

The Focal Point

The Atlanta Astronomy Club
Established 1947
January 2013

Vol. 25 No. 8

Editor: Tom Faber

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January General Meeting

Join us for the November meeting of the Atlanta Astronomy Club on Friday, January 18th at 8PM. The meeting will take place in the Parlor Room of the Hitson Center of the Sandy Springs Methodist Church, 86 Mt Vernon Hwy, NE, Sandy Springs, GA 30328 (see map on pg 7). Refreshments will be provided starting around 7:30PM.

The Program:

The January program will be about important “cosmic” numbers. As we all know in science, if the numbers don’t work out, something wrong and needs to be changed. Any scientific theory must meet the test of having the numbers all work out. Many things can go wrong in the process. The methodology of making & recording the initial raw data, the number crunching itself or the theory you are trying to prove, can all be trouble spots. Our program will be about how some of the most important numbers for astronomers came to be. Well, I know a lot of people have fear of anything mathematical, but fear not! There will not be a lot of lengthy equations and their will not be a test afterwards. So, please join us and find out the origins such things as light speed, the Hubble constant and the gravitational constant.

Our Speaker:

One of our club members, Larry Phillips, will be doing our program. Larry was an Electrical Engineer and software developer at Lucent Technologies & Bell Labs. He is now tutoring students in mathematics and physics. He also writes a blog on mathematics at BrightStarTutors.com/blog. Larry is also working on a book tentatively titled “The Elementary Mathematics of Gravity”.



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Lifetime AAC Member Leonard B. Abbey FRAS, 1938-2012

By Alex Langoussis

Lenny Abbey was just a young teenager when he attended his first meeting of the Atlanta Astronomy Club at Agnes Scott College. There, he found people who enjoyed and talked about what he loved, astronomy. Surrounded by mentors from whom he could learn, that meeting opened up a whole new world for him that lasted a lifetime. Leonard B. Abbey had been an AAC member for over 60 years when he passed away on December 14th, just one week before he and Eugenia were to celebrate their 50th wedding anniversary.

Lenny was a man of many interests and talents. He was schooled at Emory University and Georgia Tech, and his careers included physics (Georgia Tech Research Institute), photography (Diebold), and computers (Microsoft). A lover of cats, he was also an avid student of history, loved classical music, and was a gourmand who enjoyed cooking. He also enjoyed a good debate for the mental exercise.

But astronomy was his first love. He was quite knowledgeable about the histories of telescopes, optics, and astronomy in general. While he enjoyed viewing the night sky through the telescope as much as any of us, he took it to the next level. It was important to him that the majority of his time in astronomy be devoted to the advancement of the science. Early on he started working with the Association of Lunar and Planetary Observers (ALPO), and was coordinator of the Uranus and Neptune sections. His telescopes were always long focal-length Newtonians that would give exquisite planetary views, enabling him to produce finely detailed drawings of the planets. (He fondly referred to his last telescope as “The Great 10-inch Reflector”.) Later on, he did extensive work with the American Association of Variable Star Observers (AAVSO). There, he helped bring their long history of data collection into the computer age, so that their charts and observations were accessible to the world in digital form. As computers started becoming part of our everyday lives, he also managed



Lenny, age 18, with his second telescope. A 6" f/8 reflector (circa 1956).

Continued on page 3

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:

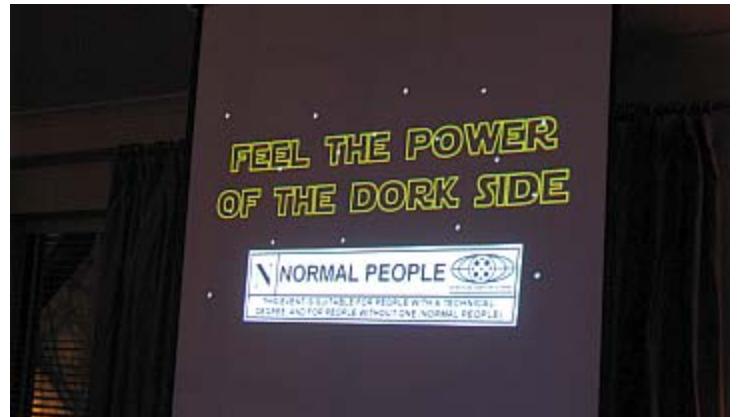
Our meetings will usually be held on the 3rd Friday of the month. Future meeting dates are Feb 15, Mar 15, and Apr 19 (3rd Friday of each month). Meetings will be held at the Parlor Room of the Hitson Center starting at 8PM unless noted otherwise.

December AAC Meeting & Potluck

By Pixie Bruner, AAC Recording Secretary. Photos by Tom Faber

Happy New Year to all. May this year be filled with clear skies wonderment and excitement as we have some great historical celestial events to look up to and forward to. December's festive AAC meeting was the most hilarious and lively as Dr. Peter Ludovice from Georgia Tech (bottom right) did his standup routine (center right) and got his science corrected by hecklers for the first time ever. The club hosted a great send out to 2012, a challenging year for AAC members with the losses of two great members, Art Zorka and Lenny Abbey (*Editor's Note: Lenny Abbey passed away the following week*), one of the old guard of the club and both these men loved

the skies and were role models and educators to so many current members. Both will be remembered in 2013. The next AAC board meeting is Jan 27 at the AFS Hall in Smyrna. The next club meeting will be at the Hitson Center in Sandy Springs on the third Friday of the month, Jan 18th. The speaker and topic is TBA. Please check our club webpage and the NSN site for local volunteer opportunities of ways you can share the skies with others who want to learn about astronomy and are curious about the upcoming comets and other discoveries in the astro-fields of science. Wishing you clear skies and sky-gazing adventures!



Continued from page 1

the astronomy forum on Microsoft's network. Lenny was a member of the British Astronomical Association. When he was with the Astronomical League he tried unsuccessfully to model our League to be more like the BAA, which has close ties to the professional community. For his contributions to astronomical science he was honored by being elected a Fellow of the Royal Astronomical Society.

But Lenny always said his greatest honor was being elected a lifetime member of the AAC. Over the years he was a great contributor to our local astronomy community. He held every office in the club, usually more than once, with several years as president and newsletter editor. He also set up and managed the club's Yahoo discussion group, where members can exchange information online. As a longtime member, Lenny was always a resource for the history of our organization. And when there were difficult times in the club's past, he would often dip into his own pocket to help the club make it through.

In the last several years age and health made it more difficult for Lenny to attend meetings, so it is unfortunate that many newer members never got to know him. A man of intellect and humor, with a sprinkling of curmudgeon thrown in, he was someone who, for over half a century, had strived to advance astronomy and our astronomy club. He will be greatly missed.



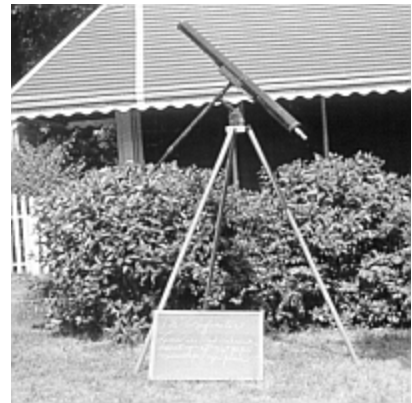
Lenny dances with his telescope - the equatorial head for his "Great Ten Inch Reflector" (circa 1966).



Lenny addresses the 1999 ALPO Banquet.



Lenny with one of his cats, Frieda.



Lenny's first telescope - A 1.5" f/30 monochromatic refractor.



Lenny's first astrophoto.

Lenny Abbey back under the stars with his 8-inch telescope in late 2011. The mount it is on is the mount for Lenny's "Great Ten Inch Reflector", the same one he is "dancing" with in the other picture. Lenny's 8-inch scope had recently been refurbished by Alex Langoussis - see Alex's article "Return to Starlight" in the January 2012 Focal Point (Photo by Alex Langoussis).



CE Chapter Outreach

By Theo Ramakers, Outreach Coordinator

<http://ceastronomy.org/tramakers>

Three events in December concluded the outreach activities for the Chapter in 2012. A return to Hightower Trail Elementary in Rockdale County for two days and participation in Ison Spring Elementary School's Science night in Sandy Springs were the last events of the year for the Chapter.

2012 was a huge success for our willingness to reach out to schools and clubs in the Region. We had exactly 100 registrations, 13 needed to be cancelled for various reasons and 4 ended up being club events leaving 83 events completed! :-). Eight Members have qualified for the Night Sky Network's outreach award and pin, by participating in 5 or more events for the year. Dan Schmitt, Frank Garner, Jack Fitzmier, Jeff Rebitzke and his son Kiernan, Marie Lott, Steve Siedentop and Theo Ramakers will receive their awards in the February meeting of the Chapter. The Chapter members contributed over 900 man-hours to volunteer for these events and drove over 11,500 miles collectively to reach the sites where the events were held. A fantastic effort for all to bring astronomy to our schools and civic organizations.

Thanks to all, including those who could not make it 5 times, but helped with a few.



The Next AAC Board Meeting

The next Board meeting of the Atlanta Astronomy Club is scheduled for Sunday, January 27th at 3PM. Location of the meeting is at the Atlanta Freethought Society building in Smyrna. Contact President Richard Jakiel or Board Chair Daniel Herron for more information about the meeting.

The Next Charlie Elliott Meeting

Join us for our next meeting at 3 p.m., Saturday, January 12, at the Charlie Elliott Conference Center

Meeting Agenda

Feature Presentation: Telescopes 101

Please join us for “Telescopes 101”. BRING YOUR TELESCOPE to the meeting for show and tell, or to learn how to use it (with the lights on this time). If you’re new to astronomy and to astronomical telescopes, this is your opportunity to learn how to use that new telescope you got for Christmas, and if you’re an experienced astronomer this is your opportunity to share your experience with others. Please join us at the Charlie Elliott Conference Center, January 12th at 3:00 PM.

Sunset Time Alert

When the meeting is indoors, and if the meeting runs extra-long, a “Sunset Time Alert” will be announced. While we’d love for everyone to stay for the entire meeting, we also realize that some folks prefer to leave a bit earlier so as to set up their equipment at the observing field before dark.

“Observing after the Meeting”

All are invited to the observing field immediately after the meeting (weather-permitting) (or to stay on the observing field if the meeting was outdoors). Everyone is welcome.

Place: Jon Wood Astronomy Field at Charlie Elliott Wildlife Center



Jupiter & Ganymede by Dan Llewellyn

This photo was taken October 24, 2012 from my house in Decatur Ga. Jupiter’s moon Ganymede is transiting and has good detail visible.

Cassini Suggests Icing on a Lake

NASA/JPL News Release - January 08, 2013

It’s not exactly icing on a cake, but it could be icing on a lake. A new paper by scientists on NASA’s Cassini mission finds that blocks of hydrocarbon ice might decorate the surface of existing lakes and seas of liquid hydrocarbon on Saturn’s moon Titan. The presence of ice floes might explain some of the mixed readings Cassini has seen in the reflectivity of the surfaces of lakes on Titan.

“One of the most intriguing questions about these lakes and seas is whether they might host an exotic form of life,” said Jonathan Lunine, a paper co-author and Cassini interdisciplinary Titan scientist at Cornell University, Ithaca, N. Y. “And the formation of floating hydrocarbon ice

will provide an opportunity for interesting chemistry along the boundary between liquid and solid, a boundary that may have been important in the origin of terrestrial life.”

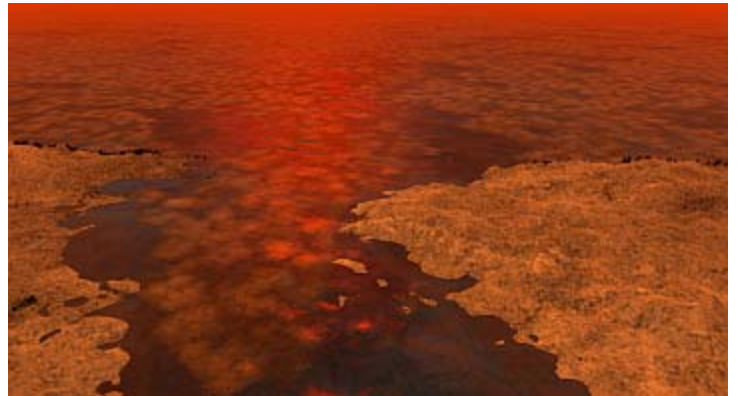
Titan is the only other body besides Earth in our solar system with stable bodies of liquid on its surface. But while our planet’s cycle of precipitation and evaporation involves water, Titan’s cycle involves hydrocarbons like ethane and methane. Ethane and methane are organic molecules, which scientists think can be building blocks for the more complex chemistry from which life arose. Cassini has seen a vast network of these hydrocarbon seas cover Titan’s northern hemisphere, while a more sporadic set of lakes bejewels the southern hemisphere.

Up to this point, Cassini scientists assumed that Titan lakes would not have floating ice, because solid methane is denser than liquid methane and would sink. But the new model considers the interaction between the lakes and the atmosphere, resulting in different mixtures of compositions, pockets of nitrogen gas, and changes in temperature. The result, scientists found, is that winter ice will float in Titan’s methane-and-ethane-rich lakes and seas if the temperature is below the freezing point of methane -- -297° F (90.4K). The scientists realized all the varieties of ice they considered would float if they were composed of at least 5 percent “air,” which is an average composition for young sea ice on Earth. (“Air” on Titan has significantly more nitrogen than Earth air and almost no oxygen.)

If the temperature drops by just a few degrees, the ice will sink because of the relative proportions of nitrogen gas in the liquid versus the solid. Temperatures close to the freezing point of methane could lead to both floating and sinking ice - that is, a hydrocarbon ice crust above the liquid and blocks of hydrocarbon ice on the bottom of the lake bed. Scientists haven’t entirely figured out what color the ice would be, though they suspect it would be colorless, as it is on Earth, perhaps tinted reddish-brown from Titan’s atmosphere.

“We now know it’s possible to get methane-and-ethane-rich ice freezing over on Titan in thin blocks that congeal together as it gets colder -- similar to what we see with Arctic sea ice at the onset of winter,” said Jason Hofgartner, first author on the paper and a Natural Sciences and Engineering Research Council of Canada scholar at Cornell. “We’ll want to take these conditions into consideration if we ever decide to explore the Titan surface some day.”

Cassini’s radar instrument will be able to test this model by watching what happens to the reflectivity of the surface of these lakes and seas. A hydrocarbon lake warming in the early spring thaw, as the northern lakes of Titan have begun to do, may become more reflective as ice rises to the surface. This would provide a rougher surface quality that reflects more radio energy back to Cassini, making it look brighter. As the weather turns warmer and the ice melts, the lake surface will be pure liquid, and will appear to the Cassini radar to darken.



This artist’s concept envisions what hydrocarbon ice forming on a liquid hydrocarbon sea of Saturn’s moon Titan might look like. Image credit: NASA/JPL-Caltech/USGS



ALCON 2013 ATLANTA

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

Location: Fernbank Science Center

Host Organizations: Atlanta Astronomy Club, Astronomical League

Partnering Organization: Association of Lunar and Planetary Observers (ALPO)



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-px.trvlclick.com
- Saturday night's Awards Banquet



Primary Venue: Fernbank Science Center

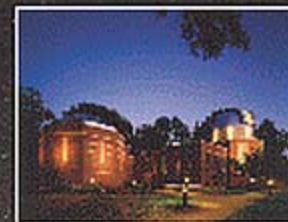
- Talks held in 70ft planetarium
- Evening shows with Zeiss Mark V projector coupled with various special effects projector
- 0.9 meter Cassegrain reflector in the Ralph Buice Memorial Observatory
- Vendor displays



Excursions around Atlanta

Agnes Scott College Bradley Observatory

- Friday night's Star BQ
- Delafield Planetarium
- 30 inch Lewis H. Beck telescope
Atlanta Astronomy Club's Villa Rica Observatory
- Full size roll-off roof observatory
- 20 inch Newtonian reflector

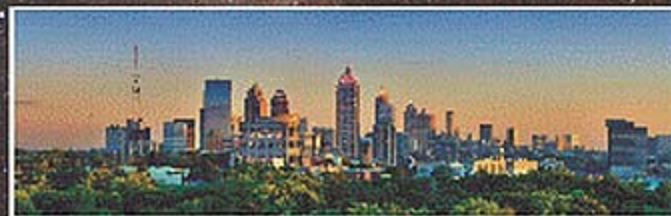


Atlanta Attractions

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



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

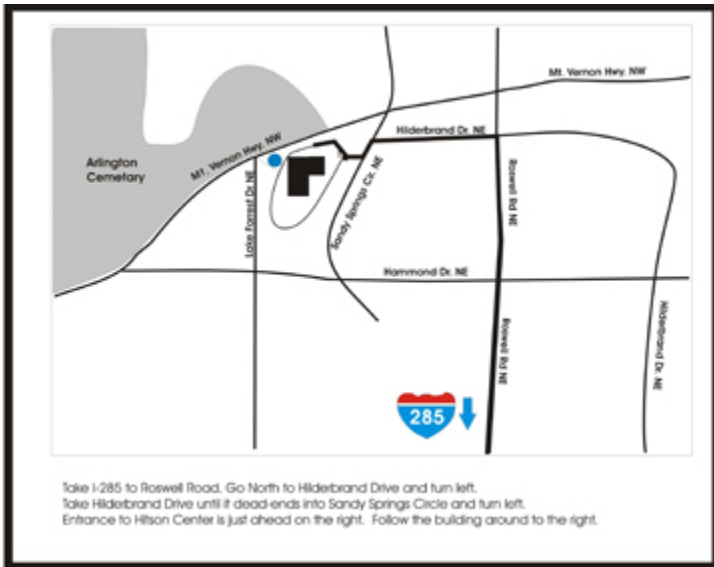


The Astronomical League

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 AAC's meeting location at the Hitson Center in Sandy Springs.

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/atlaastro>.

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
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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

- Jan 2nd, Wednesday: Earth at Perihelion.
- Jan 4th, Friday: Latest Sunrise in Atlanta: ~7:42 AM.
- Jan 5th, Saturday: Moon Last Quarter.
- Jan 11th, Friday: New Moon.
- Jan 12th, Saturday: **CE Chapter Meeting, 3 PM.**
- Jan 18th, Friday: **AAC Meeting, 8PM.** Moon First Quarter.
- Jan 25th, Friday: **February Focal Point Deadline.**
- Jan 26th, Saturday: Full Moon.
- Feb 3rd, Sunday: Moon Last Quarter.
- Feb 9th, Saturday: **CE Chapter Meeting, 3 PM.**
- Feb 10th, Sunday: New Moon.
- Feb 11th, Monday: Moon near Mercury & Mars.
- Feb 15th, Friday: **AAC Meeting, 8PM.**
- Feb 17th, Sunday: Moon First Quarter.
- Feb 22nd, Friday: **March Focal Point Deadline.**
- Feb 25th, Monday: Full Moon.
- Feb 28th, Thursday: Moon near Spica.
- Mar 4th, Monday: Moon Last Quarter.
- Mar 11th, Monday: New Moon.
- Mar 15th, Friday: **AAC Meeting, 8PM.**
- Mar 16th, Saturday: **CE Chapter Meeting, 3 PM.**

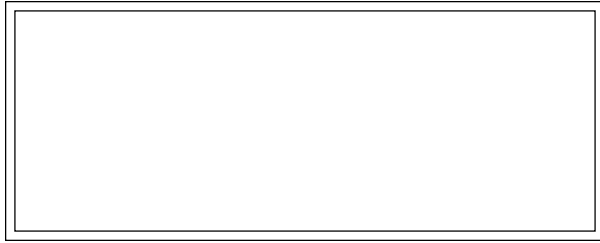
For more event listings see the calendar at www.atlantaastronomy.org

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 . 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 PDF's are okay. You can submit articles anytime up to the deadline. **The deadline for February is Friday, January 25th. 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.



Tom Faber
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Alpharetta, GA 30022

Atlanta Astronomy Club

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Atlanta, GA 30358-1155

www.atlantaastronomy.org

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