

# The Focal Point

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The Atlanta Astronomy Club  
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Editor: Kat Sarbell

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## November General Membership Meeting

by Nancy "Gumby" Cronin

Our November guest speaker is Dr. Richard Schmude Jr., Executive Director of the Association of Lunar & Planetary Observers (ALPO). His presentation is titled "Recent Observations of the Planet Uranus". An engaging and entertaining speaker, you don't want to miss Dr. Schmude present the latest research on Uranus.



In his talk, Dr. Schmude will present recent images and will also discuss recent brightness measurements of Uranus. Finally, he will discuss long term brightness changes of the planet. For fun, there may be a short quiz after the talk.

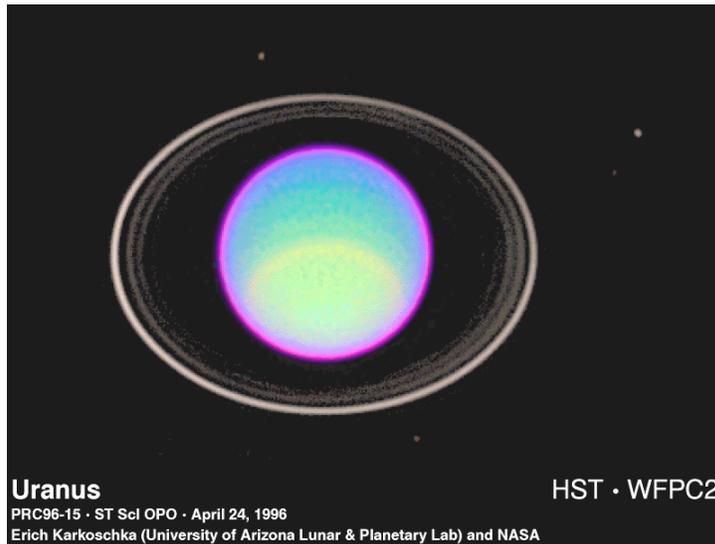
Dr. Schmude is the Remote Planets Section Coordinator, the Jupiter Coordinator, and board member of ALPO, as well as Secretary of the Astronomical League. He is also an active member of the American Association of Variable Star Observers, and the Flint River and Atlanta Astronomy Clubs.

Raised in Texas, he received his Ph.D. in Physical Chemistry from Texas A&M University in 1994. Since then, Dr. Schmude has been teaching Astronomy, Physics and Chemistry at Gordon College in Barnesville, GA. His primary areas of study include the solar system, variable stars and planetary nebulae.

If you'd like more information on his associations, go to these sites:

The Association of Lunar and Planetary Observers - [www.lpl.arizona.edu/alpo](http://www.lpl.arizona.edu/alpo)

American Association of Variable Star Observers - [www.aavso.org](http://www.aavso.org)



*False color image of Uranus showing the rings and two of the moons.*



Larry Owens took these pictures of the total lunar eclipse which occurred the evening of Wednesday, October 27th. The images were taken from Alpharetta, GA with a Canon 300D digital SLR, mounted on a 5" F/5 refractor. For more eclipse photos, see page 4.

## Special Photo Gallery: The Peach State Star Gaze 2004

This year, the Peach State Star Gaze (PSSG) was held from October 13th through 17th at Whitewater Express Campground in Tennessee. The PSSG Committee, chaired by Peter Macumber and Joanne Cirincione, and many volunteers went to great lengths to secure speakers, workshop leaders, vendors, refreshments, and door prizes for the star party. The following photos will give you just a glimpse of all the fun: interesting talks given by expert speakers, vendors exhibiting new products, workshops and generous prize giveaways, and beautiful views!



*PSSG Chair Peter Macumber and Co-Chair Joanne Cirincione. Photo Frank Marchese.*



*Volunteers gather at the check-in tent. Photo Joanne Cirincione.*



*Above and below: Two views of the observing field at Whitewater Express. Volunteers used lime powder and orange traffic cones to designate driving areas. The field was surrounded by forested hills, and a few of the trees were starting to change color for the fall. Photos Holly B. Ritger.*



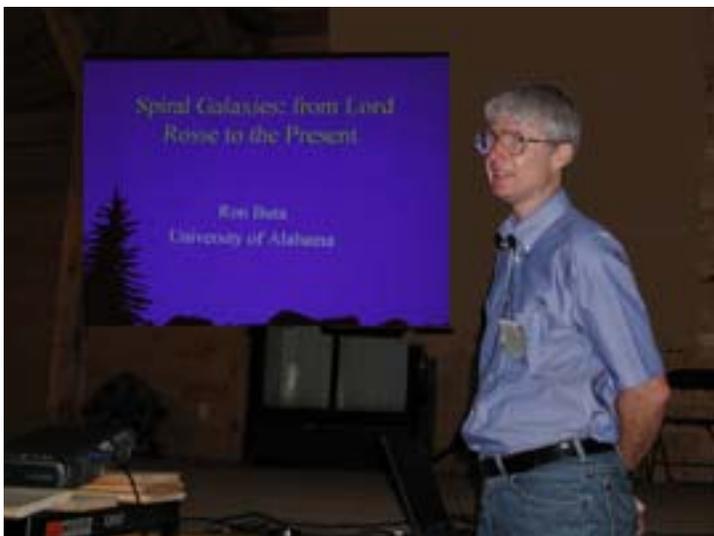
*By Friday and Saturday nights the clouds began to break up, giving a few hours of clear skies for stargazing and imaging. Photo Holly B. Ritger.*



*Eric Honeycutt was our keynote speaker at the PSSG. He presented two talks on planetary nebulae.*



*Rich Jakiel's talk on Mars started on a lighthearted note! He showed some of the latest imagery from the red planet.*



*Dr. Ron Buta, Ph.D. presented a talk on spiral galaxies.*



*Peter Macumber (at left) hosted a workshop on how to build a solar filter.*



*There was no shortage of assistance in setting up the club's 24" Dobsonian. All photos on this page by Frank Marchese.*



*Above, top: Campers visit the vendor tables in the coffee house pavillion. Photo Frank Marchese.*

*Above, bottom: One of the youngest visitors at the PSSG won his choice of telescope at the door prize giveaway - with some help from his dad. Photo Frank Marchese.*

*Right: The deck outside the new presentation hall was a great place to socialize between talks. Photo Holly B. Ritger.*



## Watch it disappear...

On the night of Wednesday, October 27, 2004, a full lunar eclipse occurred. The next one won't be visible from North America until March of 2007! As he observed from Douglasville, GA, club member Keith Burns took these images of the Earth's shadow as it slowly passed in front of the moon. He used an Astroscan telescope and Kodak 210 camera.

## Lunar Club Certificate Awarded

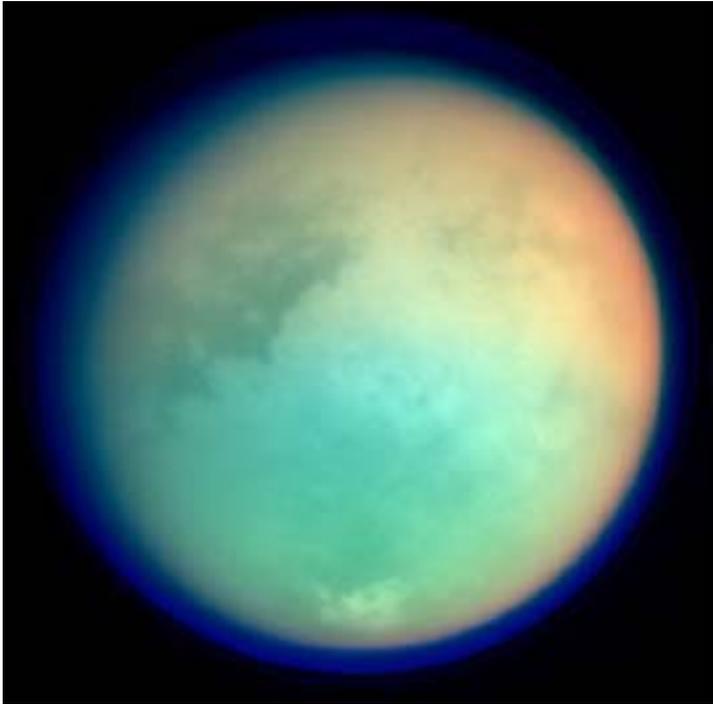
Keith Burns of the AAC Mentoring Program is also pleased to announce that Jim Ferrell has been awarded Lunar Certificate number 433.



## Titan Image Gallery

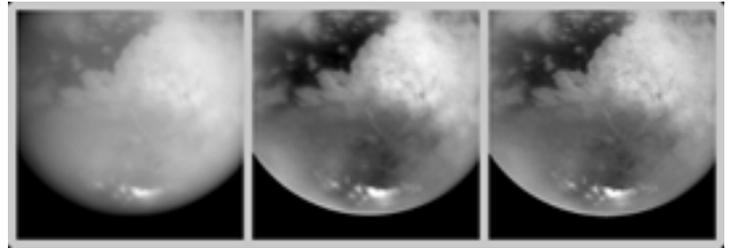
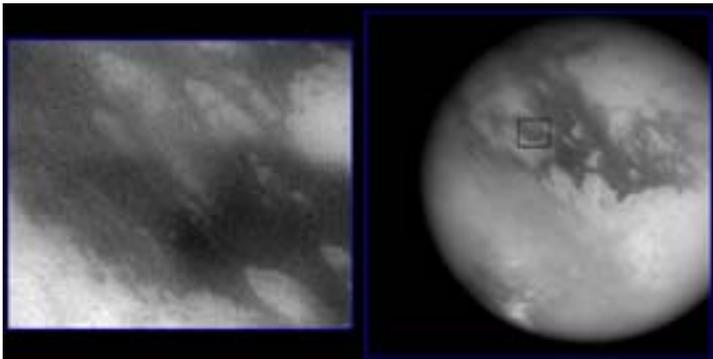
Enjoy these images of Saturn's moon Titan taken by the Cassini spacecraft during its first close flyby on October 26th.

The Cassini-Huygens mission is a cooperative project of NASA, the European Space Agency and the Italian Space Agency. The Jet Propulsion Laboratory, a division of the California Institute of Technology in Pasadena, manages the Cassini-Huygens mission for NASA's Office of Space Science. The Cassini orbiter and its two onboard cameras, were designed, developed and assembled at JPL. The imaging team is based at the Space Science Institute, Boulder, Colo. For more information, visit, <http://saturn.jpl.nasa.gov>. Images credit: NASA/JPL/Space Science Institute.



The image above shows Titan in ultraviolet and infrared wavelengths. It is constructed from four images acquired through different color filters. Red and green colors represent infrared wavelengths and show areas where atmospheric methane absorbs light. These colors reveal a brighter (redder) northern hemisphere. Blue represents ultraviolet wavelengths and shows the high atmosphere and detached hazes.

Titan has a gigantic atmosphere, extending hundreds of kilometers above the surface. The sharp variations in brightness on Titan's surface (and clouds near the south pole) are apparent at infrared wavelengths. The image scale of this picture is 6.4 km per pixel.



These three pictures were created from a sequence of images acquired by Cassini's imaging science subsystem on Oct. 25, 2004, 38 hours before its closest approach to Titan. They illustrate how the details of Titan's surface can be revealed through image processing techniques.

The picture on the left is a single image that has undergone only basic cleaning of corrupted pixels and imperfections in the camera's charge coupled device, a light-sensitive detector similar to those found in digital cameras. In the middle frame, multiple images were used to enhance the contrast detected from Titan's surface and to reduce the blurring effect of atmospheric haze. The picture on the right has been further processed to sharpen the edges of features.

The processed images reveal sharp boundaries between dark and light regions on the surface; there are no shadows produced by topography in these images. The bright area on the center right is Xanadu, a region that has been observed previously from Earth and by Cassini. To the west of Xanadu lies an area of dark material that completely surrounds brighter features in some places. Narrow linear features, both dark and bright, can also be seen. It is not clear what geologic processes created these features, although it seems clear that the surface is being shaped by more than impact craters alone. The very bright features near Titan's south pole are clouds similar to those observed during the distant Cassini flyby on July 2, 2004.

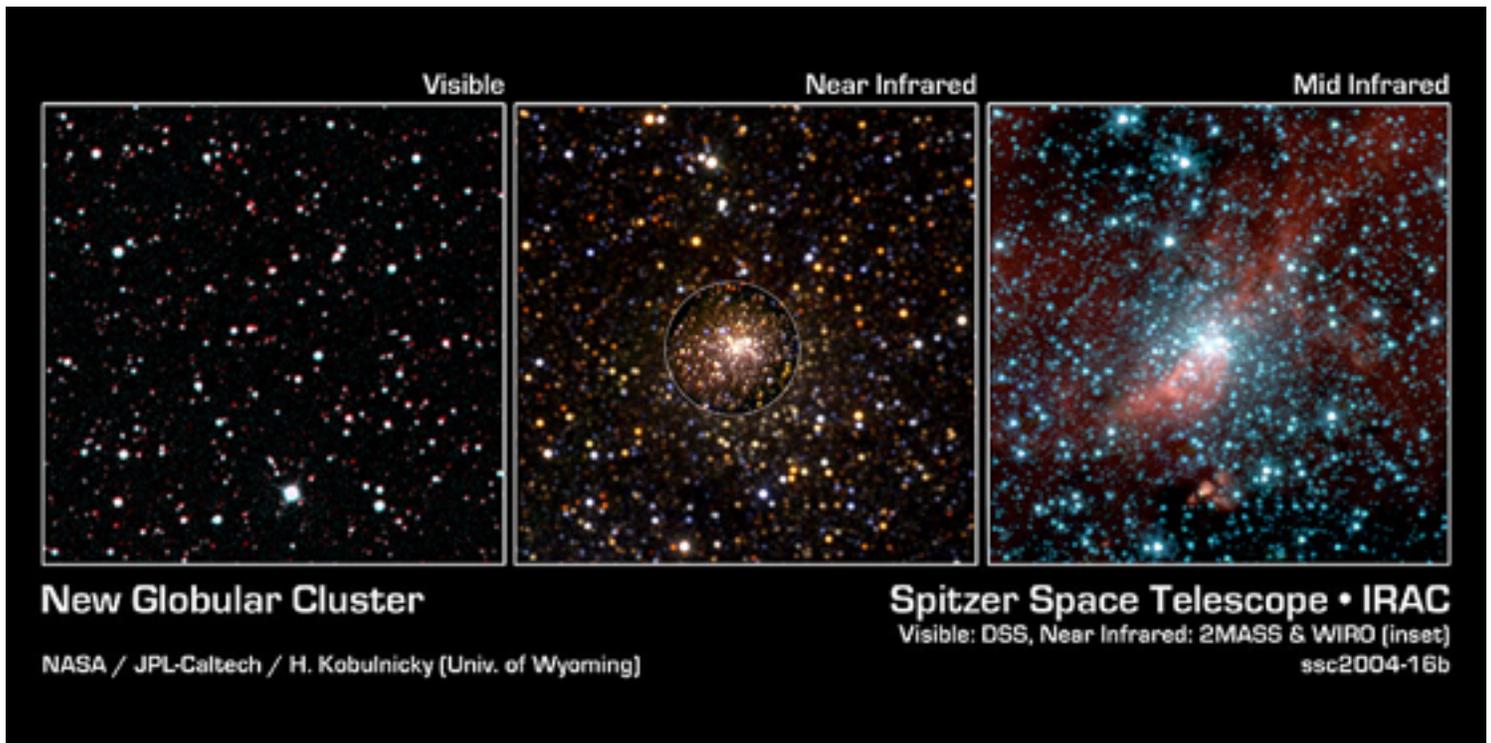
These images were acquired by Cassini on Oct. 25, 2004, at an altitude of 702,000 km and a pixel scale of 4.2 km. The Sun was illuminating Titan from nearly behind the spacecraft.



The radar image above of the surface of Saturn's moon Titan was produced when the Cassini spacecraft flew approximately 1,600 km above the surface and acquired radar data for the first time. Brighter areas may correspond to rougher terrains and darker areas are thought to be smoother. This image highlights some of the darker terrain, which the Cassini team has nicknamed "Si-Si the Cat" after a team member's daughter, who pointed out its cat-like appearance. The interconnected dark spots are consistent with a very smooth or highly absorbing solid, or could conceivably be liquid.

The image is about 250 km wide by 478 km long, and is centered at 50 N, 54 W in the northern hemisphere of Titan, over a region that has not yet been imaged optically. The smallest details seen on the image vary from about 300 m to 1 km. The data were acquired in the synthetic aperture radar mode of Cassini's radar instrument. In this mode, radio signals are bounced off the surface of Titan.

To the left are two images of the expected landing site of Cassini's Huygen's probe. At right is a wide-angle image showing most of Titan's disc, with a scale of 10 km per pixel. At left is a narrow-angle image of the landing site at a scale of 0.83 km per pixel (location shown by black box at right). North is tilted about 45 degrees from the top of both images. The surface has bright and dark markings with a streamlined pattern consistent with motion from a fluid, such as the atmosphere, moving from west to east (upper left to lower right). The image at left is 400 km wide. Both images were taken by Cassini's imaging science subsystem through near-infrared filters.



## Spitzer Digs Up Galactic Fossil

NASA News Release

This false-color image taken by NASA's Spitzer Space Telescope shows a globular cluster previously hidden in the dusty plane of our Milky Way galaxy. Globular clusters are compact bundles of old stars that date back to the birth of our galaxy, 13 or so billion years ago. Astronomers use these galactic "fossils" as tools for studying the age and formation of the Milky Way.

Most clusters orbit around the center of the galaxy well above its dust-enshrouded disc, or plane, while making brief, repeated passes through the plane that each last about a million years. Spitzer, with infrared eyes that can see into the dusty galactic plane, first spotted the newfound cluster during its current pass. A visible-light image (inset) shows only a dark patch of sky.

The red streak behind the core of the cluster is a dust cloud, which may indicate the cluster's interaction with the Milky Way. Alternatively, this cloud may lie coincidentally along Spitzer's line of sight.

Follow-up observations with the University of Wyoming Infrared Observatory helped set the distance of the new cluster at about 9,000 light-years from Earth -- closer than most clusters -- and set the mass at the equivalent of 300,000 Suns. The cluster's apparent size, as viewed from Earth, is comparable to a grain of rice held at arm's length. It is located in the constellation Aquila.

Astronomers believe that this cluster may be one of the last in our galaxy to be uncovered.

This image composite was taken on April 21, 2004, by Spitzer's infrared array camera. It is composed of images obtained at four wavelengths: 3.6 microns (blue), 4.5 microns (green), 5.8 microns (orange) and 8 microns (red). The visible-light image is from the Digitized Sky Survey, California University of Technology, Pasadena, California.

### About the Object:

Object Name: GLIMPSE-C01

Object Type: Globular Cluster

Position (J2000): RA: 18h48m49.7s Dec: -01d29m50s

Distance: 3.1-5.2 kpc or 10,000-17,000 ly

Constellation: Aquila

### About the Data:

Image Credit: NASA/JPL-Caltech/H. Kobulnicky (Univ. of Wyoming)

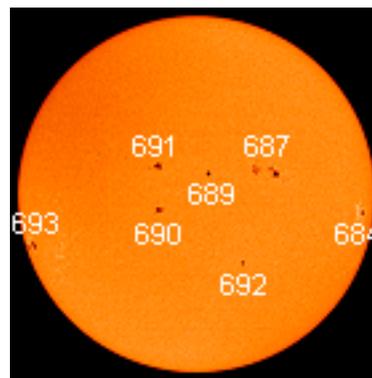
Instrument: IRAC, Wavelength: 3.6 (blue), 4.5 (green), 5.8 (orange), 8.0 (red) microns

Exposure Date: 2004 April 21. Exposure Time: 2.4 sec

Image Scale: 6 x 6 arcmin

Orientation: North is 63 deg CCW from up

Release Date: October 12, 2004



**SUNSPOT WATCH:** The Sun on Oct. 28, 2004. Earlier last month, the sun was absolutely blank--no sunspots. Forecasters said this signaled the approach of solar minimum. But now there are plenty of sunspots. What's happening? Solar minimum is approaching, but it won't arrive until 2006. Between now and then we can expect occasional surges in solar activity. At the moment, sunspot 687 has a "beta-gamma" magnetic field that harbors energy for M-class solar flares. Credit: SOHO

## Charles Elliot Chapter Meeting

(PLEASE NOTE NEW FALL/WINTER SCHEDULE)

Saturday November 13th, 2004

3:00-4:00 PM. General meeting open to public. Enter through the left side door nearest the back of the building.

4:00-4:30 PM. "Astronomy Current Events." Enjoy a presentation of the latest current events in astronomy. Speaker Horace Sullivan.

4:30-5:30 PM. "The Philosophy of Astronomy." Explore unimaginable "places" in the cosmos and see how the "experience" of astronomy can broaden your sense of reality. Speaker: Larry Owens

Saturday December 11th, 2004

3:00-4:00 PM. CE Chapter Meeting General meeting open to public.

4:00-4:30 PM. "Astronomy Current Events." Enjoy a presentation of the latest current events in astronomy. Speaker TBD

4:30-5:30 PM. "An Interesting Astronomical Topic." Dr. Amy Lovell, PhD, Associate Professor of Physics and Astronomy at Agnes Scott College is coming to Charlie Elliott to give us an interesting talk on astronomy. The topic will be announced soon.

## GASP (Georgia Astronomy in State Parks) November Event

The final GASP campout and lecture for the public for 2004 will be held at Unicoi State Park on November 20th. If you need additional information about this event, contact Joanne Cirincione at [Starrynights@AtlantaAstronomy.org](mailto:Starrynights@AtlantaAstronomy.org).

## Directions to White Hall at Emory

Meeting Location Information:

Turn onto Dowman Drive from North Decatur Road at the five way intersection (across from Everybody's Pizza). White Hall is located on the right across from the new Science & Math building. Parking is available along Dowman Drive on both sides of the road. There is also a gated parking lot on the left behind the Admissions Building. After 6PM there is no fee to park there. For more detailed directions on how to get to Emory University, visit [www.atlantaastronomy.org](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 third Friday of each month at Emory University's White Hall or occasionally at other locations. Membership is open to all. 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 **\$29** 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 is:** Atlanta Astronomy Club, PMB 305, 3595 Canton Road A9, Marietta, Georgia 30066.

Atlanta Astronomy Club Hot Line: Timely information on the night sky and astronomy in the Atlanta area. Call **770-621-2661**.

Internet Home 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.

## AAC Contacts

**President:** Chuck Painter 404-386-3899  
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**Woodruff Observ. Coordinator:** John Lentini 770-984-0175  
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**Webmaster Atlanta Astronomy:** Peter Macumber 770-941-4640  
[pmacumber@nightsky.org](mailto:pmacumber@nightsky.org)

## 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>

## Calendar

**November 5th, Friday: Moon Last Quarter: Conjunction Venus & Jupiter. Bradley Observatory Open House.** 8:00PM, Agnes Scott College. "Our Molecular Interstellar Neighborhood." Speaker: Loris Magnani, University of Georgia.

**November 9th, Tuesday: Moon near Jupiter and Venus; Moon occults Jupiter.**

**November 10th, Wednesday: Mars, Moon, Venus, Jupiter lined up in morning sky.**

**November 12th, Friday: Moon New.**

**November 17th, Wednesday: Leonids Meteor Shower: Venus near Spica with Jupiter to the West, Mars to the East.**

**November 19th, Friday: General Membership Meeting,** White Hall at Emory University. 8PM. Speaker Dr. Richard Schmude, Jr., Gordon College. **Moon First Quarter.**

**November 20th, Saturday: GASP.** Unicoi State Park. Contact Joanne Cirincione for details.

**November 21st, Sunday: Mercury at Eastern Elongation.**

**November 24th, Wednesday: December Focal Point submission deadline.** 4PM.

**November 25th, Thursday: Moon near M45.**

**November 26th, Friday: Moon Full (Frosty Moon).**

**December 5th, Sunday: Moon Last Quarter. Conjunction Venus & Mars.**

**December 6th, Monday: AAC Board Meeting. 7-9PM, in Buckhead, location TBA.**

**December 7th, Tuesday: Moon occults Jupiter.**

**December 9th, Thursday: Moon near Venus and Mars.**

**December 10th, Friday: Mercury at Inferior Conjunction. AAC Christmas Pot Luck Dinner,** Atrium of Math and Science Building at Emory University. Time TBA. **Bradley Observatory Open House.** 8:00PM, Agnes Scott College. "Asteroids and Comets: Things your mother never told you." Speaker: Dr. Amy Lovell, Agnes Scott College.

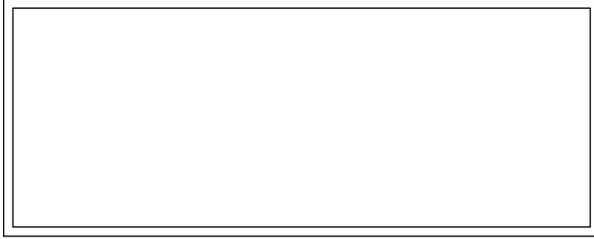
## Atlanta Astronomy Club Listserve

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 Info

Please send articles, pictures, and drawings in electronic format on anything astronomy related to Kat Sarbell at focalpoint@atlantaastronomy.org. **You can submit articles anytime up and including the deadline date. The deadline for December is Wednesday, November 24th at 4:00 PM .... Submissions will no longer be accepted after the deadline.**

FIRST CLASS



*The Focal Point*

Newsletter of The Atlanta Astronomy Club,

Inc.

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[We're here to help! Here's how to reach us:](#)

Atlanta Astronomy Club

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