

The Focal Point

The Atlanta Astronomy Club
Established 1947
June 2006

Vol. 19 No. 1

Editor: Kat Sarbell

Table of Contents

- Page 1...**June Meeting Information
Page 2...May Meeting Minutes, CEC Information
Page 3...Woodruff Summer Camp, "The DSO at DAV"
Page 4...Astronomy Day 2006
Page 5..."Making Your Own Sight Tube"
Page 6...Jupiter Image, "Hubble Captures a "Five-Star" Rated Gravitational Lens"
Page 7...GASP Events, Web Site, Memberships & Contacts
Page 8...Calendar, AAC List Serve Info, Focal Point Deadline

June General Membership Meeting

By Keith "Kosmic Kow" Burns, Program Chair

The next general meeting of the Atlanta Astronomy Club will be on June 16th at 8 P.M. in **Bradley Observatory at Agnes Scott College**. This is a location change from our usual meeting location **just for this month only**. The meeting will take place in the classroom located to the left through the double doors upon entering into the building when you come into the front door. We will have refreshments just outside of the room before the meeting. A small donation in the kitty box is requested but not required.

The meeting starts at 8 PM sharp. We will have our business meeting first. This includes any announcements and other things of astronomical interest. Anyone who wishes to make any announcements, please notify Peter Macumber at president@atlantaastronomy.org and also email me at Keith_B@Bellsouth.net. That way Peter knows who is speaking ahead of time and he can schedule the time needed. I need to know so I can put your information on a Power Point presentation slide show that will run before and during the beginning of the meeting. Please have the announcement info to me by no later than June 13th.

Our featured speaker, Professor Brad S. Meyers, will give his talk with questions and answers to follow. We will adjourn the meeting and head off to a local eating establishment for supper, dessert, and/or just a drink.

About the Talk: Short-Lived Radioactivities and the Birth of the Sun. Primitive meteorites show excesses in daughter isotopes of short-lived radioactive species. These excesses correlate with the concentration of the stable counterpart isotopes and therefore provide convincing evidence that the radioactivities were alive at the birth of our Solar System. The inferred concentration of some isotopes suggests they were injected into the proto-solar cloud from a nearby massive star. This has significant implications for the location and timing of the Sun's formation and for our theories of stellar nucleosynthesis.



Speaker Bio: Brad Meyer was born on July 23, 1961 in Tarrytown, NY. He grew up in Tempe, AZ and graduated from Tempe High School in 1979. He obtained his Bachelor's degree in Space Physics in 1983 from Rice University in Houston, TX and his Ph.D. in Astrophysics from the University of Chicago in 1989. After performing postdoctoral research in nuclear astrophysics at Lawrence Livermore National Laboratory in Livermore, CA, he joined the faculty in the Department of Physics and Astronomy at Clemson University in Clemson, SC in December 1990. He is now a Full Professor at Clemson and

continues his research in element formation, stellar evolution, and cosmochemistry. He is a member of the American Astronomical Society, the American Chemical Society, the American Physics Society, and the Meteoritical Society. He has been a Fellow of the Division of Nuclear Physics of the American Physics Society since 2003.

Directions to Bradley

From downtown Decatur go south on South Candler Street (155) over the railroad tracks and cross East College Ave. After about 0.25mi turn right on East Dougherty St. Parking is available along East Dougherty and in a small parking lot on the right about half way to S. McDonough St. If these are filled, additional parking is available off of S. McDonough St. Follow Dougherty to the four-way stop, either turn left and take the first left into the parking lot, or turn right and park in the large parking deck on the left. Handicapped-accessible parking is available adjacent to the observatory. For more details see directions on <http://bradley.agnesscott.edu/openhouse.html>

Upcoming speakers and programs

July 21st - Paul Wallace of Berry College will give a talk on the Copernicus Revolution.

August 18th - Dennis Hands of GTCC Cline Observatory/ Natural Science Center of Greensboro will talk about, " My Two Weeks On Mars."

September 15th - April Whitt of Fernbank Science Center will speak on a topic to be announced.

October 20th - the meeting will be cancelled due to the Peach State Star Gaze. This event will include several wonderful speakers who will talk on various topics of astronomical interest. Be sure to make your reservations.

May 19th General Membership Meeting Minutes

By Richard Jakiel, AAC Recording Secretary

With the absence of both the President (Phil Sacco) and the Program Chair (Keith Burns), Dan Herron (Observing Chair) presided over the meeting. Over 60 visitors and AAC members were in attendance. After a brief introduction, Daniel introduced Don Hall from the AAC Nominating Committee. Other than for president and the AAC board, most positions were uncontested. For the AAC board, there were two nominations from the floor - Brad Isley and Mike Boni. Ballots were distributed and were collected after the membership had made their choices.

Election Results: Club Officers (1 year term): President: Peter Macumber; Program Chair: Keith "Kosmic Kow" Burns; Observing Chair: Daniel Herron; Corresponding Secretary: Kat Sarbell; Treasurer: Sharon Carruthers; Recording Secretary: Rich "Curly" Jakiel; AAC Board (2 year terms) - 3 positions open: Tom Crowley, Gil Shilcutt, and Brad Isley.

Other Business

Though much of the business portion of this meeting can be found in the May issue of the Focal Point, several key items were brought up regarding the Deerlick Astronomical Village or DAV. Over the Memorial Day Weekend, the DAV sponsored a BBQ and DSO open for all AAC members. On June 2nd, the DAV will be presenting sample lighting ordinances for Taliaferro County. Tom Crowley also reported that a contract between the AAC and DAV was in the "final stages of being ironed out". A full disclosure on this contract will be presented to the AAC membership in the near future.

Featured Presentation:

Dr. Robert Knop gave an interesting, often humorous talk that linked the normally divergent topics of "cosmic dark ages", star formation (and the origin of the elements) and interacting galaxies into a coherent presentation. We are all made of 'star stuff' - including the often udderly 'Zen' astrominerator - the Kosmic Kow.

Charlie Elliott May Meeting Minutes

by Clevis Jones, CEC Recording Secretary

Charlie Elliott Chapter (CEC) Meeting Minutes: May 20, 2006

SPECIAL EVENT REPORT – Charlie Elliott JAKES Day, the CEC Astronomy Booth: This year, the CE JAKES Day event and CEC meeting coincided, making for a very long and VERY SATISFYING fifteen-hour day of astronomy day for the volunteers: Steve Kennedy, Larry Owens, Steven Phillips, Jon Wood, Debbie & Clevis Jones. On behalf of the club and 107 visitors – thank you! Suffice it to say it was a memorable occasion with the CEC astronomy booth being setup in the CE Wildlife Visitor's Center with a planetarium atmosphere of soft lights, low level space music, an LCD projector showing images and movies on the big screen, Starry Night movies on Steve Kennedy's 42" monitor, and lots of handouts from NASA in support of their "JPL Saturn Observation Outreach Program", and great members talking with 107 visitors to the booth. Pictures say a thousand words far better than I can – visit <http://www.CEastronomy.org/> (click Charlie Elliott Chapter, then click Latest Events).

IMPORTANT - THANK YOU: Many wives attended this meeting – thank you. We enjoyed your company and hope you will come back for every meeting. To those whose hands prepared (or purchased) the food we ate, a hardy thank you! The Pot Luck Dinner was WONDERFUL!

ATTENDANCE: Twenty-nine guests and members attended the May meeting consisting of a Pot Luck Dinner, Officer elections, and three presentations.

BUSINESS: Election Committee Chairman Debbie Jones conducted the election of officers. Results: Director: Larry Owens; Observing Supervisor: Steve Bieger; Recording Secretary: Clevis Jones.

CALL FOR VOLUNTEERS: Jamie Gibbs, CE coordinator for "Overnight Camp" at CE issued a request for volunteers for the June 13th and July 12th events. Dr. Richard Schmude volunteered to present (rain or shine) a program on meteorites: Jon Wood, Jim Honeycutt – schedule permitting, and Clevis Jones volunteered to bring telescopes for observing after the program on the 13th. Jon and Clevis also volunteered to bring their telescopes for the July 12th event. A PROGRAM & PRESENTER for the Wednesday, July 12th, 6:30 p.m. event is STILL NEEDED. Please contact: Larry Owens: director@CEastronomy.org, Steve Bieger: observing@CEastronomy.org, or Clevis Jones: secretary@CEastronomy.org

ANNOUNCEMENTS: Art Zorka described his duties and the benefits to the club of his position as Astronomical League Coordinator. Ken Poshedley reminded everyone there is an ALPO conference in Atlanta July 21-22. Contact Ken (p.7) for details. Ray Major invited everyone to the Deerlick Astronomy Village (DAV) 1st annual Memorial Day Picnic: <http://www.deerlickgroup.com/> Alesia Rast, CE liaison, complemented the entire CEC group on the effectiveness of the CEC club efforts. Thank you, Alesia! Bill McKibben, the instigator, and Jim Honeycutt, his mouthpiece, were ignored <GRIN> Chapter Director, Larry Owens, gave an update on the club's 16" telescope projects. Art Zorka pointed out the AAC made a substantial contribution. Larry thanked the AAC for its approximately \$750 donation from the budget and the members of the AAC and CEC for their approximately \$1200 generous donations. Thank you all! There have been two more telescopes donated to the club – more about them when they are received. Lee Nelson presented materials and offered a suggestion that a visit be setup to the Woodbury Research Labs Radio Astronomy location. Steve Bieger will investigate and report back.

OBSERVING REPORT: Steve Bieger presented "What's Up Tonight". Steve's program included interesting information on Galileo and Cassini along with coverage of what was up for viewing for the night.

CURRENT EVENTS REPORT: Clevis Jones covered the passing of comet 73P/Schwassmann-Wachmann 3 (2006).

FEATURE PRESENTATION: Jon Wood presented a program on "Imaging and Processing with the Autostar Suite". He took us step-by-step through the use of the program with his own images. He showed how the program can do a lot of the work for you, but also how you have to add your own touch to get the best results. Thanks, Jon! We look forward to more reports from you!

OBSERVING SESSION: Some folks went to the observing field; some stayed at the visitor center parking lot and put an end to a perfect day by viewing through the 16" on the Byers mount.

Charlie Elliot June Meeting

by Clevis Jones, CEC Recording Secretary

June 17 at 5:00 p.m. at the CEWMA Visitor Center

"What's Up Tonight" by Steve Beiger; Current Events by Clevis Jones; Feature Presentation: "JUPITER" by Dr. Richard Schmude. With a new giant hurricane like storm called "Oval BA" [which we all know is really the GRS, Jr.:-] and its centuries old big brother The Great Red Spot" [GRS Sr :-] Jupiter continues to put on an amazing show. Please, join us for Dr. Schmude's, sure to be animated and most entertaining, presentation on JUPITER.

FOR UPDATES & DIRECTIONS: PLEASE check the CEC website for the most current meeting information! <http://www.CEastronomy.org>

Woodruff Boy Scout Summer Camp

by Sharon Carruthers, Treasurer

The Summer Scout Camping season is fast upon us. This is not only our time to "pay the rent" for our use of Woodruff as a Dark Sky site; but also our best opportunity to fulfill our Club mandate to "educate" and "to promote the public knowledge of and interest in astronomy".

John Lentini will be retiring to the Keys this year and has passed over the Scout-AAC liaison duties to Chuck Swan and me. We had a very productive meeting with the whole scout leadership on Friday April 28th and have set up the needs and expectations for the coming camp season.

This year they would like our Club to take a more active role in the education process for the astronomy merit badge, then help out with some hands-on field observing with the Club's 24" (and the member's scopes, as well).

The preliminary plan is to have an astronomy "power point program (PPP)" starting around 9 p.m. on Monday night.

On Thursday "scope night" you would help set up the 24" about an hour before sunset (8:30 - 9 p.m.). The scouts will be on the field at 7:30 reviewing their skills and would be viewing with the scopes when it gets dark (from 9:30 p.m.). We will be scheduling training on the 24" before camp starts - contact us if you want to be trained for the summer program.

Chuck and I will commit to the Monday night PPP - but we welcome anyone else who would like to volunteer to help out. If you have ever wanted to do the astronomy "talk circuit", here is your chance to get some practice.

We need volunteers to commit to go up on Thursdays, from June 8 - July 27. Please phone or e-mail us if you can commit to one or more evenings. You can contact Chuck Swann at CharlesESwann@cs.com and myself, Sharon Carruthers, at scarruthers@AtlantaAstronomy.org, or at 770-941-4640 (h) or 404-843-9610 (w).

We want to thank John Lentini for his years of service as liaison between the Scouts and the AAC.

DSO at Deerlick Astronomy Village

by Daniel Herron, Observing Chair

What a time we had at the DSO / DAV Memorial Day Weekend Picnic! Misty, Merlin, (our dog) and I arrived on Saturday around 1pm. There were already a few people there. The weather as looking good it was partly cloudy and windy and HOT! We started setting up with the help of Don Conrad's sons. All was going well, the tent was setup and I was just about to stake it down when it took off rolling across the field as a big gust of wind blew through the field. The tent looked like a tumble weed as it tumbled about 10 times before I caught up to it. Tent back in place we finished setting up and took a break. We spent most of the day sitting around a talking and wasting time trying to stay cool and hoping for the sun to set as soon as possible.

Saturday night was great! We had about 45 people on the field. It was clear and the temperature was comfortable. Sharon started the night with a Presentation for the youngsters. We started the night looking a Jupiter. The Red spots were visible and the shadow of one of its moons was transiting the planet. I spent most of the night just showing the kids and their parent some of the cooler sights of the night sky. I was even able to get Omega Centari again although it was not much to look at so low in the southern sky. The Milky Way started rising and I could see a few of the Sagittarius Messier objects naked eye. Misty, Merlin, and I called it a night around 1am.

Sunday was a fun day. It was Hot again and we spent most of the day trying to stay cool. I made some Ice cream for everyone with my home

made ice cream maker. The ice cream was a huge hit I would like to think it was my ice cream making ability that wow everyone, but I think it had more to do with the fact that it was 96 degrees out side. Oh well we enjoyed it and had a good time. We went skeet shooting in afternoon in southern field and did a number on some clay pigeons. We had a Bar-B-Que dinner that night and later had some ribs! As it got dark the transparency got pretty bad, but that did not stop us from observing. We got some views of Jupiter, M13, Virgo Cluster, M81 & 82, and many NGC object. I tried for the veil nebula even though Cygnus was low on the horizon and transparency was bad, but I wanted to use my OIII filter I got for Christmas so bad it was killing me! I was just able to make out the brighter part of it and cannot wait to see it higher in the sky later this year.

What a great time we had! I consider the DAV memorial day and huge success and see this becoming a tradition in years to come even under a full moon I would suggest it!!



Saturday evening sunset at the DAV field. Photo by Tom Faber.



Tom Faber took this photo of the old moon in the new moon's arms on Sunday night, May 28th at the DAV field. The moon was about 43 hours past new when this picture was taken. This shot was made with a handheld digital camera through Keith Burns' 13" Dobsonian. The exposure time was 1/6 of a second through a 26 mm eyepiece.

Astronomy Day 2006

The Atlanta Astronomy Club assisted Fernbank Science Center in hosting Astronomy Day on Saturday, May 6th. Club members set up scopes and displays about astronomy, handed out information, and talked with the many visitors. Tom Crowley brought his small radio telescope, along with his hydrogen alpha scope and a solar scope. Marc Sandberg gave presentations about reducing light pollution. Sharon Carruthers brought membership brochures and her display "The Yardstick Universe" - an illustration of the relative distances between the planets of the Solar System. Tom Faber and Kat Sarbell passed out extra Focal Points to visitors interested in the club. Fernbank gave planetarium shows and hosted a drawing to win a telescope. The weather was clear and sunny and there was a large turnout at the event. Other people volunteering at the event included Daniel and Misty Herron, Keith Burns, Elisa Roberts, Art Zorka, and many others. All photos by Tom Faber.



Visitors lined up to look through the volunteers' telescopes.



The AAC banner and other exhibits were on display among the many telescopes brought to the event.



Dr. Ralph Buice and David Dundee of Fernbank Science Center chat with Tom Crowley.



Crowds lingered for hours in front of the Science Center.



Tom Crowley's solar radio telescope allowed visitors to "listen" to the sun.



The Focal Point editor aims Tom Crowley's hydrogen alpha telescope at the sun by observing the scope's shadow on the ground.

Visitors trickled away by mid-afternoon. After the volunteers packed up, many of them went out for a well-deserved late lunch.

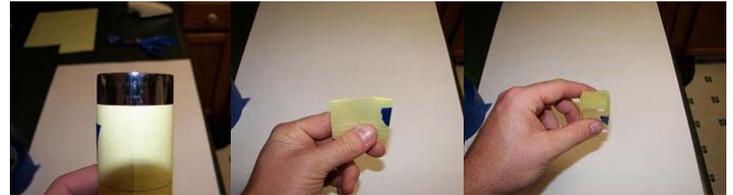


2. Cut Tube to length

Be careful not to deform the tube too much while cutting

3. Drill holes for the thread.

Wrap a piece of paper around the cut end of the tube and tape where the strip overlapped itself. This will give you the exact circumference. Fold this strip flat to create creases open it back up and fold again bring those crease together. Use the four creases to mark where holes need to be drilled on the cut end of the tube. Carefully drill holes on the marks using the smallest drill bit possible.



4. Add the cross hairs

Pull a piece of thread taught through two opposite holes and tape both sides of the thread to the side of the tube. Do the same for the other two holes. Add a dab of super glue over each hole to secure the threads



5. Add the peephole

Take a cap from a Kodak Film Canister and using a small nail poke a hole right in the middle of the film cap. (Note: heating up the nail with a lighter helps it push through easier)

Clean up the hole a little to insure you can see through it. Super glue the cap onto the tube opposite the crosshairs, the cap should easily snap in place on the end of the tube.



Making your own Sight Tube

by Daniel Herron

What you will need:

12 Inch 1-1/4 in diameter metal Extension-plumbing section at hardware store) - \$6.50

Cap form a Kodak Film Canister (Wolf Camera has tons) - FREE

Black Thread or thin string - \$0.50

Super Glue - \$2.50

Razor Blade - \$1.00

Masking Tape - \$1.50

Piece of small paper long enough to wrap around tube - FREE

Scissors - FREE

Total - \$12.00

How to put it all together:

1. Determine length of tube.

A good equation to find the proper length is to multiply the Focal ratio of your scope by the diameter of the sight tube. $1.25 \times \text{Focal ratio of scope}$. So for my 10 inch Skyquest with a focal ration of F4.7 it would be $1.25 \times 4.7 = 5.8$ or 6. So my tube needs to be 6 inches.



Continued on next page



6. Let the glue set for a while. I know you are excited at this point but do not look through the tube yet. The fumes from the glue will sting your eyes!

7. Remove the excess thread. When you are sure the glue has set use a razor blade to carefully cut the excess thread off by gently sliding the razor blade down the side of the tube so that it scraps the excess glue and thread off.



8. You are done! Now walk around for a few minutes targeting things and people around your house!!

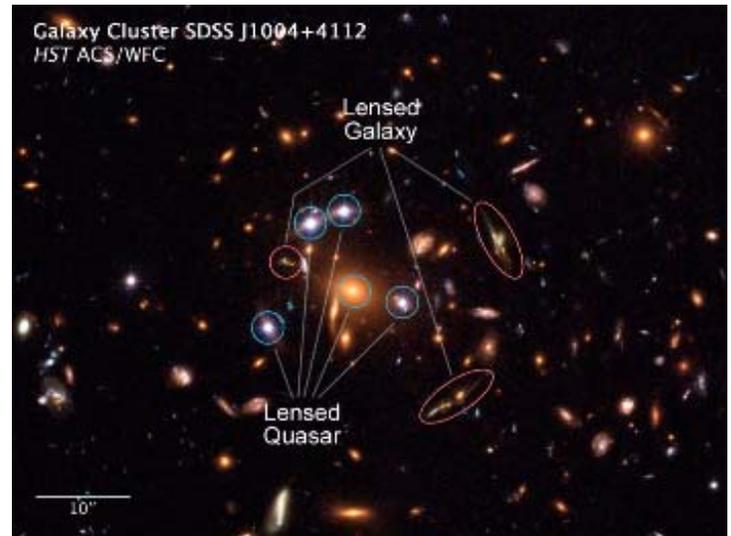
Hubble Captures a "Five-Star" Rated Gravitational Lens

May 23, 2006 - STScI-2006-23

NASA's Hubble Space Telescope has captured the first-ever picture of a group of five starlike images of a single distant quasar.

The multiple-image effect seen in the Hubble picture is produced by a process called gravitational lensing, in which the gravitational field of a massive object — in this case, a cluster of galaxies - bends and amplifies light from an object - in this case, a quasar - farther behind it.

Although many examples of gravitational lensing have been observed, this "quintuple quasar" is the only case so far in which multiple quasar images are produced by an entire galaxy cluster acting as a gravitational lens.



Gravitationally Lensed Quasar in Galaxy Cluster SDSS J1004+4112 (HST-ACS/WFC) Credit: NASA, ESA, K. Sharon (Tel Aviv University) and E. Ofek (Caltech)

The background quasar is the brilliant core of a galaxy. It is powered by a black hole, which is devouring gas and dust and creating a gusher of light in the process. When the quasar's light passes through the gravity field of the galaxy cluster that lies between us and the quasar, the light is bent by the space-warping gravity field in such a way that five separate images of the object are produced surrounding the cluster's center. The fifth quasar image is embedded to the right of the core of the central galaxy in the cluster. The cluster also creates a cobweb of images of other distant galaxies gravitationally lensed into arcs.

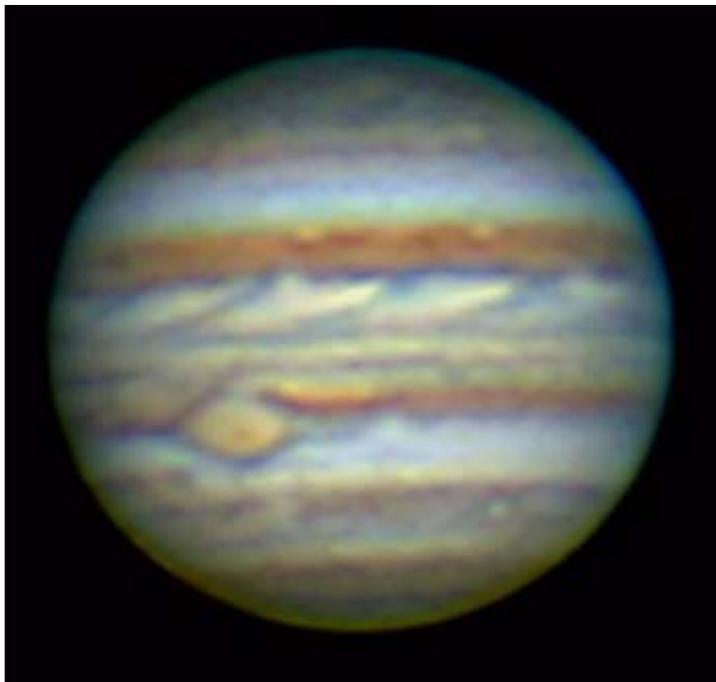
The galaxy cluster creating the lens is known as SDSS J1004+4112 and was discovered in the Sloan Digital Sky Survey. It is one of the more distant clusters known (seven billion light-years away), and is seen as it appeared when the universe was half its present age.

Spectral data taken with the Keck I 10-meter telescope show that these are images of the same galaxy. The spectral results match those inferred by a lens model based only on the image positions and measurements of the light emitted from the quasar.

A gravitational lens will always produce an odd number of lensed images, but one image is usually very weak and embedded deep within the light of the lensing object itself. Though previous observations of SDSS

Continued on next page

Jupiter Image by Rich Jakiel



Jupiter image taken at "Stooges' Field", Douglasville, GA on May 25 at 0413 UT. He used a 12" LX200 at f/20 with a NexImage planet cam. Rich took 2600 frames at 24 fps to produce this image. The seeing was fair to good, a 4 to 5 out of 10. Diameter = 44.1", Central Meridian I = 291.6, CMII = 86.8, CMIII = 231.2

J1004+4112 have revealed four of the images of this system, Hubble's sharp vision and the high magnification of this gravitational lens combine to place a fifth image far enough from the core of the central imaging galaxy to make it visible as well.

The galaxy hosting the background quasar is at a distance of 10 billion light-years. The quasar host galaxy can be seen in the image as multiple faint red arcs. This is the most highly magnified quasar host galaxy ever seen.

The Hubble picture also shows a large number of stretched arcs that are more distant galaxies lying behind the cluster, each of which is split into multiple distorted images. The most distant galaxy identified and confirmed so far is 12 billion light-years away (corresponding to only 1.8 billion years after the Big Bang).

By comparing this image to a picture of the cluster obtained with Hubble a year earlier, the researchers discovered a rare event - a supernova exploding in one of the cluster galaxies. The supernova exploded seven billion years ago, and the data, together with other supernova observations, are being used to try to reconstruct how the universe was enriched by heavy elements through these explosions.

Georgia Astronomy in State Parks (GASP) Events

Here are the remaining GASP events for 2006:

June 10th - Amicalola Falls State Park

September 2nd (Labor Day Weekend) - FDR State Park

November 11th - Florence Marina State Park



For more information about these events, contact Joanne Cirincione at Starrynights@AtlantaAstronomy.org.

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.

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 or times. 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 **\$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.

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

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: Peter Macumber 770-941-4640
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Elliott Recording Secretary: Clevis Jones
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Elliott Coordinator: Alesia Rast Alesia_Rast@mail.dnr.state.ga.us

Webmaster Charlie Elliott: Larry Owens
planetographer@comcast.net

The Telescope Workshop: Dan Llewellyn 404-735-9661 or 404-633-7562
zoser@mindspring.com

Georgia Astronomy in State Parks: Joanne Cirincione 404-824-4751
starrynights@AtlantaAstronomy.org

Light Trespass: Marc Sandberg 404-531-4227
sandberg235@earthlink.net

AL Observing Programs Assistance: Keith Burns 770-427-1475
Keith_B@bellsouth.net

PSSG Chairman: Peter Macumber pmacumber@nightssky.org

Co-Chair: Joanne Cirincione starrynights@AtlantaAstronomy.org

Sidewalk Astronomy: position open

Woodruff Observ. Coordinator: John Lentini 770-984-0175
johnlentini@yahoo.com

Webmaster Atlanta Astronomy: Peter Macumber 770-941-4640
pmacumber@nightssky.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 by Tom Faber (All times EDT unless noted)

June 3rd, Saturday: Moon First Quarter.
June 10th, Saturday: **GASP at Amicalola State Park** - see p.7 for details.
June 11th, Sunday: Full Moon (Rose, Flower, or Strawberry Moon).
June 14th, Wednesday: Earliest Sunrise (~6:25AM at Atlanta). Mars and Saturn in M44.
June 16th, Friday: **AAC Meeting at Bradley Observatory**, 8PM, Agnes Scott College. Pluto at Opposition. June Lyrids Meteors.
June 17th, Saturday: **Orientation & Telescope Workshop at Villa Rica** - Contact Daniel Herron for details. **CEC Meeting** - see p. 2 for details. Mars passes Saturn.
June 18th, Sunday: Moon Last Quarter.
June 20th, Tuesday: Mercury Greatest Eastern Elongation.
June 21st, Wednesday: Solstice at 8:26AM.
June 25th, Sunday: New Moon.
June 27th, Tuesday: Latest Sunset (~8:52PM at Atlanta).
June 28th, Wednesday: Moon near Mars.
July 3rd, Monday: Moon First Quarter. Earth at Aphelion.
July 10th, Monday: Full Moon (Thunder or Hay Moon).
July 15th, Saturday: **CEC Meeting** - see p. 2 for details.
July 17th, Monday: Moon Last Quarter.
July 18th, Tuesday: Mercury Inferior Conjunction.
July 20th, Thursday: Moon Occults M45.
July 21st, Friday: **AAC Meeting at White Hall, 8PM, Emory University**. Mars near Regulus.
July 22nd, Saturday: **DSO at Mentone, AL** - Contact Daniel Herron for details.
July 25th, Tuesday: New Moon.
July 27th, Thursday: Southern Delta Aquarid Meteors.
August 2nd, Wednesday: Moon First Quarter.

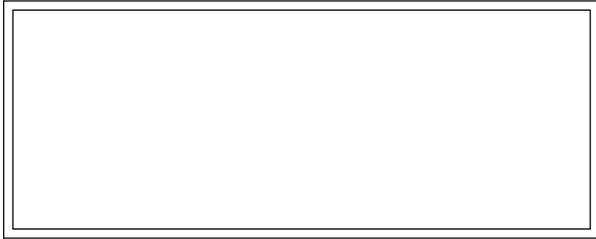
Atlanta Astronomy Club Listserve

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 focalpoint@atlantaastronomy.org. Please send images separate from articles, not embedded in them. Articles are preferred as plain text files but Word documents are okay. You can submit articles anytime up and including the deadline date. **The deadline for July is Thursday, June 29th at 4:00 PM ... Submissions will no longer be accepted after the deadline.**

FIRST CLASS



Newsletter of The Atlanta Astronomy Club, Inc.



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

FROM:
Kat Sarbell
2025 Peachtree Road, Apt.#408
Atlanta, GA 30309

Atlanta Astronomy Club
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Atlanta, GA 30358-1155