

# The Focal Point

The Atlanta Astronomy Club  
Established 1947  
September 2016

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Editor: Tom Faber

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## September AAC General Meeting

Please join us for the next general meeting of the Atlanta Astronomy Club, to be held on Saturday, September 17th at 3PM at the Fernbank Science Center. A short beginner's program will be presented at 2PM. Our featured speaker will be Dr. Nebil Misconi.

### The Talk

I will be speaking briefly about the political history of the events that took place in Baghdad, Iraq, and the Middle East during the period of the 1930's to 1970, as I was growing up. My undergraduate enrollment at the University of Istanbul, Turkey, and my experiences there will be discussed. I will also describe the efforts I made to immigrate to the United States to complete my graduate studies. I will include some short stories, for example, one of my TV appearances at Baghdad TV station; I ended up talking about astronomy, facing an AK 47 weapon in the studio!

I will give details about my research for 20 years on the so-called "Soft Money" and 16 years on "Hard Money" in astronomy and space science, and on how to write a successful research proposal. This research will highlight topics such as: The zodiacal light, Interplanetary dust dynamics, the threat of comets and asteroids, and other topics.

### Speaker Bio

Dr. Nebil Misconi is an immigrant astronomer, who dreamed of coming to the US. He was born in Baghdad, Iraq and went to school in Baghdad College, an American school in Baghdad run by American Jesuits. He went to Istanbul, Turkey on a scholarship to get his B.S. in astronomy. Dr. Misconi taught at the University of Baghdad and appeared frequently on Baghdad's only TV channel to talk about



astronomy and answer viewer's questions. He traveled to the US in 1970 and did his graduate studies at Albany, N Y University and received his Ph.D. in astronomy and space science. He carried out research at the Space Astronomy Laboratory at the University of Albany or SUNY (State University of New York at Albany) in the field of solar system astronomy and particularly interplanetary dust, comets, and asteroids. Dr. Misconi has held positions at the University of Florida, the Florida Institute of Technology, and at the University of Central Florida until retiring in 2011.

## The 2016 Peach State Star Gaze

Mark your calendars for the 2016 Peach State Star Gaze which will be held from Sunday, September 25 to Sunday, October 2 at the Deerlick Astronomy Village! Stay tuned to upcoming issues of the *Focal Point* and the AAC web sites for details on the talks, speakers, and other activities that will be held during the Star Gaze. And of course there will be lots of observing under some of the darkest skies in Georgia. The new moon occurs on Friday, September 30. Micki's Kitchen is also scheduled to return with meals, sandwiches, hot coffee, hot chocolate and other drinks, and her famous brownies! See you there!

**Update:** See page 4 for information about the Imaging Symposium lineup. Key Note Speaker - Dr Mike Reynolds: August 2017 - Solar Eclipse.



The AAC field at the DAV during the 2013 PSSG - Photo by Tom Faber.

# August AAC Meeting Report

Photos by Tom Faber unless noted

The August AAC general meeting was held on Saturday, August 20th at the Fernbank Science Center. About 35 members and guests were present. Tom Faber presented a short beginner's program at 2PM about observing satellites (photo right by Kat Faber). The general meeting began at 3PM.

Our featured speaker was John Sinclair, who presented a talk titled "Pisgah Astronomical Research Institute - 2016 and beyond." John's talk was about what is happening at the Pisgah Astronomical Research Institute (PARI), which is located west of Brevard, North Carolina in

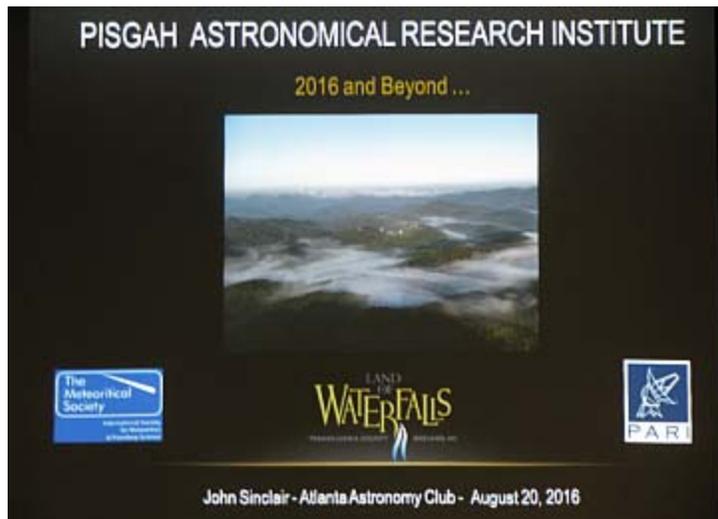


the Pisgah National Forest. The PARI site was originally built in the early 1960s as a NASA tracking site. The site was no longer needed by NASA and in 1981 was turned over to the Department of Defense. DoD used it to communicate with satellites until 1995 when the facility was closed and its functions were moved elsewhere. In 1999 the Pisgah Astronomical Research Institute took over operation of the site for research and educational purposes. See <http://www.pari.edu/>

After his talk John answered a number of questions about PARI.

After the Q&A session there were announcements by Club officers about upcoming events and activities.

Then after the meeting adjourned a number of attendees went to Athens Pizza for dinner and more astronomy discussions.



## 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>

## The August Charlie Elliott Meeting

By Brian Tucker, Charlie Elliott Chapter Recording Secretary

The August monthly meeting for the Charlie Elliott Chapter of the Atlanta Astronomy Club was held on 8/6/16 in the Charlie Elliott Wildlife Management property in Mansfield, Georgia. There were 31 members in attendance.

Tim Geib, Chapter Director, called the meeting to order at 6:00 p.m. and welcomed everyone. There were twenty-four attendees with four guests in attendance.

David Whalen, Observing Director, treated us to another exciting episode of "All of the Above", which gives a run-down of what you can expect to see in the sky in the coming weeks. The theme of this month's presentation was "Globular Cluster Season". After a briefing on classifications of



different types of globular clusters, he led into the Constellation of the month, Cepheus. In Cepheus, there are several targets of interest that David mentioned:

- NGC 40 - Planetary Nebula
- NGC 7008 - Planetary Nebula
- NGC 7023 - Open Cluster
- IC 1396 - Elephant Trunk Nebula
- Mu Cephei - Herschel's Garnet Star
- Caldwell 9 - Cave Nebula
- NGC 6946 - Fireworks Galaxy
- Beta Cephei (Alfirk) - Double Star

In other business, there were several outreach events discussed for this month:

- August 13: Stephens Park - Talk about Perseid Meteor Shower with observing from 8:30 PM to 11:00 PM in Crawfordville, GA
- August 13: Hard Labor Creek Observatory Open House
- August 19: The Canals of Mars from 5-9 PM at the Tellus Science Museum.
- August 26: Peachtree Corners - Gwinnett Park - Strictly Observing from 9-11 PM

There were no Astronomical league awards for this month.

The monthly program was delivered by Tiffany Clements, a Georgia State PhD candidate; she discussed her research on low mass stars. After this interesting presentation, 22 people went to the Jon Wood Astronomy field in hopes of the clouds clearing up, but were all disappointed by the lack of cooperation by Mother Nature. Better luck next month!

## The Next Charlie Elliott Meeting

### Meeting Details

**Note that we'll be meeting in the Campbell Building rather than the Shepard Building.**

Join us on September 10, 2016 at 5:30 p.m. for our quarterly potluck! If you've been to one of our potlucks, you're probably looking forward to the good food and good company these events have become known for.

Potlucks take a lot of effort to organize, and ours are no different. In addition to banana pudding, barbecue sandwiches, and potato salad, we need help with set up and clean up. If you can bring food or offer a few minutes for setup or clean up, click here to find out how you can help: <http://www.perfectpotluck.com/meals.php?t=CUYX0551>

### All of the Above!

Charlie Elliott Astronomy Observing Supervisor David Whalen will reprise his stand up comedy routine and might even talk about what you can expect to see in the sky this month with binoculars and small telescopes, as well as the monthly observing challenge.

### Observing After the Meeting

All are invited to Jon Wood Astronomy Field immediately after the meeting (weather-permitting). The event is free and everyone is welcome.

Minutes & Handouts: The minutes, handouts, and presentations from past meetings of Charlie Elliott Astronomy are available for download on our Past Events web page, <http://ceastronomy.org/blog/events>. Monthly sky maps are available from [skymaps.com](http://skymaps.com).

Meeting dates for the remainder of the year are: September 10 (potluck), October 29, November 19, December 10 (potluck).

## Atlanta Astronomy Club Board Meeting

11 Nov 2015, By Alan Coffelt, AAC Recording Secretary

Meeting called to order at 2 p.m. by Chairperson Sharon Carruthers.

Members present: Mark Banks, David Lumpkin, Brigitte Fessele, Tom Faber, Richard Jakiel, Sharon Carruthers, Alan Coffelt

Members absent: Steve Phillips, Daniel Herron

### Approval of Minutes:

Minutes from the previous board meeting were approved.

### Reports of Officers, Boards, and Committees:

President (Mark Banks):

**Renewal of PSSG Contract with DAV.** High-level review of accounts from the 2015 PSSG. 2016 is the final year of the current contract with DAV. Discussion about terms in the current contract (facility improvements that have been implemented by DAV during the current contract (pavilion, restrooms/showers, etc.). DAV's possible plans to use part of the upper field where PSSG is hosted for lease lots.

Key changes the board discussed to include in contract negotiations: Renew year-to-year instead of a 10-year agreement. Flat fee or fee per PSSG attendee instead of getting 50% of the profit. Remove provision to have DAV review the AAC's PSSG budget. Discussion about who might help with the negotiations, and who knows contract law. The board will ask Peter Macumber and Dan Llewellyn to discuss this. Mark Banks will begin identifying potential alternate sites for PSSG after 2016.

### Villa Rica observatory:

Mark has discussed the viability of the Villa Rica site with Ken Poshedly, who agreed it is probably not viable, due to low use and cost to maintain.

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## PSSG Imaging Symposium Line Up

Van Macatee - Introduction to Pixinsight 2 parts: 12:00PM to 12:45PM, break, 1:00PM to 2:00PM

Alan Coffelt - Night sky photography with your DSLR, for Beginners: 2:30PM to 3:30PM

Dan Llewellyn - Break the Analysis Paralysis! How to Actually Get Started Effectively in Astro Imaging: 4:00PM to 5:00PM

### Van Macatee - Introduction to Pixinsight

Pixinsight has emerged as a premiere option for processing your hard earned astrophotography data. Many of the top Astrophotographers in the world use PI as their processing tool of choice. But the rap is that it is hard to learn. Judge for yourself after this soup-to-nuts demonstration of the power and capabilities of this AP purpose built software. This workshop will cover all the most used features in the form of an overview of the software including the complete processing of a deep sky data set. We will evaluate, stack, calibrate, debayer and integrate linear sub frames. Once complete, the demonstration will walk through processing covering gradient removal, color balance, background neutralization and conversion to nonlinear format. Then the real fun begins with high dynamic range compression, noise reduction, color saturation adjustment, and other tricks to make those images pop. Included in the workshop will be a copy of the workflow that we will follow as well as a list of links to further your knowledge of this rich AP processing tool kit. Is PI hard to learn? No. Just different. Powerful? By the end of this workshop, you will be able to judge for yourself.



Van Macatee is the AP Coordinator for the Charlie Elliott Astronomy Club and has been involved in amateur astronomy for many years. Van is an accomplished Astrophotographer with numerous published image credits and a dynamic speaker/teacher.

### Alan Coffelt - Night sky photography with your DSLR, for Beginners

If you know how to use a DSLR camera and now you're ready to learn more about how to photograph and process star trails, the Milky Way, or even trying panoramic images, Alan's talk about what he has learned this year is for you!



Alan Coffelt has been a planetary imager since 2008 and a deep sky imager since early 2013. He has attended the PSSG for a number of years and has applied techniques and best practices learned at

planetary imaging symposiums, the North East Astro Imaging Conference, and the wealth of information from the local and online amateur astronomy communities. Alan regularly contributes images to the Planetary Virtual Observatory and Laboratory (PVOL) and the ALPO Japan image databases. One of his Saturn images was published in the September 2015 issue of Sky & Telescope. He is a member of the Association of Lunar and Planetary Observers (ALPO) and a member of the AAC since 1999.

### Dan Llewellyn - Break the Analysis Paralysis! How to Actually Get Started Effectively in Astro Imaging

This lecture will take a fresh new approach on getting off the ground for astro imaging. New technologies have arrived and have drastically altered the landscape and entry point for imaging. Coverage of optics, mounts and cameras will be integrated with object acquisition strategies. Volumes of confusing data will be distilled down to a comprehensible working knowledge to get you started. Software will be covered, with an emphasis on usability and cost. Surprisingly, a lot of it is free. Questions during the lecture will be encouraged, and there will be a Q and A session afterwards.



Dan Llewellyn has been a Planetary & Deep Sky Imager for over 15 years. His images have been featured in Sky & Telescope, Photonic Spectra, Atlanta Journal & Constitution, Association of Lunar and Planetary Observers (A.L.P.O.), The Astronomical League, and Fernbank Science Center. He authored an article in

the April 2014 edition of Sky & Telescope entitled "Redeeming Color Planetary Cameras".

Dan has received the Lenny Abbey Service award for his contributions in getting people started in Planetary and Deep Sky imaging. He has given lectures at Georgia Tech, The Peach State Star Gaze, Mid South Star Gaze, Chiefland Star Party, ALPO and ALCON conferences, Atlanta Astronomy Club and at DragonCon in the Science trek. Dan currently serves as the Director of the Imaging Symposium at the Peach State Star Gaze.



Continued from page 3

Mark collected estimates from tree service companies if we were able to secure permission from the neighboring property owners, and that ranged from \$25,000-\$30,000. Motion by Mark Banks to decommission the Villa Rica Observatory site: Motion seconded. Vote: 7 in favor, 0 opposed. Resolved: Motion carried.

An announcement needs to be placed in the next *Focal Point*, in the Yahoo Group, and Facebook page to let club members know that the board has decided end the use of the Villa Rica site due to increased light pollution, encroaching tree growth on neighboring properties, low use, and maintenance costs. As such the site is not an effective use of club assets and funds. Also include the plans to remove any useful materials, equipment, instruments, or items that can be repurposed, and disposal for everything else. Discussion about going out to VR and inventory what can be salvaged.

#### Other:

Update on the Fernbank Science Center as the club's meeting location. Discussion about possible alternatives or staying at Fernbank for now. Mark is waiting for a confirmation about new meeting dates at FSC (third Saturday of each month). Reminder about the Georgia Science Teacher Association meeting at Stone Mountain, and the need for volunteers on 2/4. Ken Olsen is the new Astronomical League Coordinator. We have an opening on the board to replace Jamie Anderson. Discussion about moving club elections to March.

Motion by Mark Banks to initiate amendment to the club bi-laws to sanction electronic voting (email) for club officers: Motion seconded. Vote: 6 in favor, 0 opposed, 1 abstained. Resolved: Motion carried. Discussion about what steps are required to amend the club bi-laws.

Program Chair (Rich Jakiel): Discussion on possible upcoming speakers.

Treasurer (Sharon Carruthers): Sharon reviewed the treasurer's report and recapped expenses, membership income, and account balances. Noted membership income has increased. The Farmers liability insurance policy has been renewed, as it was lowest cost to alternatives. Discussion about possible insurance coverage for the BOD.

Motion from Sharon Carruthers to approve the treasurer's report. Motion seconded. Vote: 6 in favor, 0 opposed. Resolved: Motion carried.

Correspondence Secretary (Tom Faber): Nothing to report

Observing Chair (Daniel Herron): Not present

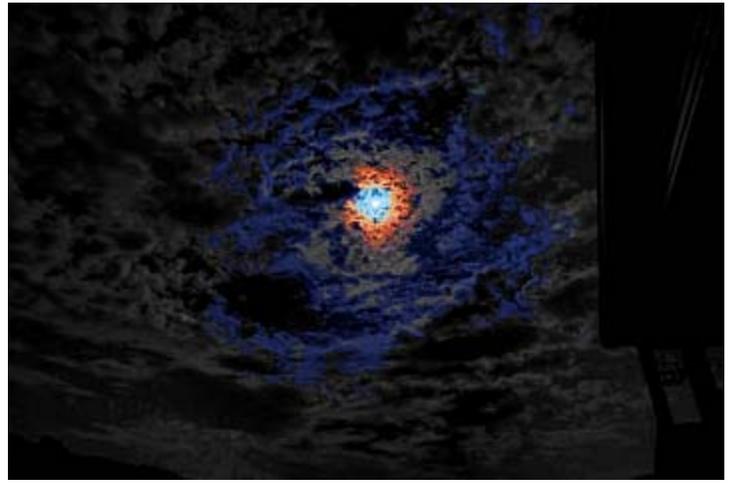
Unfinished Business: None

Meeting adjourned at 5:00 p.m. by Chairperson Sharon Carruthers

## Images by Dan Llewellyn

Top Image: This image, taken by Dan at the Deerlick Astronomy Village on August 16, 2016, shows the moon with a nice corona in the clouds around the moon. Coronae are produced by the diffraction of light by tiny cloud droplets. In rare cases several concentric rings of different colors are visible, but this requires the cloud droplets to be very uniform in size.

Bottom Image: This is a "new and improved" version of the image that was in last month's *Focal Point*. This version shows a stacked version of the Lagoon Nebula (M8) and the Trifid Nebula (M20). While last month's image was a single exposure this image is a stack of 5 X 60 second exposures with a Sony A7S Camera, using an Esprit 150 refractor and a field flattener.



# Launch of the OSIRIS-REx Spacecraft

By Tom Faber

Those of you who were at the 2012 Peach State Star Gaze may remember a talk by Dolores Hill (photos right), a member of the Education and Public Outreach team for the OSIRIS-REx spacecraft. OSIRIS-REx was designed to travel to the Near Earth Asteroid 101955 Benu and collect samples for return to Earth. At the time of Dolores' talk the mission had recently been approved and work on the construction of the spacecraft had begun. Tonight (September 8) the OSIRIS-REx spacecraft was launched on an Atlas V 411-Centaur rocket from Cape Canaveral Air Force Station, Florida (photo below). About an hour after launch the spacecraft had been accelerated to escape velocity by the Centaur upper stage and had separated from the Centaur. Its solar panels have deployed and signals were received from the spacecraft by the Deep Space Network's Canberra, Australia tracking station and so far all looks good. The spacecraft is to rendezvous with Benu in August 2018, and will spend about two years imaging and studying the asteroid's surface before a location will be selected to collect samples from, which will be done in 2020. The spacecraft is scheduled to depart Benu in early 2021 and return the samples to Earth in September 2023.

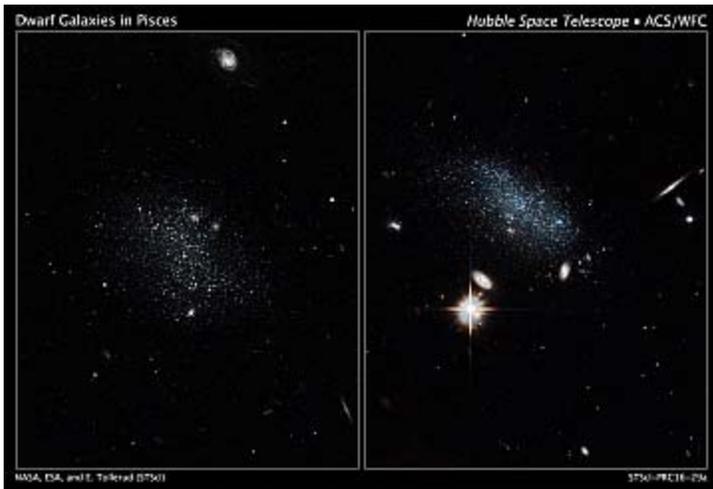
For more information on the OSIRIS-REx see the project website:

<http://www.asteroidmission.org/>



Photo Credit: United Launch Alliance

Photos above by Tom Faber



## Dwarf Galaxies in Pisces

NASA/STScI News Release - August 11, 2016

The Hubble Space Telescope has captured the glow of new stars in these small, ancient galaxies. Pisces A is on the left and Pisces B is on the right.

Astronomers estimate that less than 100 million years ago both galaxies doubled their star-formation rate. An analysis of the stars' colors reveals that the galaxies contain about 20 to 30 bright blue stars. The blue color is a sign they are young, less than 100 million years old. Each galaxy contains about 10 million stars.

In the image of Pisces A, at left, the bright object at the top of the image is a distant background galaxy. Other distant background galaxies are visible as bright dots. In the image of Pisces B, at right, the bright object with the diffraction spikes below left of center is a foreground star in our Milky Way galaxy. Several distant background galaxies are also visible.

Hubble observations suggest that Pisces A and Pisces B should have produced the bulk of their stars long ago. But the puny galaxies dwelled for billions of years in the Local Void, a region of the universe sparsely populated with galaxies. Now the galaxies have moved into a region packed with galaxies and intergalactic gas. This environment is triggering star birth.

Pisces A is roughly 19 million light-years away and Pisces B about 30 million light-years away. The image of Pisces A was taken on Oct. 30, 2014, by Hubble's Advanced Camera for Surveys. The image of Pisces B was taken on Nov. 8, 2014, by the Advanced Camera for Surveys.

The **Atlanta Astronomy Club, Inc.**, one of the South's largest and oldest astronomical society, meets at **3:00 P.M.** on the 2nd Saturday of each month at the Fernbank Science Center in Decatur, or occasionally at other locations or times. Membership fees are **\$30** for a family or single person membership. College Students membership fee is **\$15**. These fees are for a one year membership.

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](mailto: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 posted. 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](mailto:President@AtlantaAstronomy.org)

**Program Chair:** Richard Jakiel [Programs@AtlantaAstronomy.org](mailto:Programs@AtlantaAstronomy.org)

**Observing Chair:** Daniel Herron [Observing@AtlantaAstronomy.org](mailto:Observing@AtlantaAstronomy.org)

**Corresponding Secretary:** Tom Faber  
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**Treasurer:** Sharon Carruthers [Treasurer@AtlantaAstronomy.org](mailto:Treasurer@AtlantaAstronomy.org)

**Recording Secretary:** Alan Coffelt,  
[Secretary@AtlantaAstronomy.org](mailto:Secretary@AtlantaAstronomy.org)

**Board Chair:** Sharon Carruthers [Treasurer@AtlantaAstronomy.org](mailto:Treasurer@AtlantaAstronomy.org)

**Board:** Brigitte Fessele, Contact info TBA

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**Board:** Steve Phillips [sandsphillips@att.net](mailto:sandsphillips@att.net)

**ALCor:** Jamie Anderson, [jameia@bellsouth.net](mailto:jameia@bellsouth.net)

**Elliott Chapter Director:** Tim Geib [director@ceastronomy.org](mailto:director@ceastronomy.org)

**Elliott Observing Supervisor:** David Whalen  
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**Elliott Recording Secretary:** Brian Tucker  
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**Elliott Webmaster:** Larry Owens [webmaster@CEastronomy.org](mailto:webmaster@CEastronomy.org)

**Elliott Outreach Coordinator:** Dan Thoman  
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**Georgia Astronomy in State Parks:** Sharon Carruthers  
[Treasurer@AtlantaAstronomy.org](mailto:Treasurer@AtlantaAstronomy.org)

**PSSG Chairman:** Peter Macumber [pmacumber@nightsky.org](mailto:pmacumber@nightsky.org)

**PSSG Co-Chair:** Open

**Sidewalk Astronomy:** Brad Isley  
[sidewalkastronomy@AtlantaAstronomy.org](mailto:sidewalkastronomy@AtlantaAstronomy.org)

**Light Trespass:** Ken Edwards, Contact info TBA

**Woodruff Observ. Coordinator:** Sharon Carruthers  
[Treasurer@AtlantaAstronomy.org](mailto:Treasurer@AtlantaAstronomy.org)

**AAC Webmaster:** Daniel Herron  
[Observing@AtlantaAstronomy.org](mailto:Observing@AtlantaAstronomy.org)

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

## AAC Events are listed in BOLD

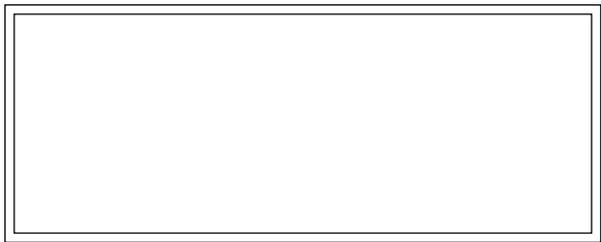
- Sept 1st, Thursday: New Moon.
- Sept 2nd, Friday: Moon near Jupiter.
- Sept 3rd, Saturday: **DSO at Deerlick Astronomy Village.**
- Sept 9th, Friday: Moon First Quarter.
- Sept 10th, Saturday: **CE Chapter Meeting and Potluck Dinner.**
- Sept 12th, Monday: Mercury at Superior Conjunction.
- Sept 16th, Friday: Full Moon.
- Sept 17th, Saturday: **AAC Mtg at Fernbank Science Center 3:00PM.**
- Sept 23th, Friday: Moon Last Quarter.
- Sept 25th, Sunday: **The Peach State Star Gaze opens 12:00PM.**
- Sept 26th, Monday: Jupiter Conjunction with Sun.
- Sept 29th, Thursday: Moon near Mercury.
- Sept 30th, Friday: New Moon.
- Oct 2nd, Sunday: **The Peach State Star Gaze closes.**
- Oct 3rd, Monday: Moon near Venus.
- Oct 9th, Sunday: Moon First Quarter.
- Oct 11th, Tuesday: Mercury and Jupiter less than 1/2 degree apart (Morning).
- Oct 15th, Saturday: Uranus at Opposition.
- Oct 16th, Sunday: Full Moon.
- Oct 19th, Wednesday: Moon occults Aldebaran: Disappears 1:18AM, Reappears 2:27AM (Atlanta).
- Oct 21st, Friday: Orionid Meteor Shower
- Oct 22nd, Saturday: Moon Last Quarter.
- Oct 27th, Thursday: Saturn, Venus, and Antares form a near straight line.
- Oct 29th, Saturday: **CE Chapter Meeting.**

For more event listings see the calendar at [www.atlantaastronomy.org](http://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](mailto:AstroAtlanta@yahoogroups.com) . To add a subscription, send a message to: [AstroAtlanta-subscribe@yahoogroups.com](mailto: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](mailto: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 October is Saturday, September 24. Submissions after the deadline will go in the following issue.**



FIRST CLASS



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



**Atlanta Astronomy Club**  
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*The Focal Point*

Newsletter of The Atlanta Astronomy Club, Inc.

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