a great deal of time using the telescopes at Villa Rica during much of that time, plus attended all of the PSSG’s since their inception. Though I’ve concentrated on “deep sky” observing, I am also a dedicated solar system observer and (of late) - an imager. Before acquiring a decent imaging platform, I spent a great deal of time sketching the cosmos and have a half dozen notebooks filled with hundreds of drawings. Over the years a fair number of these have been published in magazines and in several books.”

“Back in 1990, I had my first major article (on galaxies in Ursa Major) published by Astronomy magazine. Since then I have had over 50 articles published in Astronomy, Sky & Telescope, ALPO’s - Strolling Astronomer, Astronomie Heute, Magellanics, Amateur Astronomy, and the Deep Sky Observer (Webb Society) to name a few. Most of these articles have

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Photo by Frank Marchese.

The Peach State Star Gaze!

By Keith Burns, A-V Coordinator

The next Peach State Star Gaze is fast approaching! The AAC’s annual star party will again be held at the Deerlick Astronomy Village near Sharon, GA. This year the PSSG will run from Sunday, October 3 to Sunday, October 10 (new moon is October 7). DAV has an 11-acre field that has room for RVs, campers, and tents. Limited power is available on the field. Full restrooms with showers are available on the field along with a 40’ x 40’ pavilion and gas BBQ grill. The Atlanta Astronomy Club’s 24” telescope will be set up on the field and AAC’s clubhouse will be open. We will have speakers, workshops, and vendors. One speaker will be Sue French who writes the “Deep Sky Wonders” column in Sky & Telescope. She will present a talk titled “A Few of my Favorite Things”. Keep checking our website as information is always being updated. Registration is now open. Please visit us at AtlantaAstronomy.org/pssg/. You can also email us at pssg@atlantaastronomy.org. For information about the DAV visit the Deerlick Astronomy Village’s web site at Deerlickgroup.com.

been on “deep sky” observing, though I've had written several book reviews, biographical sketches and other historical pieces. I have also written a ½ dozen technical articles in geochemistry and radiochemistry for several major refereed scientific journals. In the last year, I helped coauthor (with Wolfgang Steinicke) an observer's guide to galaxies - Galaxies: How to Observe Them as part of Springer's continuing amateur observer series.”

Upcoming AAC Meetings:

Future meeting dates for 2010 are Oct 22nd, Nov 19th, and Dec 11th (Saturday). Meetings held in Room 207 of White Hall unless noted.

Parking News Update at Emory University

The parking deck behind the admissions building is now open for parking. So those of you who have been walking from either the Peavine or Fishburne parking decks will not have to do that anymore. Plus they are opening a new Barnes and Noble and other shops on the top floor. So there will be a few things to do while waiting for the meeting to start. This new facility and parking area is located next to the Math and Science Building and directly behind the Admissions building. Math and Science Building is directly across the street from our usual meeting place.

August General Meeting Minutes

By Julie Moore, AAC Recording Secretary. Photos by Tom Faber

The August 20 meeting of the Atlanta Astronomy Club was called to order at 8:05PM. Thirty-five members and visitors were present.

Dr. Richard Schmude of Gordon College presented a talk on observing and measuring features in Jupiter's atmosphere. Thanks again, Dr Schmude for an interesting evening!



The beginning of Dr. Schmude's talk about observing and recording features in Jupiter's atmosphere.

A short business meeting was called to order after Dr Schmude's talk. The following reports were submitted:

Speakers for the upcoming meetings by the Program VP: September: Rich Jakiel, October: Julian Greg, November: Angela Tanner.

Upcoming observing evenings by the Observing VP: Aug. 21 Chattahoochee Nature Center, Aug. 24 Whisky Blue Bar in Downtown Atlanta, Sept. 11 Woodruff DSO, Sept. 18 Woodruff Boyscouts.

PSSG Update: Oct 3-10; Speakers: Sue & Allen French, Pat Griffin-DSLR Modification, Jack Huerkamp. Deadline for Registration is Sept 15

Friday Aug. 27 is Solar System day, so get out there, find a solar system you like and give it an attaboy! And maybe show some planets to your friends and neighbors.

GASP: The club received a very nice thank you note from the Mentone Public Library for the observing event we hosted there.

International Observe the Moon Night is Sept. 18, so make plans to dust off that Lunar List you've been meaning to finish and host an moon observing party for that night. We'll all be there!



Dr. Schmude (left - pointing) used five members of the audience to demonstrate how Jupiter rotates much faster than the Earth.



Near the end of Dr. Schmude's talk the audience broke up into groups of 4-5 to do a "class work" assignment to see how to determine the rotation rate of features in Jupiter's atmosphere.

The Next AAC Board Meeting

The next Board meeting of the Atlanta Astronomy Club is scheduled for Sunday, November 7th at 3PM at Emory University in the Math and Science building room N301. Contact President Marks Banks or Board Chair Jim Moore for more information about the meeting agenda.

From the President's Desk

It's that time of year again when school is back in session. We all need to help our schools succeed. Budgetary shortfalls will limit our teachers' ability to get the materials needed to teach. This is especially true with science education because, unfortunately, many people consider it an unnecessary subject. A great way to help is by donation of materials and your time.

First, let's talk about materials. Books, magazines and other items are always needed. Just make up some peel & stick labels to place on the items that say:

"Donated by the Atlanta Astronomy club" www.atlantaastronomy.org

This will help the students and teachers, generate some new membership, and grow the club.

Next, let's talk about time. Most schools still have a "Science Fair" for the students to do projects. The teachers need help with mentoring of students on an individual basis, as well as volunteers to serve as a judge of the competition.

The best way to contact your local school is to call or go by and visit with the principal first. The schools are very security conscious now, so you will need to do this to get to the science teacher. When you contact the science teacher, let them know what you can do, and go for it. Please let me know how things go and share your success story with the club

Mark Banks, AAC President

August CE Chapter Minutes

by Larry Owens (filling in for Recording Secretary Marie Lott)

The meeting was held on August 7th at the Charlie Elliott Wildlife Visitor's Center and called to order at 5:00 PM by chapter director Theo Ramakers. There were approximately 16 members and guests in attendance. Theo started the meeting with a few announcements: Our next meeting will be "Dinner and a Movie", September 11, 2010 - this will be a potluck dinner with an astronomy related movie shown during dinner (to be announced). Future presentations: Steve Ramsden will present "If Jupiter was a Star", and Rich Jakiel will present a program in December. Outreach events: Please see the "Alerts" section of our website for the latest events: <http://ceastronomy.org/blog>

The featured speaker was Theo Ramakers with a program called "Building your own Observatory". Here's an outline of Theo's presentation:

The problems amateur astronomers face:

- Setting up and taking down equipment in the dark
- Dew and cold winter months

Solutions:

- Mark a location on the driveway
- Pour a concrete footing or install "pavers" at your observing site
- Ultimate solution - build your own observatory

Observatory design goals:

- Solid pier
- Easy open roof
- Make it weather and bug proof
- Avoid a building permit
- Self sustained power

Construction:

- Easy "roll off roof"
- Minimal closing/opening noise

Plenty of vent space and insulation

Batteries/power inverter in special cut-out under floor

Garage door rails and casters to support the roof

Roof roll-off extension

Open house - Several chapter members admired Theo's hard work

Next steps - Solar panels to charge a 125 amp hour battery from the sun

Please see Theo's entire presentation at (2010-08-07): <http://ceastronomy.org/blog/events>

Theo then presented a few current events: Steve Ramsden, Theo Ramakers and Frank Garner were able to image a solar transit of the International Space Station on July 30th, and received a nice write-up in the Covington newspaper.

The next presentation was "August - Observing 101" by our Observing Supervisor, Steve Phillips.

Here's an outline of Steve's presentation:

- Astro Events for August
- Featured Objects
- Deep Sky Object Catalogues
- Robert Trumpler
- August Target List

Please see Steve's full presentation at this link (2010-08-07): <http://ceastronomy.org/blog/events>

The meeting adjourned at approximately 8:00 PM. The next CE astronomy chapter meeting will be at 5:00 PM, Saturday, September 11.



Jupiter by Dan Llewellyn

This image of Jupiter was made by Dan Llewellyn on 9/1/2010 at 07:21UT from Decatur, GA. Telescope was a C-14 with a 2X Zeiss barlow and the camera was a Point Grey Research Flea2 monochrome camera. Astronomik filters were used for 30 second AVI runs at 30 frames per second for the red, green, and blue channels. CM1 - 353.5, CM2 - 124.9, CM3 - 325.3. Seeing 8 of 10 steady.

Measuring the Cosmos - Part 4

“Lighting a ‘Standard Candle’ in the Dark”

By Sharon Carruthers, AAC Treasurer

Using stellar parallax, we can measure the distance to stars up to 1,600 light years (ly) from Earth. Our Milky Way Galaxy is estimated to be 100,000 ly wide and 1,000 ly thick (with between 200 - 400 billion stars; the Andromeda Galaxy is estimated to contain 1 trillion stars). As we can see, stellar parallax does not measure very far into our own galaxy, let alone to other galaxies in the Universe.

As a result, astronomers have had to develop other techniques to measure farther outward. Each technique has its limitations, so they have built a “cosmic distance ladder” - each “rung” of the ladder provides information that can be used to determine the distances at the next farther “rung.”

A fundamental technique is based on the “Standard Candle”. By determining the luminosity or Absolute Brightness (ABB) of an object and comparing it to the Apparent Brightness (APB) (i.e. how bright it appears to us on the earth), we can use Newton’s inverse square law (ISL) to calculate the distance. The ISL states that the luminosity is inversely proportional to the square of the distance from the source. An object (of the same size) twice as far away, receives only one-quarter the light (in the same time period) as the closer one; an object three times the distance has a ninefold decrease in light.

The problem is how to know the ABB of a far away star.

The solution is to look for classes of stars (or other objects) that have the same luminosity and use them as “Standard Candles”. If you can determine a faraway star is the same as a nearby star whose distance you can measure, you have its APB (from earthly observation) and its ABB (because it is the same as the close star) and use those to calculate its distance.

The first stars used as Standard Candles were Cepheid variables. In 1784, the variability of Eta Aquilae and Delta Cepheus were first observed. 1908, Henrietta Swan Leavitt, while cataloguing stars in the Magellanic Clouds, discovered that there was a fixed relationship between the length of time of the variability and the brightness/dimness of these stars (the period-luminosity relationship). Using this knowledge, if we can find a Cepheid variable with the same period in another galaxy, we will know its ABB and, using its APB, we can calculate its distance (and the distance to the other galaxy.)

This is precisely what Edwin Hubble did in 1925. He observed what he thought was a supernova in the Andromeda Nebula. Subsequently he realized it was actually a variable star- specifically a Cepheid Variable - which enabled him to calculate the distance to the Andromeda Galaxy (approx. 2.5 million ly) and also resolve the major dispute among astronomers of his time.

Up to this time, the prevailing view of the cosmos was that the Universe was small, made up of our Milky Way galaxy with some patches of nebulosity around it (hence, the Andromeda Nebula). No telescope or photograph was able to resolve stars in these nebulae to prove they were like the Milky Way. Other astronomers, including Hubble, had begun to suspect that these nebulae were actually galaxies, but so far away their stars could not be resolved. On April 26, 1920, “The Great Debate” was held at the Smithsonian Museum of Natural History between Harlow Shapley (who defended “the Milky Way is the Universe” position) and Heber Curtis (who defended the position that nebula were distant separate galaxies or “island universes”). The consensus among the astronomers of the day was that Shapley won the debate. Only to have Curtis’ position proved correct by Hubble within the next five years. (Which only demonstrates that scientific controversies are best resolved, not by debating science, but by practicing science.)

Cepheid Variables: are unstable stars whose luminosity varies due to the pulsation of the star (as opposed to being eclipsed by a companion star). It is believed they formed with masses of 3-30 times that of our Sun; then, having passed through the main sequence as B-class stars and burning up all the hydrogen in their cores, are now passing through the later stages of nuclear burning. It was discovered early in the 20th century that other kinds of variable stars had been “lumped” in with the Cepheids (i.e. RR Lyrae variables) and that there are two classes of Cepheids. This discovery has resulted in revisions of the “ladder rungs” over the last century, but leading also to greater accuracy in the results.

The Cepheid variables are now divided into two subclasses, **Population I** and **Population II**, which have different period-luminosity relationships. Population I or *classical* Cepheids, are young, massive, metal-rich stars; and Population II or *W Virginis* Cepheids, are older, fainter, metal-poor low-mass stars, whose luminosity is, on average, less than classical Cepheids by about 1.5 magnitudes.

Cepheids are generally found along the galactic planes; RR Lyrae in globular clusters.

Delta Cephei, from which the Cepheids got their name, is a Population I (classical) Cepheid which varies from magnitude 3.6 to 4.3 in a period of 5.36634 days. It rises to a maximum quickly, then declines to its minimum at a slower rate. Its spectral type varies from about F5 to G3. Delta Cephei is 273 parsecs, or 890 light-years from us (within a 4% error range). It has a 7.5 magnitude companion star, separated from it by 41 arc seconds.

Next Month: Part 5: “More Rungs on the Ladder.”

Bradley Obs Open House Series

2010-2011 Open House Lecture Series

Astronomy Since Galileo (1610 – 2010)

The 400 years since the first astronomical use of the telescope have brought enormous progress to the science of astronomy. Technologies and new areas of science have been brought to bear on outstanding astronomical questions. The development of photography, spectroscopy, quantum mechanics, to name just a few have had profound impacts on our understanding of the universe. In this year’s lectures, speakers will explore the development of astronomy since Galileo. Lectures/Concerts begin at 8 PM. There will be observing with the Beck Telescope afterwards weather permitting.

Fall 2010

September 24, 2010 - Fall Equinox Concert and Open House

October 8, 2010 - LaserFest 2010: “Beam Me Up, Scottie!”, A. Sullivan (Agnes Scott College)

November 12, 2010 - “Science and the Catholic Church (1610-2010)”, D. McCann (Agnes Scott College)

December 10, 2010 - “Astronomical Technology since the Telescope (1610-2010)”, C. De Pree (Agnes Scott College)

Spring 2011

February 11, 2010 - “Sugar and spice and everything nice - is that what space is made of?”, Susanna Widicus Weaver (Emory University)

March 25, 2011 - Spring Equinox Concert and Open House

April 15, 2011 - “Jupiter’s Galilean Satellites”, Melissa McGrath (NASA Marshall Space Flight Center)

May 13, 2011 - “An Evening at the Edge of the Universe”, James Webb (Florida International University)

Georgia Astronomy in State Parks

by Keith Burns, A-V Coordinator & GASP Coordinator

One of the main things we do in the Atlanta Astronomy Club is to provide sidewalk astronomy events to the public. As an offshoot of sidewalk astronomy, a group of us formed GASP. GASP or Georgia Astronomy in State Parks goes out to select state parks and does an astronomy talk followed by viewing through telescopes. In case of rain, we set up the telescopes inside and show our telescopes to the attendees of the events. The events are always scheduled on a Saturday night. Currently we are doing four of these events per year.

Any Atlanta Astronomy Club member is welcome to join us and help out at one of these events. You don't need a telescope - just being able to answer questions is a big help when dealing with the public. For more information on the group, please contact Keith Burns at keith_b@bellsouth.net.

If you read the article in the August *Focal Point* about the GASP event to be held at Moon Lake Community Library, then this article is a follow up to that event. The program took place on August 14th. Since this was a different type of event from our usual GASP events, I did a modified PowerPoint talk to give folks a bit of information about what you will see in the sky and what astronomers do. An audience of 85 souls filled the room. Included in attendance were Roger's wife Judy, his son Stan, his daughter Sharon, and his sister Gwen. A rather emotional event of mixed happy and sad for Roger's family. They were happy to see folks come out and enjoy the wonders of the night skies just like Roger use to do. The talk lasted about 45 minutes and adjourned with everyone going outside to view the moon, Mars, and a few other things through the telescopes. Many questions were asked. Not bad for a night of partly cloudy skies with approaching thunderstorms to our northwest!

The night ended with a few of us volunteers heading on over to the nearest Waffle House for a bit of late night food and conversation. Sharon and I visited with Gwen on Sunday on our way back to Atlanta. We stopped by Roger's field and were able to see what damage had been done by the tornado that had stuck there back in the spring. Many of the downed trees had been cleared from the road. Repairs were being made to the water and power on the field. Soon astronomers will be making the track up there to view the wonders of the night skies. The best tribute to Roger and his dream is for us, the AAC, to come up for star gazing on his field. His family solidly wants us to come up and use the place just for that.

In closing, I wanted to thank the following people for their help in this event. Sharon Carruthers, Alton Leonard, and Sunny Snaith. Plus, a few days later, I found this note in my email box from the folks at the Moon Lake Community Library. It says in just one paragraph more I could say in a couple of pages.

Dear Keith, What a delightful evening! You and your club members provided a wonderful program...aided by the clear skies and God's beautiful universe. Thank you all for giving of your time, knowledge, and enthusiasm! Roger Dowiat's family was moved by the event; the response; and the closure for their emotional upheaval. Everyone who attended was thrilled with the opportunity to be 'shown' the night skies. What a great gift y'all gave us. Many thanks, Jan Wilkinson.

November 13th at Red Top Mountain State Park on Lake Allatoona. This is close enough to Atlanta for any club member to attend. This event usually draws a large crowd of people. The start time is 7PM.

I was recently contacted by Panola State Park about possibly doing an astronomy program there next year. Time will tell as we discuss this with the ranger there.

We are always looking for new state parks to explore and perhaps do an event at. So if you have any ideas, please let me know about them. Hope to see you at the next event, "out in the wilds and under the stars."

Solar Probe Instruments Selected

JHU/APL News Release - September 2, 2010

NASA has begun development of a mission to visit and study the sun closer than ever before. The unprecedented project, named Solar Probe Plus, is slated to launch no later than 2018.

The small car-sized spacecraft will plunge directly into the sun's atmosphere approximately four million miles from our star's surface. It will explore a region no other spacecraft ever has encountered. NASA has selected five science investigations that will unlock the sun's biggest mysteries.

"The experiments selected for Solar Probe Plus are specifically designed to solve two key questions of solar physics -- why is the sun's outer atmosphere so much hotter than the sun's visible surface and

what propels the solar wind that affects Earth and our solar system?" said Dick Fisher, director of NASA's Heliophysics Division in Washington.

"We've been struggling with these questions for decades and this mission should finally provide those answers."

As the spacecraft approaches the sun, its revolutionary carbon-composite heat shield must withstand temperatures exceeding 2,550 degrees Fahrenheit and blasts of intense radiation. The spacecraft will have an up close and personal view of the sun enabling scientists to better understand, characterize and forecast the radiation environment for future space explorers.

NASA invited researchers in 2009 to submit science proposals. Thirteen were reviewed by a panel of NASA and outside scientists.

The selected proposals are:

-- Solar Wind Electrons Alphas and Protons Investigation: principal investigator, Justin C. Kasper, Smithsonian Astrophysical Observatory in Cambridge, Mass. This investigation will specifically count the most abundant particles in the solar wind -- electrons, protons and helium ions - and measure their properties. The investigation also is designed to catch some of the particles in a special cup for direct analysis.

-- Wide-field Imager: principal investigator, Russell Howard, Naval Research Laboratory in Washington. This telescope will make 3-D images of the sun's corona, or atmosphere. The experiment actually will see the solar wind and provide 3-D images of clouds and shocks as they approach and pass the spacecraft. This investigation complements instruments on the spacecraft providing direct measurements by imaging the plasma the other instruments sample.

-- Fields Experiment: principal investigator, Stuart Bale, University of California Space Sciences Laboratory in Berkeley, Calif. This investigation will make direct measurements of electric and magnetic fields, radio emissions, and shock waves that course through the sun's atmospheric plasma. The experiment also serves as a giant dust detector, registering voltage signatures when specks of space dust hit the spacecraft's antenna.

-- Integrated Science Investigation of the Sun: principal investigator, David McComas of the Southwest Research Institute in San Antonio. This investigation consists of two instruments that will take an inventory of elements in the sun's atmosphere using a mass spectrometer to weigh and sort ions in the vicinity of the spacecraft.



Credit: NASA

Continued on page 7

August DSO at Brasstown Bald Mtn

For the second month in a row the AAC held its Dark Sky Observing session in the parking lot at Brasstown Bald Mountain. This event was on the night of August 7-8. About 15 club members were present for the event including Keith Burns, Mark Dove, Kat Sarbell, Tom Faber, and Steven Yood. The temperatures again dropped into the low 60's by Sunday morning. The humidity was a little higher than in July and there were a few more passing clouds from time to time, but we still had long hours of observing under the dark skies of Brasstown. We saw quite a few early Perseids all through the night and many satellites, including an early morning pass of the ISS. It was another great cool night under the stars for us heat weary folks! Photos by Tom Faber.



Keith Burns using his AstroScan for solar observing before sunset.



Keith's 13-inch Dob and Steven Yood's 8-inch refractor are pointed toward the heart of the Milky Way in Sagittarius.

Right: The crescent moon rises next to Steven Yood's refractor as the sky begins to brighten Sunday morning. Another great night of observing at Brasstown was drawing to a close.



Above: More people arrived and set up scopes the closer to sunset it got. The observation tower on the top of Brasstown is visible in the background.



Kat Sarbell views Venus through Keith's 13-inch Dobsonian in the fading twilight. Venus, Mars, and Saturn were within about 5-degrees of each other this night. Saturn is above brilliant Venus and Mars is to the left.



-- Heliospheric Origins with Solar Probe Plus: principal investigator, Marco Velli of NASA's Jet Propulsion Laboratory in Pasadena, Calif. Velli is the mission's observatory scientist, responsible for serving as a senior scientist on the science working group. He will provide an independent assessment of scientific performance and act as a community advocate for the mission.

"This project allows humanity's ingenuity to go where no spacecraft has ever gone before," said Lika Guhathakurta, Solar Probe Plus program scientist at NASA Headquarters, in Washington. "For the very first time, we'll be able to touch, taste and smell our sun."

For more information about the Solar Probe Plus mission, visit: <http://solarprobe.gsfc.nasa.gov/> and <http://solarprobe.jhuapl.edu>

Georgia Astronomy in State Parks

There is one GASP event remaining for this year:

Nov 13 - Red Top Mtn SP.

For more information about these events, contact Keith Burns at 770-427-1475 or Keith_B@bellsouth.net.



The GASP volunteers at FDR State Park on Labor Day weekend 2004 - From left to right: Joanne Cirincione, Keith Burns, Harold and Claudia Champ with Ginger, Peter Macumber, Sharon Carruthers, Tom Faber, Kat Sarbell, and Holly and John Ritger. Photo by Holly Ritger.

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>.

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 (\$35)** for a family or single person membership. College Students membership fee is **\$15 (\$20)**. These fees are for a one year membership (\$5 per year extra charge to receive the *Focal Point* mailed).

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.

AAC Officers and Contacts

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Elliott Recording Secretary: Dan Schmidt - Contact Info TBA

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

Elliott Webmaster: Larry Owens 678-234-5399
webmaster@CEastronomy.org

Georgia Astronomy in State Parks: Keith Burns 770-427-1475
Keith_B@bellsouth.net

Audio-Video Coordinator: Keith Burns 770-427-1475
Keith_B@bellsouth.net

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 observing@AtlantaAstronomy.org

Directions to White Hall at Emory

Our meetings are generally held in White Hall. To get to White Hall, turn onto Dowman Drive from North Decatur Rd at the five way intersection (across from Everybody's Pizza). White Hall is located across from the new Science & Math building. The best places to park are the Peavine and the Fishburne Parking Decks. The Fishburne deck is located on Fishburne Drive which is accessible from N. Decatur Rd. Turn onto Dowman and then right on Fishburne. You can also access Fishburne Drive from Clifton Road just north of N. Decatur. The Peavine parking deck is accessible from N. Decatur Rd. Turn onto Oxford Rd, go to the back entrance of Emory and turn onto Eagle Row. Take that to the Peavine deck. You can also access the Peavine deck from Clifton Rd. Turn onto Asbury Circle. It's the intersection next to the railroad tracks on Clifton. For maps to the decks see <http://map.emory.edu>. For more detailed directions to Emory University, visit www.atlantaastronomy.org or go to the Emory web site.

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

AAC Events are listed in BOLD

- Sept 3rd, Friday: Mercury Inferior Conjunction.
- Sept 8th, Wednesday: New Moon.
- Sept 11th, Saturday: **Charlie Elliott Chapter Meeting at 5PM. DSO at Woodruff BSC - Contact Daniel Herron for details.**
- Sept 15th, Wednesday: Moon First Quarter.
- Sept 17th, Friday: **AAC Meeting at White Hall, Emory University, 8PM.**
- Sept 18th, Saturday: International Observe the Moon Night - <http://observethemoonnight.org/>
- Sept 19th, Sunday: Mercury at Greatest Elongation West.
- Sept 20th, Monday: **October Focal Point Deadline (Early due to PSSG).** Jupiter & Neptune at Opposition.
- Sept 22nd, Wednesday: Equinox at 11:09PM.
- Sept 23rd, Thursday: Full Moon. Venus at Greatest Evening Brilliancy.
- Sept 30th, Thursday: Moon Last Quarter. Saturn Conjunction with Sun.
- Oct 2nd, Saturday: **Charlie Elliott Chapter Meeting.**

October 3rd-10th: Peach State Star Gaze at DAV! See page 1 for info.

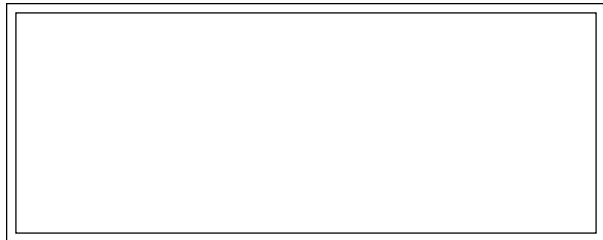
- Oct 7th, Thursday: New Moon.
- Oct 8th, Friday: Draconid Meteors.
- Oct 9th, Saturday: Venus & Mars near the Moon.
- Oct 14th, Thursday: Moon First Quarter.
- Oct 16th, Saturday: Mercury Superior Conjunction.
- Oct 22nd, Friday: **AAC Meeting at White Hall, Emory Univ, 8PM.** Orionid Meteors. Full Moon.
- Oct 28th, Thursday: Venus at Inferior Conjunction.
- Oct 30th, Saturday: Moon Last Quarter.
- Nov 5th, Friday: Taurids Meteors.
- Nov 6th, Saturday: **Charlie Elliott Chapter Meeting.** New Moon.

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@atlantaastro.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 October is MONDAY, Sept 20th at 6:00 PM. Submissions will not be accepted after the deadline.**



FIRST CLASS



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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