The Focal Point

The Atlanta Astronomy Club
Established 1947
March 2010

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Editor: Tom Faber

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March General Meeting

The Program

The next general membership meeting of the Atlanta Astronomy Club will be held on Friday, March 26, at White Hall on the Emory University Campus in Room 207. The meeting starts at 8PM. Refreshments and snacks will be served starting around 7:30PM. Directions to White Hall are at the bottom of this article. The meeting starts out with the monthly announcements Power Point program that will run before the meeting starts and at the beginning of the meeting. After that, we move on to our featured speakers of the night - *Astro-imaging on a Budget*. Do you want to produce beautiful astronomy images without investing in many 1000's of dollars of equipment? On March 26th, AAC members Richard Jakiel and Dan Llewellyn will host an informal forum on inexpensive CCD, DSLR and planetary imaging. Topics covered will include types of equipment, setup, imaging software, common pitfalls plus numerous examples of astro-images.

Our Speakers

Currently, Richard (right) is a research scientist working for The State of Georgia's Radiation Protection Program. A member of the AAC since 1987, he has contributed over 60 astronomy articles to magazines and 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 *Night Observer's Guide*. His latest articles (2010) were on observing the Fornax Galaxy Cluster and Whirlpool Type Galaxies. He also taught astronomy and physics at the University of West Georgia (1997-2002), and is currently the director of the Webb Society's Galaxy Section. Richard is also a review editor for the Association of Lunar and Planetary Observers (ALPO), and a number of his images of the planets have graced the pages and covers of their main publication - The Strolling Astronomer. His current research interests include the imaging and monitoring the major bodies of the solar system and ancient (Greco-Roman) astronomy. He is currently constructing a new observatory (Duck Dodgers Observatory) in the 'wilds' of Lithia Springs.

Dan Llewellyn (right) is a telescope designer and manufacturer. He currently produces the T1-16, the lightest 16 inch Dobsonian GOTO telescope available. He is also an avid planetary and CCD imager. In the late 1990's he was one of the pioneers to image the planets with a video camera. In 2003, Mars' closest approach to Earth in some 60,000 years, a live video shot was broadcast on CNN to the world using Dan's camera and telescope at the AAC's Villa Rica facility. Dan continues to use the latest technology for planetary imaging, which is ever evolving. His images have been featured in *Sky & Telescope, Photonic Spectra, Astronomy Cameras Newsletter, Point Grey Insights, Astro Photo Insight*, and the AAC's *Focal Point*. Dan is also a deep sky galaxy imager, and is well versed in all the modern imaging technology, including the latest CCD's, filters, guiders, telescopes, mounts and Adaptive Optics. He also uses most of the Astro Image Processing

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March is Membership Renewal Month

MEMBERSHIP RENEWALS: The AAC has moved to a "one-date-for-all" membership renewal. ALL CLUB MEMBERS, with some exceptions, should submit their $30 ($35 if you receive the mailed *Focal Point*) dues for 2010 by March 20th - The Vernal Equinox. (There will be an R1 in the upper right corner of your *Focal Point* label if you receive it in the mail. If you receive the *Focal Point* online you will receive an email - be sure we have your current email address). New members and those who have not yet paid their pro-rated dues, will receive a notice in their *Focal Point* stating the amount you owe to bring you in line with the March date. (There will be either an xxx or an RF on your label). If you have questions or concerns, please let the Treasurer (Sharon Carruthers) know.

Software that is available. Dan is keenly aware of the large financial cost that can be required, so his talk will emphasize how to get into imaging without being wealthy.

Directions to White Hall and Parking

For now, the best places to park are the Peavine Parking Deck and the Fishburne Parking Deck. Fishburne Parking Deck is located on Fishburne Drive. When driving on North Decatur Rd, turn onto Dowman Drive (Dowman is now a one-way road into the campus now from North Decatur Road. Exit either by Oxford Road or Fishburne Drive) and then right on Fishburne Drive. You can also access Fishburne Drive from Clifton Road southbound on right before the N. Decatur Rd intersection. Note the Fishburne Parking deck is actually accessible from Fishburne Lane. When driving on Fishburne Drive, watch for the parking lot signs. The parking deck is located behind the Rich Building.

The Peavine parking deck is accessible from North Decatur Road. Take N. Decatur Rd to Oxford Road. Oxford is accessible from N. Decatur Road at two spots. If you are traveling east on North Decatur, then turn left onto Oxford. If traveling west, turn right onto Oxford. Take Oxford Road to the back entrance of Emory and turn onto Eagle Row. Take that to the Peavine parking deck. Note Peavine is across the street from the running track. You can also access Peavine from Clifton Road. Take Clifton south from Briarcliff Road. Turn right onto Asbury Circle. Asbury Circle changes names to Eagle Row. Parking deck will be on right side of road.

Directions to White Hall are on page 7. See the Emory web site for more details and directions: www.emory.edu

Upcoming AAC Meetings:

Our new program chairman is working on speakers for the year 2010. As soon as he has information, it will be passed on to you. Meeting dates are the following: April 23, May 21, and June 25.

February Meeting Minutes

by Julia Moore, Recording Secretary. Photos by Tom Faber

The February meeting of the Atlanta Astronomy Club convened on Feb. 26 at White Hall, Emory University. President Keith Burns called the meeting to order at 8:00 PM with 40 members and guests in attendance. Dr. Amy Lovell of Agnes Scott College's Astronomy Department (photo below) spoke on asteroids and comets. Here are some random highlights written in the dark:

Web sites: aerith.net gives information on comets past and current. Near earth objects web site is neo.jpl.nasa.org, minorplanetobserver.com offers help with photometry, analysis and observing. They have software for Automated Imaging which lets you receive images while you sleep! How cool is that!? The 2 interesting objects heading our way soon are: 2009RI-McNaught, June morning sky, and 103P/Hartley 2 from September to December (might be a interesting sight during the PSSG). Thanks, Amy for an interesting and entertaining talk!

Members and guests socialize and enjoy snacks in White Hall's lobby before the meeting.

The general meeting was held after the speaker. Business included:

DSO's - Mar 11-14 at Deerlick, Apr 17 at Woodruff. Upcoming AAC Meetings and events: Mar. 26 Imaging Panel, Apr. 23 Dr. Paul Schenk, Galileo, May 21 TBA. The next AAC Board Meeting will be on Sunday April 18. GASP - March 20, Unicoi State Park. Bradley Observatory, March 20 - Spring Equinox Concert, April 24 - Astronomy Day at Tellus.

There were several announcements of interest: Long time AAC member and former AAC light pollution officer Tom Buchanan is moving to Arkansas. He will be missed and we hope he has a great retirement and enjoys some dark skies out there. Member Tom Wilson (photo below, right) received his AL Messier Observing Certificate and pin, presented to him by the AAC's ALCOR Art Zorka. Great job! Elections are coming up. Board Chair Don Hall and Keith Burns are on the nominating committee, so let them know if you're willing to serve as an officer for the coming year.

On a sad note, Alex Langoussis noted the passing of Dr. Ralph Buice. He was a great friend to the AAC and cemented our friendship with Fernbank Science Center where he worked for many years. He will be missed.

CE Chapter Activities

By Theo Ramakers

The chapter's February meeting was cancelled because of snow and icy conditions. That does not mean that the chapter was inactive. In February we held three outreach events (photos below and to the right). In addition, NASA held the last scheduled nighttime Shuttle launch on February 8th and Stephen Ramsden was at Jon Wood field at CE to capture it (photo bottom right). In addition we had some ad hoc solar events and Frank and Theo teamed up to do a solar event at Ficquett Elementary School in Covington as a follow up to their earlier classroom presentation. Boy Scout troop 211 paid a visit to Jon Wood Field on the 16th. Frank and Theo teamed up again to participate at Puckett Mill Elementary School's Science Night with views of Mars, the Moon and M42. The kids were also treated to some great NASA Hubble pictures for participating in some education about our solar system. Overall, a great month!

Next CE Chapter Meeting

Join us for our next meeting on April 17 at 4:00 p.m. This will be a quarterly Potluck Dinner Meeting and observing after the meeting. Enter the meeting room through the side door. The meeting will also include the "Observing 101" and "Current Events in Astronomy and Space Exploration" programs. There will be observing on the field afterwards, weather permitting. Everyone is welcome!

Future meeting dates are: May 15, Jun 12, Jul 10, Aug 7, Sept 11, Oct 2, Nov 6, Dec 4.

Remembering Dr. Ralph L. Buice Jr.

Editor's Note: February brought more sad news regarding another member of the Atlanta Astronomy Club. Dr. Ralph L. Buice of the Fernbank Science Center and a long time member of the Atlanta Astronomy Club passed away. Dr. Buice was good friend of the AAC and helped the club in many "behind the scenes" ways. He will be greatly missed. Below is his obituary.

Dr. Ralph L. Buice, Jr. passed away Tuesday, Feb 24, 2010 at his home. Dr. Ralph Buice was a 39 year veteran of Fernbank Science Center and the DeKalb County School System. While attending Georgia Tech, he often visited Fernbank Science Center to work with the astronomy team. His volunteer efforts led to a position at Fernbank where he was instrumental in working with NASA to develop tracking of satellites in the early years. As a result, the Apollo Six capsule was placed at the Science Center. Dr. Buice was involved in the recovery of the "lost" satellite Pageos. As a Chemistry instructor he inspired hundreds of students in Independent Study Classes, the Scientific Tools and Techniques Program and other Fernbank programs. In more recent years, his duties included mentoring teachers and working with students doing independent research projects. He was very instrumental in developing the partnership with NASA's Science, Engineering, Mathematics, and Aerospace Academy (SEMAA) at the Science Center. Over the years he has supported science instruction in the school system in a variety of means including working with young teachers to judging in science fairs. Dr. Buice enjoyed traveling throughout the world. He often took guests with him on his adventures and encouraged others to live their own adventures. He loved food, wine, and life. Predeceased by his mother Sara Edwards Buice, father Ralph Lendon Buice, sister Elizabeth Ann Buice. Survivors include his brother, Rick Buice, sister-in-law, Fran Buice and nieces Kristi and Elizabeth Buice, Fredrick and Smithfield, several cousins in Chattanooga, close friends, and his Fernbank Science Center family. In lieu of flowers, please send donations to Fernbank Science Center, 156 Heaton Park Drive, NE, Atlanta, GA 30307.

Dr. Ralph L. Buice, Jr. (on the left) greeting the many visitors at the Astronomy Day 2006 activities held at the Fernbank Science Center. Photo by Tom Faber.

Bradley Observatory Open House Series 2009-2010

The Galileo Project: Revealing Hidden Worlds

During the 2009-2010 academic year, the 400th anniversary of Galileo's first astronomical use of his telescope, Agnes Scott College is hosting "Project Galileo: Revealing Hidden Worlds". This year-long series of events will explore Galileo's complex life and innovative work, and it will help us engage the challenges we all face when pushing the boundaries of exploration in the quest for knowledge. Lectures focus on Galileo's contributions to astronomy and to changing the way we see the universe. Programs begin at 8PM and will be followed by a planetarium show and observing with the Beck telescope (weather permitting).

April 9 - Tina Pippin, professor of religion, Agnes Scott College: "Galileo and the Church"

May 7 - Jeffrey Young, Georgia State University Honors Program: "Galileo and the Birth of the Modern"

For more info see: http://www.agnesscott.edu/academics/bradleyobservatory/open-house-series.aspx

The Astronomical League

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

* You will receive *The Reflector*, the AL's quarterly newsletter.

* You can use the Book Service, through which you can buy astronomy-related books at a 10% discount.

* You can participate in the Astronomical League's Observing Clubs. The Observing Clubs offer encouragement and certificates of accomplishment for demonstrating observing skills with a variety of instruments and objects. These include the Messier Club, Binocular Messier Club, the Herschel 400 Club, the Deep Sky Binocular Club, and many others.

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

The Next AAC Board Meeting

The next board meeting of the Atlanta Astronomy Club is scheduled for Sunday, April 18th from 4PM to 6PM at Emory University in the Math and Science building room N301. Contact Keith Burns or Board Chair Don Hall for more information about the meeting agenda.

Endeavour's Nighttime Launch

by Tom Faber

Kat Sarbell and I drove down to Florida on Friday, February 5th to try to see the last scheduled nighttime Shuttle launch. The launch was set for 4:39AM Sunday morning. We stayed in the Daytona Beach area, then on Saturday afternoon drove down to Titusville to view the launch. After dinner we went to Space View Park to find a good viewing spot. The crowds were already big when we got there at 6PM and were growing (top photo - later that night) by the minute! We got a viewing spot near the water with a good view of the pad. The Shuttle pad, between the VAB and pad 39-B, was lit up by powerful floodlights. Everything looked good until about T-2 hours when the clouds moved in (middle photo - the clouds at least provided a cool light show!), scrubbing the launch until the next morning. We didn't go back to Titusville the next night but watched from Daytona Beach. Clouds blocked some of our view but I managed to get the bottom photo just after SRB separation.

Historic Deep Space Network Antenna Starts Major Surgery

NASA/JPL New Release - March 08, 2010

Like a hard-driving athlete whose joints need help, the giant "Mars antenna" at NASA's Deep Space Network site in Goldstone, Calif. has begun major, delicate surgery. The operation on the historic 70-meter-wide (230-foot) antenna, which has received data and sent commands to deep space missions for over 40 years, will replace a portion of the hydrostatic bearing assembly. This assembly enables the antenna to rotate horizontally.

The rigorous engineering plans call for lifting about 4 million kilograms (9 million pounds) of finely tuned scientific instruments a height of about 5 millimeters (0.2 inches) so workers can replace the steel runner, walls and supporting grout. This is the first time the runner has been replaced on the Mars antenna.

The operation, which will cost about $1.25 million, has a design life of 20 years.

"This antenna has been a workhorse for NASA/JPL for over 40 years," said Alaudin Bhanji, Deep Space Network Project manager at NASA's Jet Propulsion Laboratory, Pasadena, Calif. "It has provided a critical lifeline to dozens of missions, while enabling scientific results that have enriched the hearts and minds of generations. We want it to continue doing so."

The repair will be done slowly because of the scale of the task, with an expected completion in early November. During that time, workers will also be replacing the elevation bearings, which enable the antenna to track up and down from the horizon. The network will still be able to provide full coverage for deep space missions by maximizing use of the two other 70-meter antennas at Deep Space complexes near Madrid, Spain, and Canberra, Australia, and arraying several smaller 34-meter (110-foot) antennas together.

NASA built the Mars antenna when missions began venturing beyond the orbit of Earth and needed more powerful communications tools. The Mars antenna was the first of the giant antennas designed to receive weak signals and transmit very strong ones far out into space, featuring a 64-meter-wide (210-foot) dish when it became operational in 1966. (The dish was upgraded from 64 to 70 meters in 1988 to enable the antenna to track NASA's Voyager 2 spacecraft as it encountered Neptune.)

While officially dubbed Deep Space Station 14, the antenna picked up the Mars name from its first task: tracking the Mariner 4 spacecraft, which had been lost by smaller antennas after its historic flyby of Mars. Through its history, the Mars antenna has supported missions including Pioneer, Cassini and the Mars Exploration Rovers. It received Neil Armstrong's

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The 70-meter antenna at the Goldstone Deep Space Communications Complex in the Mohave Desert in California. This complex is one of three comprising NASA's Deep Space Network. Image: NASA/JPL.

famous communiqué from Apollo 11: “That’s one small step for a man. One giant leap for mankind.” It has also helped with imaging nearby planets, asteroids and comets by bouncing its powerful radar signal off the objects of study.

A flat, stable surface is critical for the Mars antenna to rotate slowly as it tracks spacecraft. Three steel pads support the weight of the antenna rotating structure, dish and other communications equipment above the circular steel runner. A film of oil about the thickness of a sheet of paper -- about 0.25 millimeters (0.010 inches) -- is produced by a hydraulic system to float the three pads.

After decades of constant use, oil has seeped through the runner joints, slowly degrading the structural integrity of the cement-based grout that supports it. Rather than continuing on a weekly schedule to adjust shims underneath the runner to keep it flat, Deep Space Network managers decided to replace the whole runner assembly.

“As with any large, rotating structure that has operated almost 24 hours per day, seven days per week for over 40 years, we eventually have to replace major elements,” said Wayne Sible, the network’s deputy project manager at JPL. “We need to replace those worn parts so we can get another 20 years of valuable service from this national treasure.”

Over the next few months, workers will lay a new epoxy grout that is impervious to oil and fit the antenna with a thicker runner with more tightly sealed joints. They will then test that the rotation is smooth before turning the antenna back on again.

“The runner replacement task has been in development for close to two years,” said JPL's Peter Hames, who is responsible for maintaining the network’s antennas. “We've been testing and evaluating modern epoxy grouts, which were unavailable when the antenna was built, updating the design of the runner and designing a replacement process that has to be performed without completely disassembling the antenna. We’ve had to make sure we've reviewed it for practicality and safety.”

JPL, a division of the California Institute of Technology in Pasadena, manages the Deep Space Network for NASA Headquarters, Washington. More information about the Deep Space Network is online at: http://deepspace.jpl.nasa.gov/dsn/index.html .

Cassini Data Show Ice and Rock Mixture Inside Titan

NASA/JPL News Release - March 11, 2010

PASADENA, Calif. -- By precisely tracking NASA’s Cassini spacecraft on its low swoops over Saturn’s moon Titan, scientists have determined the distribution of materials in the moon’s interior. The subtle gravitational tugs they measured suggest the interior has been too cold and sluggish to split completely into separate layers of ice and rock.

The finding, to be published in the March 12 issue of the journal Science, shows how Titan evolved in a different fashion from inner planets such as Earth, or icy moons such as Jupiter’s Ganymede, whose interiors have split into distinctive layers.

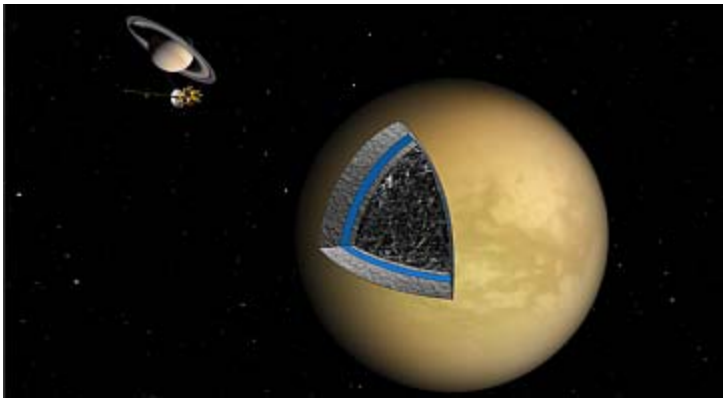
“These results are fundamental to understanding the history of moons of the outer solar system,” said Cassini Project Scientist Bob Pappalardo, commenting on his colleagues' research. Pappalardo is with NASA’s Jet Propulsion Laboratory in Pasadena, Calif. “We can now better understand Titan’s place among the range of icy satellites in our solar system.”

Scientists have known that Titan, Saturn's largest moon, is about half ice and half rock, but they needed the gravity data to figure out how the materials were distributed. It turns out Titan’s interior is a sorbet of ice studded with rocks that probably never heated up beyond a relatively lukewarm temperature. Only in the outermost 500 kilometers (300 miles) is Titan’s ice devoid of any rock, while ice and rock are mixed to various extents at greater depth.

“To avoid separating the ice and the rock, you must avoid heating the ice too much,” said David J. Stevenson, one of the paper’s co-authors and a professor of planetary science at the California Institute of Technology in Pasadena. “This means that Titan was built rather slowly for a moon, in perhaps around a million years or so, back soon after the formation of the solar system.”

This incomplete separation of ice and rock makes Titan less like Jupiter’s moon Ganymede, where ice and rock have fully separated, and perhaps more like another Jovian moon, Callisto, which is believed to have a mixed ice and rock interior. Though the moons are all about the same size, they clearly have diverse histories.

The Cassini measurements help construct a gravity map, which may help explain why Titan has a stunted topography, since interior ice must be warm enough to flow slowly in response to the weight of heavy geologic structures, such as mountains.



This artist’s illustration shows the likely interior structure of Saturn’s moon Titan deduced from gravity field data collected by NASA’s Cassini spacecraft. Image credit: NASA/JPL.

Creating the gravity map required tracking minute changes in Cassini's speed along a line of sight from Earth to the spacecraft as it flew four close flybys of Titan between February 2006 and July 2008. The spacecraft took paths between about 1,300 to 1,900 kilometers (800 to 1,200 miles) above Titan.

“The ripples of Titan’s gravity gently push and pull Cassini along its orbit as it passes by the moon and all these changes were accurately recorded by the ground antennas of the Deep Space Network within 5 thousandths of a millimeter per second [0.2 thousandths of an inch per second] even as the spacecraft was over a billion kilometers [more than 600 million miles] away,” said Luciano Iess, a Cassini radio science team member at Sapienza University of Rome in Italy, and the paper’s lead author. “It was a tricky experiment.”

The results don't speak to whether Titan has an ocean beneath the surface, but scientists say this hypothesis is very plausible and they intend to keep investigating. Detecting tides induced by Saturn, a goal of the radio science team, would provide the clearest evidence for such a hidden water layer.

A Cassini interdisciplinary investigator, Jonathan Lunine, said of his colleagues’ findings, “Additional flybys may tell us whether the crust is thick or thin today.” Lunine is with the University of Rome, Tor Vergata, Italy, and the University of Arizona, Tucson. “With that information we may have a better understanding of how methane, the ephemeral working fluid of Titan’s rivers, lakes and clouds, has been resupplied over geologic time. Like the history of water on Earth, this is fundamental to a deep picture of the nature of Titan through time.”

More Cassini information is available, at http://www.nasa.gov/cassini and http://saturn.jpl.nasa.gov

New Light Pollution Web Site

"Light pollution - the artificial sky glow that dims the stars - now affects 63 percent of the world's population and 99 percent of people living in the European Union and continental United States, according to some estimates. The Milky Way is not visible in most cities, much less a meteor shower, Orion's shield, or, in the biggest cities, the North Star." The AAC's former light trespass officer Marc Sandberg has started a new web site with information how to reduce light pollution. The site is: www.sustainableoutdoorlighting.com. There is also a link to this web site on the AAC's web site under light pollution.

Georgia Astronomy in State Parks

The following GASP events are currently scheduled:

March 20 - Unicoi St. Park.

June 5 - Tugaloo St. Park.

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 Website

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 (when available) and other information. http://www.atlantaastronomy.org

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

President: Keith Burns 770-427-1475 Keith_B@bellsouth.net

Program Chair: Rich Jakiel Programs@atlantaastronomy.org

Observing Chair: Daniel Herron observing@atlantaastronomy.org

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Treasurer: Sharon Carruthers Treasurer@AtlantaAstronomy.org

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Elliott Recording Secretary: Ken Poshedly 678-516-1366 poshedly@bellsouth.net

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

Light Trespass: Open - Contact Keith Burns if you would like to volunteer.

PSSG Chairman: Peter Macumber pmacumber@nightsky.org

PSSG Co-Chair: Joanne Cirincione starrynights@AtlantaAstronomy.org

Sidewalk Astronomy: Brad Isley sidewalkastronomy@atlantaastronomy.com

Woodruff Observ. Coordinator: Sharon Carruthers Treasurer@AtlantaAstronomy.org

Webmaster Atlanta Astronomy: 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.

The Focal Point

Newsletter of The Atlanta Astronomy Club, Inc.

FROM:
Tom Faber
2206 Treeridge Parkway
Alpharetta, GA 30022

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

Atlanta Astronomy Club
P.O. Box 76155
Atlanta, GA 30358-1155
www.atlantaastronomy.org

FIRST CLASS

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

AAC Events are listed in BOLD

March 20th, Saturday: **GASP at Unicoi State Park - See pg 7 for details.** Equinox at 1:32PM.
March 21st, Sunday: Saturn at Opposition.
March 23rd, Tuesday: Moon First Quarter.
March 26th, Friday: **AAC Meeting at White Hall, 8PM, Emory University.**
March 29th, Monday: Full Moon.
April 2nd, Friday: **April *Focal Point* Deadline.**
April 6th, Tuesday: Moon Last Quarter.
April 8th, Thursday: Mercury at Greatest Elongation East.
April 9th, Friday: Open House at Bradley Observatory, 8PM - see pg 4 for details.
April 14th, Wednesday: New Moon.
April 17th, Saturday: **DSO at Woodruff, Charlie Elliott Chapter Meeting at 4PM.**
April 18th, Sunday: **AAC BoD Meeting at Emory University, 4PM.**
April 21st, Wednesday: Moon First Quarter.
April 22nd, Thursday: Lyrids Meteor Shower.
April 23rd, Friday: **AAC Meeting at White Hall, 8PM, Emory University.**
April 24th, Saturday: Astronomy Day at Tellus Museum.
April 28th, Wednesday: Full Moon. Mercury Inferior Conjunction.
April 30th, Friday: **May *Focal Point* Deadline.**
May 5th, Wednesday: Eta Aquarids Meteor Shower.
May 6th, Thursday: Moon Last Quarter.
May 7th, Friday: Open House at Bradley Observatory, 8PM - see pg 4 for details.
May 13th, Thursday: New Moon.
May 15th, Saturday: **DSO at DAV, Charlie Elliott Chapter Meeting at 4PM.**
May 20th, Thursday: Moon First Quarter.
May 21st, Friday: **AAC Meeting at White Hall, 8PM, Emory University.**

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 Lenny Abbey.

Focal Point Deadline and Submission Information

Please send articles, pictures, and drawings in electronic format on anything astronomy, space, or sky related to Tom Faber at focalpoint@atlantaastronomy.org. Please send images separate from articles, not embedded in them. Articles are preferred as plain text files but Word documents or PDFs are okay. You can submit articles anytime up to the deadline. **The deadline for April is Friday, April 2th at 6:00 PM. Submissions will not be accepted after the deadline.**