

# The Focal Point

The Atlanta Astronomy Club  
Established 1947  
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Editor: Tom Faber

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## October General Meeting

Join us for the October meeting of the Atlanta Astronomy Club on Friday October 14th at 8PM. Refreshments will be provided starting around 7:30PM. The location of the meeting is at the Atlanta Freethought Society (AFS) building in Smyrna. Directions to the meeting at The Atlanta Freethought Building: Take I-285 to exit # 16. Go south ( in towards Atlanta) about half a mile. Turn right on to North Church Lane. The first Building you see on the left is it (Looks like a small brick church). The street address is 4775 North Church Lane S.E. , Smyrna 30080. The meeting will run for about 2 hours. If you have any announcements that you want to make during the meeting please contact our President, Mark Banks, so that he can schedule the time for you during the meeting. His contact information is on page 7.

### The Program:

On October 14th, club member and Program Chair Richard Jakiel will present a talk titled "Alpha-Omega: The Birth and Death(s) of the Universe". Starting 13.7 GYR ago with the early Big Bang Chronology, with a discussion of GUTS, Inflation, Early Nucleosynthesis, Dark matter and energy, the "Dark Ages" and the formation of the earliest stars, clusters and galaxies. Then we will look ahead to the collision of the Milky Way with Andromeda, the red giant phase of the Sun, and the possible end scenarios of the Universe. Depending on the amount/effects of dark energy on acceleration this includes the infinite expansion (and "cold death"), the BIG Crunch and Rip models, and the even more controversial Cyclic expansion and collapse of infinite Universes. I promise an exciting and maybe a tad bit perplexing discussion of



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## The Peach State Star Gaze!

The next Peach State Star Gaze is almost here! The AAC's annual star party will again be held at the Deerlick Astronomy Village near Sharon, GA, and run from Sunday, September 25 to Sunday, October 2 (new moon is September 27). DAV has an 11-acre field that has room for RVs, campers, and tents. Limited power is available on the field. Full rest rooms with showers are available along with a 40' x 40' pavilion and gas BBQ grill. This year Micki's Kitchen returns to provide us with coffee, refreshments and meals (and brownies!). The Atlanta Astronomy Club's 24" telescope will be set up on the field and AAC's clubhouse will be open. Pre-registration is now closed but walk-ins are welcome. Please visit

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*The Deerlick Astronomy Village, located about 100 miles east of Atlanta and 50 miles west of Augusta, has some of the darkest skies in the state.*



*The AAC field at the DAV during the 2010 PSSG - Photo by Tom Faber.*

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current theories that promises to be both entertaining and informative.

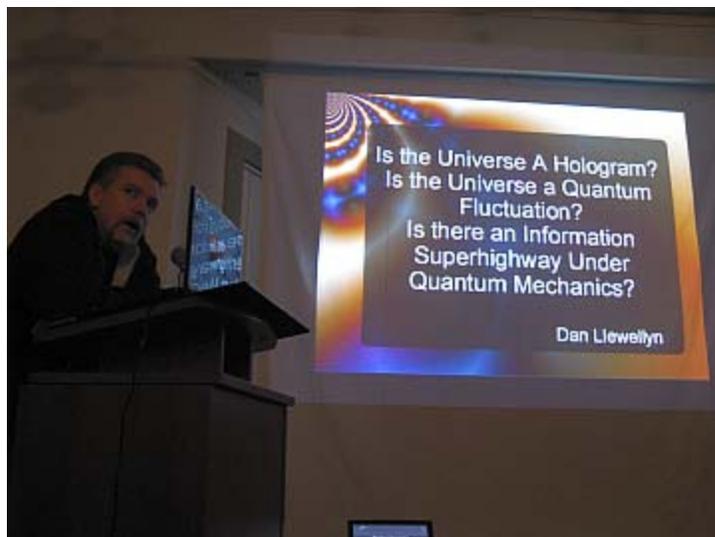
## Upcoming AAC Meetings:

Future meetings are scheduled for November 11, and December 10 (Christmas potluck dinner). Meeting speakers, and talk topics and locations will be announced at a later date.

## September General Meeting

Meeting Photos by Tom Faber

The Atlanta Astronomy Club's September meeting was held at the Atlanta Freethought Society (AFS) building in Smyrna on September 9 (photos below). The meeting was called to order at 8:00PM by President Mark Banks with about 30 members and guests present. Our speaker was club member Dan Llewellyn who presented a talk titled "The Holographic Universe" (photo right top). This talk touched on Parallel universes, multiverses, black holes, the Schwarzschild radius, Hawking radiation, and other topics on the edge of physics. After the talk and a Q&A period, announcements of upcoming events were made by other club officers including an update on the upcoming Peach State Star Gaze by PSSG Chair Peter Macumber (photo right bottom). The next AAC general meeting will be held on October 14 at the AFS building. Richard Jakiel will present a talk titled "Alpha-Omega: The Birth and Death(s) of the Universe".



## 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 at [artzorka@yahoo.com](mailto:artzorka@yahoo.com) or by phone at 404-633-8822.

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us at [AtlantaAstronomy.org/pssg/](http://AtlantaAstronomy.org/pssg/) for details and to register for the Star Gaze.

**On Friday September 30th** there will be a *Solar System Symposium*. Tom Wilson has put together the following speakers for Solar System Symposium:

Theo Ramakers - Solar Imaging and Observing

Rich Jakiel - Lunar Imaging and Observing

Dan Llewellyn - Advanced Imaging

Brian Combs - Advanced Imaging

Dr. Richard Schmude - Scientific use of data collected by amateur imagers.

Friday evening Jonn Serrie (The Stargazer's Journey) - Jonn will play music during the evening under the starry skies of the DAV.

### **Current List for Saturday October 1st:**

Chris Hetlage - Shuttle, The Final Missions

Tom Crowley - An Introduction to the Interstellar Medium the stuff between the stars

Pixie Bruner - "In the Umbra of the Boys - Women Astronomers"

More to come! Check [AtlantaAstronomy.org/pssg/](http://AtlantaAstronomy.org/pssg/) for updates.

## **Charlie Elliott Chapter Minutes**

by Marie Lott, CE Chapter Recording Secretary

The August 27th meeting of the Charlie Elliott Chapter of the Atlanta Astronomy Club was held in the CEWC Visitor Center in Mansfield, GA at 5 PM with thirty-two people in attendance. An additional ten guests, members of Jon Wood's family, came for the last half of the meeting to join in remembering Jon and dedicating the observing field in his name.

Outreach coordinator Theo Ramakers reported that the chapter's astronomy outreach has begun again for the new school year and asked that members consider helping out when able. Outreach dates are on the chapter calendar at <http://ceastronomy.org>. Art Zorka spoke briefly about the Night Sky Network and the observing clubs of the Astronomical League. For more information about these resources contact Art at [nightsky.atlanta@yahoo.com](mailto:nightsky.atlanta@yahoo.com).

Dr. Richard Schmude of Gordon College presented a lively talk about Jupiter and its belts, bands and spots. Larry Owens' animated photographs of the audience participation during his talk are a must-see at <http://bit.ly/CEphotosAugust2011>; Dr. Schmude's slides may be viewed at <http://bit.ly/SchmudeAugust2011>.

Observing supervisor Steven Philips gave the monthly "Observing 101" talk, a highlight of current sun, moon and planet rise & set times, and observing targets.

Events visible during the month of September 2011:

- \* Zodiacal light visible in the east before dawn
- \* Uranus approaches opposition and is visible all night long
- \* Neptune is visible all night long in western Aquarius
- \* Asteroid Vesta is almost stationary in the constellation Capricornus
- \* Comet Garradd passes through Vulpecula, Sagitta, and Hercules

Small Telescope/Binocular Target List: Globular clusters M2, M13 (Great Hercules Cluster), M15, M22 & M92; planetary nebulas M27 (Dumbbell) & M57 (Ring); open clusters NGC6633, M6 (Butterfly), M11 (Wild Duck), M24 (Small Sgr Star Cloud) & M25; diffuse nebulas M8 (Lagoon) & M20 (Trifid).

The featured object for September is M17 - the Omega Nebula, also known as the Swan, Horseshoe or Checkmark Nebula. An open cluster of

35 stars lies embedded within this nebula. The gas cloud is brightly illuminated by these young hot stars. Inside the dark clouds and molecular gas, new stars continue to form. This nebula is one of the youngest and most massive star-forming regions in the entire Milky Way. The Omega Nebula is located about 5500 light years away towards the constellation of Sagittarius.



*M17, the Omega/Swan Nebula - Two Micron All Sky Survey (2MASS), Wikipedia Commons*

At the close of the meeting Theo Ramakers, with the help of Janet Wood and her son, shared thoughts and photos of late Observing Supervisor and friend Jon Wood before unveiling a sign dedicating the observing field in his name.

Members and guests adjourned to the "Jon Wood Astronomy Field" with 25 scopes and several binoculars for an enjoyable evening of stargazing, comet hunting and deep sky observing. Skies were clear and the Milky Way stretched from one side of the field to the other. Three intrepid observers who stayed into the wee hours were treated to a spectacular fireball about 4 AM. The large glowing meteor was so bright that it cast shadows on the field as it passed overhead before breaking into three pieces and leaving a lingering smoke trail.

The next meeting of the chapter will be the quarterly potluck on Saturday, September 27, 2011 at 5 PM.

## **Bradley Observatory Open House Series 2011-2012**

### **Return of the Alumnae**

Graduates of the Department of Physics & Astronomy have gone on to a wide range of graduate studies and careers. This year, our speakers are all returning alumnae who will tell us about their journeys since they have left Agnes Scott College, and the work or research that they are now doing. All Open Houses run from 8:00 - 10:00 PM unless noted.

**September 23** - Fall Equinox Concert & Open House

**October 21** - Open House Lecture Series: Sensing Everything

**October 22** - Moon Viewing Festival (7:00 PM - 9:00 PM)

**November 11** - Open House Lecture Series: Exploring the Most Energetic Phenomena in the Universe

**December 9** - Open House Lecture Series: Active Galactic Nuclei

**February 10** - Open House Lecture Series: Considering Human Factors in the Design of Multimodal Displays for NASA

**March 23** - Spring Equinox and Open House Series

**April 13** - Open House Lecture Series: Science Writing and Writing Science

**May 11** - Open House Lecture Series: En Route to Smart Materials

For more information and updates see: <http://www.agnesscott.edu/academics/bradleyobservatory>

## 2012 - DOOM or DUMB?

By Sharon Carruthers, AAC Treasurer

### Part 8 - Cosmophobia - Why the Panic over 2012?

*A Little Learning*

*by Alexander Pope*

*A little learning is a dangerous thing ;*

*Drink deep, or taste not the Pierian spring :*

*There shallow draughts intoxicate the brain,*

*And drinking largely sobers us again.*

In this, my last chapter on the 2012 Doom scenarios, I will focus on the reasons why the 2012 has captured the public imagination. Be aware that there is a lot of my personal speculation & opinion in this piece: Opinions expressed in this series are those of the author, not of the Atlanta Astronomy Club, its Board, its membership, nor the editors of the *Focal Point*.

David Morrison runs the “Ask An Astrobiologist” website for NASA and started to get Planet X/2012 questions about 10 years ago. He has now received more than 5,000 questions and produced a debunking YouTube video: <http://www.youtube.com/watch?v=HQqn-zZzBLw>

In an excellent talk on FORA.tv: [http://fora.tv/2010/04/24/David\\_Morrison\\_Surviving\\_2012\\_and\\_Other\\_Cosmic\\_Disasters](http://fora.tv/2010/04/24/David_Morrison_Surviving_2012_and_Other_Cosmic_Disasters), he coins the word Cosmophobia - the fear of imminent disaster falling on the Earth from space. It is a by-product of our greater knowledge of the cosmos and of the history of catastrophic disasters on Earth (such as the extinction of the dinosaurs by a possible comet impact); selective scientific ignorance and our existing apocalyptic fears.

The first issue is the motivation for the belief in apocalyptic events. Why do people not only believe in, but seem to relish the idea of the human race, the world or even the Universe coming to an end?

I suspect that it is due to our realization of our own mortality. Death is not just an ending to our physical existence for each of us, but a knowledge that the world will go on its merry way without us, as if we never existed. The solution, of course, is that the world will end when we do. What takes us out, will take everyone else out at the same time. A cold comfort, but a comfort none the less.

The more extreme egos believe that what takes (nearly) everyone else out, will spare them because they are special in some way. They have been elected to survive, or they are smarter, more informed, better prepared than the average persons (the “sheeples”) who have closed their eyes to the truth. Nancy Leider, bunkered down on her Wisconsin farm and raising chickens for food, embraces this attitude.

There is a strong element of anti-authoritarianism in believers. They think the government, NASA, astronomers, etc KNOW that Planet X is on its way but are LYING to the “sheeples” - either to prevent panic or so they can proceed with plans to save themselves while abandoning the rest of humanity. Wisely, the believers have seen through the ruse. If you contradict their assertions, you are either a dupe or the establishment’s paid disinformation agent (don’t I wish!).

Humans are storytellers. We like to pull disparate things in to one cohesive narrative, to have an explanation. And we really hate “We don’t have an answer, yet, but we might some day.” When we have a set of facts or of facts and beliefs that seem to be contradictory, it causes “cognitive dissonance”, which is mentally and emotionally difficult for us to handle. People will grasp onto what little science they know to weave a tapestry

that keeps their beliefs intact. Scott Lilienfeld, assistant professor of psychology at Emory University, cites two major catalysts that underpin pseudoscientific beliefs: the (mis)information explosion and scientific illiteracy in the general population. (<http://www.columbia.edu/cu/21stC/issue-3.4/valhoul.html>). The information age has given people more things to worry about (killer asteroids! brown dwarfs! Coronal Mass Ejections!), but their knowledge is superficial. The “hypothesis” that Planet X is a brown dwarf companion star to our Sol is based on the science that over 60% of stars are binary systems, it would have a large orbital period, and would be invisible, as brown dwarfs do not emit light in the visible spectrum. This makes it more “scientific” to many Planet X’ers than a random planet careening through the solar system like a billiard ball. Unfortunately, if one actually studies the nature of brown dwarfs (they do emit heat and other radiation, and their gravity would effect the orbits of the planets) and knows that astronomers could detect these things, this hypothesis fails.

Weaving a narrative that does not hold up to the facts is not merely a matter of intelligence. Indeed, as Michael Shermer points out in “Why People Believe Weird Things”, highly intelligent people often have more bits of real science to use as tapestry threads; and are better able to select affirming data and to explain away contradictory data. It is often the case that a scientist, such as Velikovsky, who is well respected in his own field of science becomes a crackpot when he enters another field. All the protocols of scientific research and evidence he follows in his own field get thrown out the window when he enters another field. It is though he thinks “Well, if I’m smart enough to figure out psychology, I must be smart enough to figure out astrophysics!” (without actually taking any formal training in astrophysics).

Perversely, people will cling to beliefs more strongly in the face of contradictory evidence. Having completed a cohesive narrative, they become almost totally incapable of unweaving it and starting afresh.

Finally, I put a great deal of blame onto the popular media, especially television. While people have to search the web to come up with pseudoscientific sites, TV dumps this nonsense in our laps. When supposedly serious channels start dishing up shows about the Moon Hoax, ancient alien astronauts, Nostradamus and the 2012 Doomsday without presenting good, scientific analysis of the claims, people are duped into swallowing the claims uncritically.

Dr David Morrison, sums up the majority of questions he received on “Ask an Astrobiologist” about 2012: “Is there really a Planet X out there? Will it destroy the Earth? Will my family die? Does NASA and the government know but are lying to us?”

At first he thought the Planet X questions were a bit of silly scientific ignorance, but the fear and despair in these questions caused him to take them much more seriously.

That is the reason he made his YouTube video and the reason I have written this 8 part series.

I would only hope that you, the readers, will now be able to become ambassadors for good science and answer all the above questions from frightened people with a resounding “NO!”

## The Next AAC Board Meeting

The next Board meeting of the Atlanta Astronomy Club is scheduled for Saturday, December 3rd at 3PM at the Atlanta Freethought Society (AFS) building in Smyrna. Contact President Mark Banks or Board Chair Daniel Herron for more information about the meeting agenda.



## Dark Clues to the Universe

By Dr. Marc Rayman

Urban astronomers are always wishing for darker skies. But that complaint is due to light from Earth. What about the light coming from the night sky itself? When you think about it, why is the sky dark at all?

Of course, space appears dark at night because that is when our side of Earth faces away from the Sun. But what about all those other suns? Our own Milky Way galaxy contains over 200 billion stars, and the entire universe probably contains over 100 billion galaxies. You might suppose that that many stars would light up the night like daytime!

Until the 20th century, astronomers didn't think it was even possible to count all the stars in the universe. They thought the universe was infinite and unchanging.

Besides being very hard to imagine, the trouble with an infinite universe is that no matter where you look in the night sky, you should see a star. Stars should overlap each other in the sky like tree trunks in the middle of a very thick forest. But, if this were the case, the sky would be blazing with light. This problem greatly troubled astronomers and became known as "Olbers' Paradox" after the 19th century astronomer Heinrich Olbers who wrote about it, although he was not the first to raise this astronomical mystery.

To try to explain the paradox, some 19th century scientists thought that dust clouds between the stars must be absorbing a lot of the starlight so it wouldn't shine through to us. But later scientists realized that the dust itself would absorb so much energy from the starlight that eventually it would glow as hot and bright as the stars themselves.

Astronomers now realize that the universe is not infinite. A finite universe—that is, a universe of limited size—even one with trillions of stars, just wouldn't have enough stars to light up all of space.



*This Hubble Space Telescope image of Galaxy NGC 4414 was used to help calculate the expansion rate of the universe. The galaxy is about 60 million light-years away. NASA and The Hubble Heritage Team (STScI/AURA).*

Although the idea of a finite universe explains why Earth's sky is dark at night, other factors work to make it even darker.

The universe is expanding. As a result, the light that leaves a distant galaxy today will have much farther to travel to our eyes than the light that left it a million years ago or even one year ago. That means the amount of light energy reaching us from distant stars dwindles all the time. And the farther away the star, the less bright it will look to us.

Also, because space is expanding, the wavelengths of the light passing through it are expanding. Thus, the farther the light has traveled, the more red-shifted (and lower in energy) it becomes, perhaps red-shifting right out of the visible range. So, even darker skies prevail.

The universe, both finite in size and finite in age, is full of wonderful sights. See some bright, beautiful images of faraway galaxies against the blackness of space at the Space Place image galleries. Visit <http://spaceplace.nasa.gov/search/?q=gallery>.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

## Images by Chuck Painter

These images were made by club member Chuck Painter from suburban Alpharetta with an 8" AstroTech RC and Orion Starshoot Pro One Shot Color Camera. The images were processed with Nebulosity and PixInsight.



*2 minute exposure of Comet Garradd taken August 27.*



*4.5 hour exposure (5 minute subs) of the Bubble Nebula, NGC7635, taken late in August.*

## Tributes to Terrorism Victims Are on Mars

NASA/JPL News Release - September 08, 2011

In September 2001, Honeybee Robotics employees in lower Manhattan were building a pair of tools for grinding weathered rinds off rocks on Mars, so that scientific instruments on NASA's Mars Exploration Rovers Spirit and Opportunity could inspect the rocks' interiors.

That month's attack on the twin towers of the World Trade Center, less than a mile away, shook the lives of the employees and millions of others.

Work on the rock abrasion tools needed to meet a tight schedule to allow thorough testing before launch dates governed by the motions of the planets. The people building the tools could not spend much time helping at shelters or in other ways to cope with the life-changing tragedy of Sept. 11. However, they did find a special way to pay tribute to the thousands of victims who perished in the attack.

An aluminum cuff serving as a cable shield on each of the rock abrasion tools on Mars was made from aluminum recovered from the destroyed World Trade Center towers. The metal bears the image of an American flag and fills a renewed purpose as part of solar system exploration.

Honeybee Robotics collaborated with the New York mayor's office; a metal-working shop in Round Rock, Texas; NASA's Jet Propulsion Laboratory in Pasadena, Calif.; and the rover missions' science leader, Steve Squyres, at Cornell University, Ithaca, N.Y.

"It's gratifying knowing that a piece of the World Trade Center is up there on Mars. That shield on Mars, to me, contrasts the destructive nature of the attackers with the ingenuity and hopeful attitude of Americans," said Stephen Gorevan, Honeybee founder and chairman, and a member of the Mars rover science team.

On the morning of Sept. 11, 2001, Gorevan was six blocks from the World Trade Center, riding his bicycle to work, when he heard an airliner hit the first tower. "Mostly, what comes back to me even today is the sound of the engines before the first plane struck the tower. Just before crashing into the tower, I could hear the engines being revved up as if those behind the controls wanted to ensure the maximum destruction. I stopped and stared for a few minutes and realized I felt totally helpless, and I left the scene and went to my office nearby, where my colleagues told me a second plane had struck. We watched the rest of the sad events of that day from the roof of our facility."

At Honeybee's building on Elizabeth Street, as in the rest of the area, normal activities were put on hold for days, and the smell from the collapse of the towers persisted for weeks.

Steve Kondos, who was at the time a JPL engineer working closely with the Honeybee team, came up with the suggestion for including something on the rovers as an interplanetary memorial. JPL was building the rovers and managing the project.

To carry out the idea, an early hurdle was acquiring an appropriate piece of material from the World Trade Center site. Through Gorevan's contacts, a parcel was delivered to Honeybee Robotics from the mayor's office on Dec. 1, 2001, with a twisted plate of aluminum inside and a note: "Here is debris from Tower 1 and Tower 2."

Tom Myrick, an engineer at Honeybee, saw the possibility of machining the aluminum into the cable shields for the rock abrasion tools. He hand-delivered the material to the machine shop in Texas that was working on other components of the tools. When the shields were back in New York, he affixed an image of the American flag on each.

The Mars Exploration Rover Spirit was launched from Cape Canaveral Air Force Station, Fla., on June 10, 2003. Opportunity's launch followed on

July 7. Both rovers landed the following January and completed their three-month prime missions in April 2004. Nobody on the rover team or at Honeybee spoke publicly about the source of the aluminum on the cable shields until later that year.



*The piece of metal with the American flag on it in this image of a NASA rover on Mars is made of aluminum recovered from the site of the World Trade Center towers in the weeks after their destruction. Image Credit: NASA/JPL-Caltech/Cornell University*

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## Herschel Mission Finds Galactic Growth Slow and Steady

NASA/JPL New Release - September 13, 2011

The Herschel infrared space observatory has discovered that galaxies do not always need to collide with each other to drive vigorous star birth. The finding overturns a long-held assumption and paints a more stately picture of how galaxies evolve.

Herschel is a European Space Agency mission with important contributions from NASA and NASA's Jet Propulsion Laboratory in Pasadena, Calif.

"Galaxy mergers play an important role in producing the most powerful starbursts today," said Lee Armus, a co-author of the new study from NASA's Herschel Science Center at the California Institute of Technology in Pasadena. "But in the early universe, when most galaxies contained a lot more gas, mergers were not the only way, or even the most common way, to make lots of stars at a rapid rate."

The new results are based on Herschel's observations of two patches of sky, each about one-third the size of the full moon.

*Continued on next page*



*In this artist's conception, a galaxy accretes mass from rapid, narrow streams of cold gas. These filaments provide the galaxy with continuous flows of raw material to feed its star-forming at a rather leisurely pace. Image credits: ESA-AOES Medialab*

It's like looking through a keyhole across the universe. Herschel has seen more than a thousand galaxies at a variety of distances from Earth, spanning 80 percent of the age of the cosmos.

These observations are unique because Herschel can obtain data at a wide range of infrared light and reveal a more complete picture of star birth than ever seen before.

The results appear in the journal *Astronomy & Astrophysics*. Read more at [http://www.esa.int/SPECIALS/Herschel/SEM2Y40UDSG\\_0.html](http://www.esa.int/SPECIALS/Herschel/SEM2Y40UDSG_0.html).

Herschel is a European Space Agency cornerstone mission, with science instruments provided by consortia of European institutes and with important participation by NASA. NASA's Herschel Project Office is based at JPL. JPL contributed mission-enabling technology for two of Herschel's three science instruments. The NASA Herschel Science Center, part of the Infrared Processing and Analysis Center at Caltech, supports the United States astronomical community. Caltech manages JPL for NASA.

More information is online at <http://www.herschel.caltech.edu>, <http://www.nasa.gov/herschel> and <http://www.esa.int/SPECIALS/Herschel/index.html>.

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 (\$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](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 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/atlastro>.

### AAC Officers and Contacts

**President:** Mark Banks [President@AtlantaAstronomy.org](mailto:President@AtlantaAstronomy.org)

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

**Observing Chair/BoD Chair:** Art Zorka

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**Recording Secretary:** Pixie Bruner

[Secretary@AtlantaAstronomy.org](mailto:Secretary@AtlantaAstronomy.org)

**Board Chair:** Daniel Herron, Contact info TBA

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

**Board:** David Lumpkin, Contact info TBA

**Board:** Theo Ramakers 770-464-3777

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**Elliott Webmaster:** Theo Ramakers 770-464-3777

[webmaster@CEastronomy.org](mailto:webmaster@CEastronomy.org)

**Georgia Astronomy in State Parks:**

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**PSSG Co-Chair:** Joanne Cirincione

[starrynights@AtlantaAstronomy.org](mailto:starrynights@AtlantaAstronomy.org)

**Sidewalk Astronomy:** Brad Isley

[sidewalkastronomy@AtlantaAstronomy.org](mailto:sidewalkastronomy@AtlantaAstronomy.org)

**Light Trespass:** Open - Contact Mark Banks if you would like to volunteer for this position

**Woodruff Observ. Coordinator:** Sharon Carruthers

[Treasurer@AtlantaAstronomy.org](mailto:Treasurer@AtlantaAstronomy.org)

**AAC Webmaster:** Daniel Herron, Contact info TBA

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

## AAC Events are listed in BOLD

September 24th, Saturday: **Charlie Elliott Chapter Mtg - 5PM.**

September 25th, Sunday: **The Peach State Star Gaze opens at 12:00PM.**

September 25th, Sunday: Uranus at Opposition.

September 27th, Tuesday: New Moon.

September 28th, Wednesday: Mercury at Superior Conjunction.

October 1st, Saturday: Mars in the Beehive Cluster (M44).

October 2nd, Sunday: **The Peach State Star Gaze closes at 12:00PM.**

October 3rd, Monday: Moon First Quarter.

October 8th, Saturday: Draconids Meteors. International "Observe the Moon" night.

October 11th, Tuesday: Full Moon.

October 14th, Friday: **AAC Meeting at AFS, 8PM.**

October 19th, Wednesday: Moon Last Quarter.

October 21st, Friday: Orionids Meteors. Bradley Observatory Open House, 8PM.

October 22nd, Saturday: **Charlie Elliott Chapter Mtg - 5PM. DSO at DAY.**

October 26th, Wednesday: New Moon.

October 28th, Friday: Jupiter at Opposition.

November 1st, Wednesday: Mercury near Venus.

November 2nd, Tuesday: Moon First Quarter.

November 5th, Saturday: **Charlie Elliott Chapter Mtg - 5PM.**

November 10th, Thursday: Full Moon.

November 11th, Friday: **AAC Meeting at location TBA, 8PM.** Bradley Observatory Open House.

November 13th, Sunday: Mercury at Greatest Elongation East.

November 17th, Thursday: Leonids Meteor.

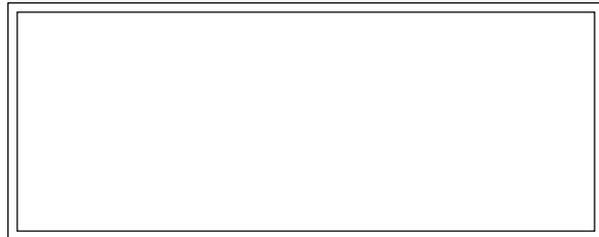
November 18th, Friday: Moon Last Quarter.

## Atlanta Astronomy Club Listserv

Subscribe to the Atlanta Astronomy Club Mailing List: The name of the list is: AstroAtlanta. The address for messages is: [AstroAtlanta@yahoogroups.com](mailto:AstroAtlanta@yahoogroups.com). To add a subscription, send a message to: [AstroAtlanta-subscribe@yahoogroups.com](mailto:AstroAtlanta-subscribe@yahoogroups.com). 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@atlantaastro.org](mailto:focalpoint@atlantaastro.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 November is Friday, October 21st. Submissions will not be accepted after the deadline.**



FIRST CLASS



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FROM:

Newsletter of The Atlanta Astronomy Club, Inc.

*The Focal Point*

