

# The Focal Point

Vol. 37 No. 8

The Atlanta Astronomy Club  
Established 1947  
April 2025

Editor: Tom Faber

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## Charlie Elliott April Meeting

Meeting and Observing April 19th, 2025  
6:00 p.m.

Join us at 6:00 p.m. on Saturday, April 19th, 2025, at the Charlie Elliott Wildlife Center Campbell Aquatics Building for our April meeting! We will be live streaming a joint meeting with the AAC with Vincent Ledvina, "The Aurora Guy". Vincent is a professional aurora chaser and astrophysics PhD candidate and will cover the science of auroras and explain the tools used to forecast the Northern Lights. Vincent will also discuss chasing auroras at different latitudes when space weather enhances geomagnetic activity. He will also demystify concepts like the Kp index, solar wind and magnetometer data interpretation, and auroral substorms. He will also provide some tips on how to take professional-quality aurora photos.

Sunset will be at 8:09 p.m. and the main gate closes to new entry at 7:00 p.m. If you are not a member and plan to arrive after 7:00 p.m., please make arrangements with a member for entry with sufficient advance notice.

## Observing on the Jon Wood Astronomy Field

Plan to treat this outing like you would a camping trip and be prepared. Dress appropriately for the weather and the environment, bring snacks and drinks if needed, and plan to take your trash with you.

After pulling up the dirt driveway from Elliott Trail and onto the astronomy field, please orient your vehicle to face the field exit gate so as not to cause problems with headlights when leaving.

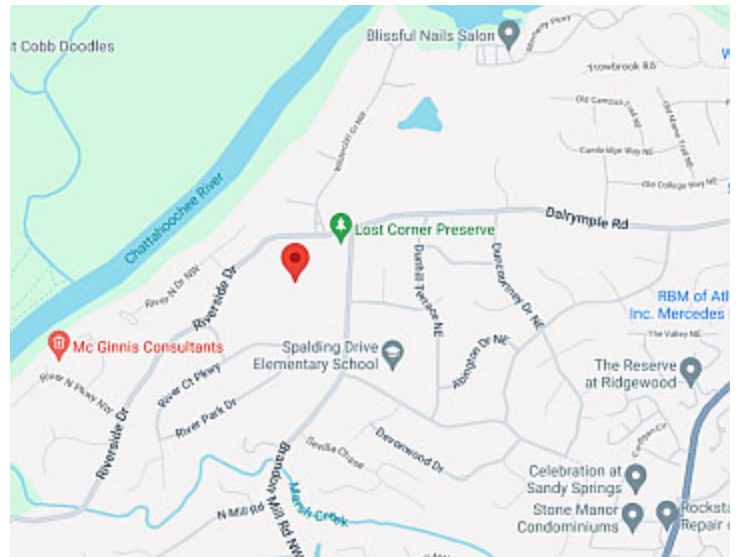
There is a regularly serviced Porta-Potty on the field.



## The April AAC Meeting

The next AAC meeting will be on Saturday, April 19 starting at 6:00PM at our meeting location at Lost Cottage at Lost Corner Preserve in Sandy Springs (see map below). We will be live streaming a joint meeting with the CEA Chapter of the AAC with Vincent Ledvina, "The Aurora Guy". Vincent is a professional aurora chaser and astrophysics PhD candidate and will cover the science of auroras and explain the tools used to forecast the Northern Lights. Vincent will also discuss chasing auroras at different latitudes when space weather enhances geomagnetic activity. He will also demystify concepts like the Kp index, solar wind and magnetometer data interpretation, and auroral substorms. He will also provide some tips on how to take professional-quality aurora photos.

As always, our AAC monthly general meeting will cover club business such as astronomy news, outreach events and observing updates ahead of welcoming our guest speakers. Our monthly general AAC meetings are open to the public.



Lost Cottage at Lost Corner Preserve. Credit: Google Maps

## March was Membership Renewal Month

The AAC has moved to a "one-date-for-all" membership renewal. ALL CLUB MEMBERS, with certain exceptions, should submit their dues for 2025 by the end of March. Please send your renewals to AAC Treasurer Sharon Carruthers, or renew online using PayPal. For more information see: [http://atlantaastronomy.org/?page\\_id=22](http://atlantaastronomy.org/?page_id=22)

**Thank You for your support of the AAC!**

*Continued on next page - first column*

The main gate on Elliott Trail closes to new entry by vehicle at 7 p.m., but will automatically open for exiting traffic at all times. If you are not a member and plan to arrive after 7 p.m., please make arrangements with a club member for access at least a day in advance.

Please refrain from using white light on the field. Red headlamps are cheap and easy to find at your favorite store. They're even cheaper to make with a spare flashlight and red nail-polish on the lens.

For more information about Charlie Elliott Wildlife Center, visit:

<https://georgiawildlife.com/charlie-elliott-wildlife-center>

## Our Monthly Meetings and Public Observing Nights

Our monthly meetings and public observing nights are free and open to the public. Visit the "Our Calendar" tab at the top of the page for our 2025 meeting, observing, and outreach schedule. Start times vary through the year so please check back for details. View our Full Calendar of all meetings & outreach events here: <http://ceastronomy.org/blog/outreach/charlie-elliott-astronomy-calendar>

It's easy to become a member of Charlie Elliott Astronomy! Pay dues here: <http://atlantaastronomy.org/membership/>



Credit: Google Maps

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## AAC March Meeting Report

The Atlanta Astronomy Club's March general meeting that was scheduled for Saturday, March 15, at the Lost Cottage at Lost Corner Preserve in Sandy Springs was cancelled due to the forecast of severe weather for that evening.

Join us on Saturday, April 19 at 6:00 PM for the next AAC General Meeting.



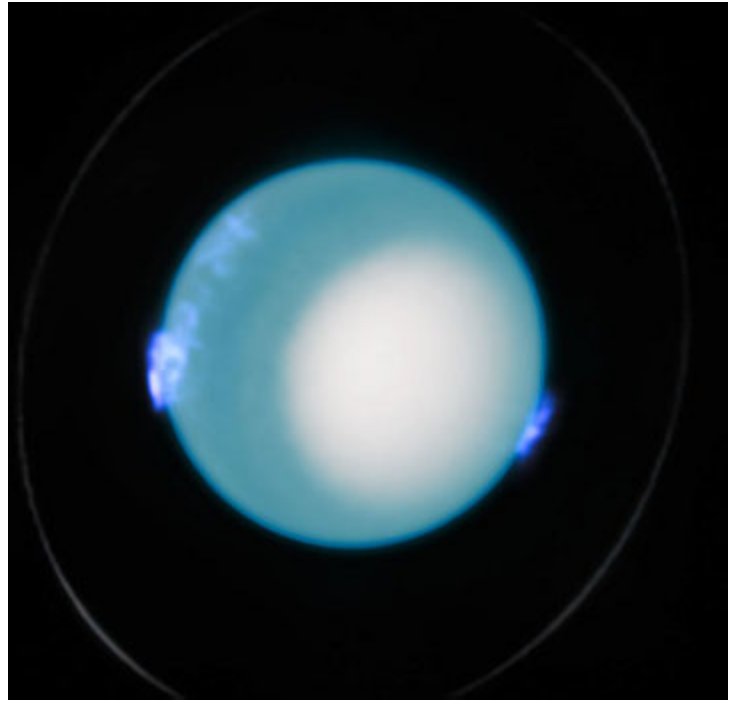
## Hubble Helps Determine Uranus' Rotation Rate with Unprecedented Precision

NASA/STScI News Release - April 9, 2025

An international team of astronomers using the NASA/ESA Hubble Space Telescope has made new measurements of Uranus' interior rotation rate with a novel technique, achieving a level of accuracy 1,000 times greater than previous estimates. By analyzing more than a decade of Hubble observations of Uranus' aurorae, researchers have refined the planet's rotation period and established a crucial new reference point for future planetary research.

Determining a planet's interior rotation rate is challenging, particularly for a world like Uranus, where direct measurements are not possible. A team led by Laurent Lamy (of LIRA, Observatoire de Paris-PSL and LAM, Aix-Marseille Univ., France), developed an innovative method to track the rotational motion of Uranus' aurorae: spectacular light displays generated in the upper atmosphere by the influx of energetic particles near the planet's magnetic poles. This technique revealed that Uranus completes a full rotation in 17 hours, 14 minutes, and 52 seconds — 28 seconds longer than the estimate obtained by NASA's Voyager 2 during its 1986 flyby.

"Our measurement not only provides an essential reference for the planetary science community but also resolves a long-standing issue: previous coordinate systems based on outdated rotation periods quickly became inaccurate, making it impossible to track Uranus' magnetic poles



*This image of Uranus' aurorae was taken by the NASA/ESA Hubble Space Telescope on 10 October 2022. These observations were made by the Space Telescope Imaging Spectrograph (STIS) and includes both visible and ultraviolet data. An international team of astronomers used Hubble to make new measurements of Uranus' interior rotation rate by analyzing more than a decade of the telescope's observations of Uranus' aurorae. This refinement of the planet's rotation period achieved a level of accuracy 1000 times greater than previous estimates and serves as a crucial new reference point for future planetary research.*

*ESA/Hubble, NASA, L. Lamy, L. Sromovsky*

*Article continued on page 7.*

# The Atlanta Astronomy Club Calendar for 2025

			SPEAKERS & EVENTS	
Meeting day	Meeting date - 2025	Time	Atlanta Astronomy Club - Location: Sandy Springs	Charlie Elliott Astronomy Chapter - Location: Madison, GA (dark sky site)
Saturday	January 18th	6-8pm EST	Dan Lewellyn - Planetary imaging	
Saturday	January 25th	4pm EST start		Jay P Dunn - Intragalactic winds
Saturday	February 15th	6-8pm EST	Kesha (Emory) - Measuring light waves	
Saturday	February 22nd	4pm EST start		Dr James Sowell (GA Tech) - Timekeeping & astronomy
Saturday	March 15th	6-8pm EST	Dave Whelan & Marie Lott - Observing	
Saturday	March 22nd	7 - 10pm EST	Morgan Falls Outlook Pavilion - public stargazing	
Saturday	March 29th	4:30pm EST start		Prof. Donovan Domingue (GCSU)
Saturday	April 5th	6 - 9pm EST	Cross-club event: Astronomical trivia competition	
Saturday	April 19th	6-8pm EST	JOINT MEETING - Vincent Ledvina (The Aurora Guy) - via Zoom	
Saturday	May 17th	7-9pm EST	Jiapeng Gao (GA Tech) - Exoplanets	
Saturday	May 24th	6:30pm EST start		
Saturday	June 14th	7-9pm EST	Mark Hanley - Dark matter	
Saturday	June 28th	6:30pm EST start		
Saturday	June 28th	7 - 10pm EST	Morgan Falls Outlook Pavilion - public stargazing	Morgan Falls & Charlie Elliott overlap
Saturday	July 19th	7-9pm EST	Prof. Mariel Meier (Oglethorpe) - Space plasma	
Saturday	July 28th	7pm EST start		
Saturday	August 16th	6-8pm EST	John Blankenhorn (GA Tech) - Methane on Mars	
Saturday	August 23rd	6:30pm EST start		
Saturday	September 6th	10am - 2pm	Morgan Falls Outlook Pavilion - scope swap / shop	
Saturday	September 13th	6-8pm EST	Prof. Donovan Domingue (GSCU) - new research	
Saturday	September 20th	6pm EST start		
Saturday	October 18th	Time TBD	JOINT MEETING - GA Tech Rocket Club OR GA Tech Women of Aeronautics/Astronautics Club	
Saturday	November 15th	Time TBD	JOINT MEETING - GA Tech Rocket Club OR GA Tech Women of Aeronautics/Astronautics Club	
Saturday	December 13th	3:30pm start		Potluck - TBD

## AAC Message Group

By Sharon Carruthers, AAC Treasurer

The AAC Message Group: The AAC has a group message board that is run by AAC members for the benefit of both AAC members & interested non-members. Subscribers can post messages or questions about various astronomy and Club related topics; arrange informal meet-ups with other observers; and get information about Club activities, such as meetings or observing events. Participants have to request membership to this group & be approved by the group moderators.

The message group address is: [AtlantaAstronomyClub@groups.io](mailto:AtlantaAstronomyClub@groups.io).

To join the: [AtlantaAstronomyClub@groups.io](mailto:AtlantaAstronomyClub@groups.io), use one of these methods:

1) Use "Envelope" icon on AAC website homepage to go to: <https://groups.io/g/AtlantaAstronomyClub>

2) Enter into your browser's address bar: <https://groups.io/g/AtlantaAstronomyClub>

On the page that comes up, click on: [AtlantaAstronomyClub@groups.io](mailto:AtlantaAstronomyClub@groups.io)

The Message Group home page will display:

Post: [AtlantaAstronomyClub@groups.io](mailto:AtlantaAstronomyClub@groups.io)

Subscribe: [AtlantaAstronomyClub+subscribe@groups.io](mailto:AtlantaAstronomyClub+subscribe@groups.io)

Unsubscribe: [AtlantaAstronomyClub+unsubscribe@groups.io](mailto:AtlantaAstronomyClub+unsubscribe@groups.io)

Group Owner: [AtlantaAstronomyClub+owner@groups.io](mailto:AtlantaAstronomyClub+owner@groups.io)

Help: [AtlantaAstronomyClub+help@groups.io](mailto:AtlantaAstronomyClub+help@groups.io)

Click on: Subscribe: [AtlantaAstronomyClub+subscribe@groups.io](mailto:AtlantaAstronomyClub+subscribe@groups.io)

3) Enter into your browser's address bar: [Groups.io](https://groups.io)

Search for Atlanta Astronomy Club in the search bar on the page.

Click on: Atlanta Astronomy Club to join that group

Click on either: Subscribe: [AtlantaAstronomyClub+subscribe@groups.io](mailto:AtlantaAstronomyClub+subscribe@groups.io)

OR the bar with +Apply for membership in this group

Your request will have to be approved by the site moderator(s), which may take a few days.

The PSSG Message Group- The Peach State Star Gaze (PSSG) is the AAC's annual star party held in the fall at The DeerLick Astronomy Village (The DAV) near Sharon, GA in Taliaferro County. The PSSG features seven nights of stargazing, speakers and workshops. The PSSG Message Board is used to post information and discussion about the PSSG.

To join the [PSSG@groups.io](mailto:PSSG@groups.io): Click on the PSSG logo on the upper right of the AAC website homepage. It will take you to the PSSG page. Enter your e-mail address in the subscribe box on the page.

Your request will have to be approved by the site moderator(s), which may take a few days.



## NGC 1499 (The California Nebula) in Perseus by Eugene Rush

This image shows The California Nebula which is an emission nebula in the constellation Perseus. The image was made using a Sharpstar 94 MM Apo refractor with a ZWO ASI071MC pro camera. The image consists of 20, 180-second subs taken from Sharpsburg GA on February 25, 2025.

For more information see: [https://en.wikipedia.org/wiki/California\\_Nebula](https://en.wikipedia.org/wiki/California_Nebula)





## **M106 by Charles Painter**

This image of Messier 106, also known as NGC 4258 is a crop of a 4 hour exposure taken in suburban Atlanta with a 200mm Ritchie Chretien telescope at F/5.9. The camera was an ASI2600MC Pro and the image was processed using PixInsight. The galaxy to the upper right of M 106 is NGC 4248.

For more information about M106 see: [https://en.wikipedia.org/wiki/Messier\\_106](https://en.wikipedia.org/wiki/Messier_106)

## Lunar Eclipse Photos by Tom Faber

The following photos were taken by Tom Faber of the March 13-14, 2025 total lunar eclipse. All images were taken with a Canon T5i DSLR with a 300 mm lens with various exposure times. They are crops of the original full-frame images.



*About 5 minutes after partial phase began.*



*About 5 minutes before totality began.*



*Mid-totality*



*Totality ends.*



*About 5 minutes after totality ended.*



*About 1/3 of the way through the partial phase, with a few passing clouds.*

over time,” explains Lamy. “With this new longitude system, we can now compare auroral observations spanning nearly 40 years and even plan for the upcoming Uranus mission.”

This breakthrough was possible thanks to Hubble’s long-term monitoring of Uranus. Over more than a decade, Hubble has regularly observed its ultraviolet auroral emissions, enabling researchers to produce magnetic field models that successfully match the changing position of the magnetic poles with time.

“The continuous observations from Hubble were crucial,” says Lamy. “Without this wealth of data, it would have been impossible to detect the periodic signal with the level of accuracy we achieved.”

Unlike the aurorae of Earth, Jupiter, or Saturn, Uranus’ aurorae behave in a unique and unpredictable manner. This is due to the planet’s highly tilted magnetic field, which is significantly offset from its rotational axis. The findings not only help astronomers understand Uranus’ magnetosphere but also provide vital information for future missions.

These findings set the stage for further studies that will deepen our understanding of one of the most mysterious planets in the Solar System. With its ability to monitor celestial bodies over decades, the Hubble Space Telescope continues to be an indispensable tool for planetary science, paving the way for the next era of exploration at Uranus.

These results are based on observations acquired with Hubble programs GO #12601, 13012, 14036, 16313 and DDT #15380 (PI: L. Lamy). The team’s paper was published in Nature Astronomy.

<https://www.nature.com/articles/s41550-025-02492-z>

<https://www.nature.com/natastron/>

The **Atlanta Astronomy Club, Inc.**, one of the South’s largest and oldest astronomical society, meets at **3:00 P.M.** on the 3rd 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:** David Lumpkin [President@AtlantaAstronomy.org](mailto:President@AtlantaAstronomy.org)  
**Program Coordinator:** Jo Welsh [Programs@AtlantaAstronomy.org](mailto:Programs@AtlantaAstronomy.org)  
**Observing Chair:** Daniel Herron [Observing@AtlantaAstronomy.org](mailto:Observing@AtlantaAstronomy.org)  
**Corresponding Secretary:** Tom Faber  
[Focalpoint@AtlantaAstronomy.org](mailto:Focalpoint@AtlantaAstronomy.org)  
**Treasurer:** Sharon Carruthers [Treasurer@AtlantaAstronomy.org](mailto:Treasurer@AtlantaAstronomy.org)  
**Recording Secretary:** Open  
**Board Chair:** Sharon Carruthers [Treasurer@AtlantaAstronomy.org](mailto:Treasurer@AtlantaAstronomy.org)  
**Board:** Mark Banks  
**Board:** Chuck Biskobing (Charlie Elliott)  
**Board:** Open  
**ALCor:** Open  
**Elliott Chapter Director:** Steve Siedentop  
[director@ceastronomy.org](mailto:director@ceastronomy.org)  
**Elliott Observing Supervisor:** Dennis Ruseski  
[observing@ceastronomy.org](mailto:observing@ceastronomy.org)  
**Elliott Recording Secretary:** Greg Gaugler  
[secretary@ceastronomy.org](mailto:secretary@ceastronomy.org)  
**Elliott Program Coordinator:** Steve Siedentop  
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**Elliott Outreach Coordinator:** Marie Lott  
[outreach@ceastronomy.org](mailto:outreach@ceastronomy.org)  
**Elliott Astrophotography Coordinator:** Mike Mardis  
**Elliott Chapter AL Liaison:** David Whalen  
**Elliott Facilities Coordinator:** Matt Harvey  
[facilities@CEastronomy.org](mailto:facilities@CEastronomy.org)  
**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:** Steve Siedentop  
**Sidewalk Astronomy:** Open  
[sidewalkastronomy@AtlantaAstronomy.org](mailto:sidewalkastronomy@AtlantaAstronomy.org)  
**Light Tresspass:** 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

- Apr 4th, Friday: Moon First Quarter.
- Apr 12th, Saturday: Full Moon.
- Apr 19th, Saturday: **Joint AAC/CEA Meeting, 6:00PM.**
- Apr 20th, Sunday: Moon Last Quarter.
- Apr 21st, Monday: Lyrids Meteor Shower.
- Apr 24th, Thursday - Apr 27th, Sunday: **AAC Zombie Party at the Deerlick Astronomy Village.**
- Apr 26th, Saturday: Sharon Shenanigans Solar Observing. 10AM. Contact Sharon Carruthers.
- Apr 27th, Sunday: New Moon.
- May 3, Saturday: Eta Aquariids Meteor Shower.
- May 4th, Sunday: Moon First Quarter.
- May 12th, Monday: Full Moon.
- May 17th, Saturday: **AAC Meeting at Lost Corners 7:00PM.**
- May 20th, Tuesday: Moon Last Quarter.
- May 24th, Saturday: **CE Chapter Meeting, 6:30PM. Dark Sky Observing at DAV, 5PM.**
- May 26th, Monday: New Moon.
- June 2nd, Monday: Moon First Quarter.
- June 11th, Wednesday: Full Moon.
- June 14th, Saturday: **AAC Meeting at Lost Corners 7:00PM.**
- June 18th, Wednesday: Moon Last Quarter.
- June 25th, Wednesday: New Moon.
- June 28th, Saturday: **CE Chapter Meeting, 6:30PM. Dark Sky Observing at DAV, 5PM.**

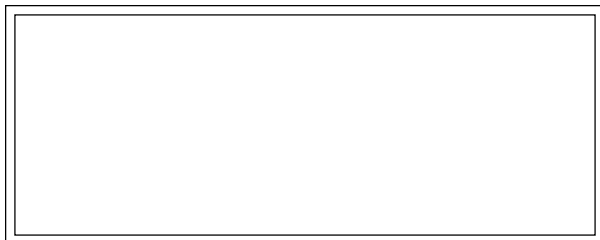
**For more event listings and updates see the calendar at [www.atlantaastronomy.org](http://www.atlantaastronomy.org)**

### Atlanta Astronomy Club Listserv

Because of the shutdown of Yahoo Groups, the Atlanta Astronomy Club Mailing List has been moved to IO Groups. You can visit the group, start reading messages and posting them here: <https://groups.io/g/AtlantaAstronomyClub>.

### 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 with images separate but Word documents or PDFs are okay. **The deadline for May is Sunday, April 27. Submissions received after the deadline will go in the following issue.**



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

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

Newsletter of The Atlanta Astronomy Club, Inc.

*The Focal Point*

