

The Focal Point

The Atlanta Astronomy Club
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Editor: Kat Sarbell

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December Christmas Potluck Dinner and Meeting

By Keith "Kosmic Kow" Burns, AAC Program Chair

Every year, we have a Pot Luck Dinner at our December General Meeting. We hold it at one of the Planetariums in the city (usually Agnes Scott or Emory). This year our Pot Luck will be at Emory, in the Atrium of the Math & Sciences Building (across the street from our normal meeting place - Whitehall), on Friday December 8th. The Atrium is located on the 1st floor. Appetizers start at 7:00 p.m.; dining at 7:30 p.m. (We know that Friday is inconvenient for many who work but the building has been booked for all Saturdays in December. Directions are on page 7.

We will provide turkey, ham and drinks and ask that attendees bring a side dish or dessert that serves at least 10-12 people. Please contact Sharon Carruthers to RSVP if you plan to attend and tell her what dish you plan to bring. You can contact Sharon either by phone at 404-843-9610(w) or email at scarruthers@AtlantaAstronomy.org .

Side dishes include items like casseroles, dish of vegetables, pasta salad, potato salad, stuffing, vegetable salad & dressings, cheese & crackers tray, table & dip tray, chips & dip, snack items, cookies, cakes, pies, or a special family dish of your own for the holiday.

We have a stove and microwave available so we can heat up items if you have to come from work with dishes that have been refrigerated – but we would like to avoid having to do this for too many items, if possible. It takes a LONG time to reheat a large casserole so running too many through the microwave may delay the dinner time).

Because of the structure of this meeting, we are not having a business meeting. We will give a few announcements of up coming events. There will be a Power Point running on the big screen on the wall during the evening. So if you want something included in the PPT, please notify Peter Macumber at president@atlantaastronomy.org and me (Keith Burns) at Keith_B@Bellsouth.net. That way Peter knows who is speaking ahead of time and he can schedule the time. I also need to know so I can put your

information on a power point presentation slide show. Please have the announcement stuff to me by no later than December 5th (Tuesday).

The tradition with the December meeting has been a planetarium show. This year we are combining a lite talk with the planetarium environment. So this should be fun for the entire family.

The speakers, yes, I said speakers are Alex Langoussis and Dave Riddle. The title of their program is *Namibian Nights*. The schedule is to start this program around 8:30PM in the planetarium.

About the Program

The night skies of the southern hemisphere hold arguably the finest treasures of the viewable universe. Atlanta amateur astronomers Alex Langoussis and David Riddle traveled to Africa to view those treasures under the dark, pristine skies of the Namib Desert, David in the southern autumn of 2005, and Alex a year later in 2006. The immense scale of the land, the numerous animals and plants, and the gracious warmth of the African people provided a perfect setting from which to enjoy the night sky. In their program, "Namibian Nights", they will share their experiences and the astronomical highlights of their 2-month stays.

About the Speakers

Alex Langoussis has been an active amateur astronomer for more than 25 years. For 20 years he was an observatory assistant at Fernbank Observatory, and has been a member of the Atlanta Astronomy Club since 1979. He is an original member of the Puckett Observatory Supernova Search team, and has discovered 22 supernovae to date. In addition, he teaches astronomy classes for the continuing education programs of Fulton County Schools and Kennesaw State University.



Alex with his 24-inch Dob at the 2006 Peach State. Photo by Tom Faber.

David Riddle (no photo available) has been viewing the skies since he was a teenager. For the past several years he has been working on correcting astronomical catalogs. That process has resulted in a co-authored article in *Astronomy and Astrophysics*, his discoveries of a planetary nebula, a galaxy, and numerous star clusters, and his recovery of several "lost" NGC objects. Both David and Alex enjoy traveling, and incorporate astronomy into their travels whenever possible.

Upcoming Speakers and Programs

January 19th meeting: Jim Hutchinson will speak about working on the Voyager Project. Yes, he actually was one of the folks who was deeply involved in the running and planning of the Voyager project.

November General Meeting Minutes

By Richard Jakiel

AAC Recording Secretary

The general meeting on November 17th began at 8 PM, with AAC president Peter Macumber presiding. Around 40 AAC members and guests were in attendance. Peter brought up several announcements – the most important being the December 8th “potluck holiday dinner” in the atrium of Emory’s Math and Sciences Building. This is a RSVP event as an accurate head count is needed for setting up the tables and chairs. Please contact Sharon Carruthers for information on what to bring. The dinner is scheduled to start at ~7:30 PM, while the feature presentation by Alex Langoussis and Dave Riddle (“Observing in Southern Africa”) will be after the feasting.

The 2006 PSSG had 85 attendees and Peter reports that the AAC “made a profit”. Next year’s PSSG date and location has already been set – it will run from October 7 to 14th, 2007 at the Deerlick Astronomical Village.

“Galaxy Classification in the 21st Century”

The feature presentation on the upcoming de Vaucoulers Atlas of Galaxies was given by Dr. Ron Buta. He gave a very detailed account on just how much the science of galaxy classification had evolved from the publication of the Hubble Atlas of Galaxies (1959). Many problems had to be overcome along the way – the selection of interesting galaxies, the standardization of the images (often in different wavelengths) and presenting up to date research information on each object. Unlike previous galaxy atlases, this one will be the first to use major atlas where all the illustrations are based on digital images.

The de Vaucoulers Atlas of Galaxies will be published by the Cambridge University Press in early 2007, and the price listed at Amazon is \$120.

Charlie Elliott November Minutes

by Clevis Jones, CEC Recording Secretary

Charlie Elliott Chapter (CEC) Meeting Minutes: November 11, 2006

Special Note: Happy Veterans Day, Veterans, and Thank You, very much!

ATTENDANCE: Seventeen guests and members attended the November CEC meeting.

BUSINESS: Larry Owens updated us on projects and status of the Telescope Babysitting program. He also gave us a report on the Charlie Elliott Mercury Transit observing event. Ken Poshedley gave an explanation of ALPO (Association of Lunar and Planetary Observers) with some Journal publications for handouts, pointed out the AAC (Atlanta Astronomy Club) meeting is at Emory University's Whitehall building on Friday the 17th at 8 p.m., and Ken was kind enough to supply coffee and eats! Thanks Ken!

FEATURE PRESENTATION (1 of 2) At Charlie Elliott: Larry Owens presented the Night Sky Networks' *Shadows & Silhouettes*. The Earth's shadow facts were covered as well as a through discussion and demonstration (using tools from the Night Sky Network's kit) of the Moon's phases, a discussion of the Moon's dark side, and the Earth's phases. Volunteers from the audience were invited up several times to help with demonstrations. Venus and Mercury transits were discussed and demonstrated (with a real life demonstration by Mercury on November 8th witnessed by four of the club's members, imaged by three of them). The discussion on transits included a lot of information on the upcoming NASA Kepler mission - a mission to find Earth like planets in a group of 100,000 stars by a space based, specialized telescope, Kepler. It is anticipated that within four or five years of Kepler's launch in 2008, we will have a good estimate of the number of Earth sized planets orbiting in stars' “Goldielocks Zone” where it's not too hot nor too cold to support life as

we know it - the habitable zone.

FEATURE PRESENTATION (2 of 2) At Camp Twin Lakes Larry Owens, with Fred Rose, Jon Wood, Clevis & Debbie Jones assisting, gave the same *Shadows & Silhouettes* presentation to about sixty folks at Camp Twin Lakes near Rutledge, GA, a camp for 11th and 12th graders with special medical needs. These kids have battled cancer, organ transplants, Chron's disease, hemophilia and muscular dystrophy. The teaching aids from the Night Sky Network's tool kit which encourages audience participation helped all to have a rousing good time! They were a great group of kids, and Larry gave a great presentation! For images of both events, see our web site: www.CEastronomy.org

OBSERVING REPORT: Steve Bieger presented another informative program. Included was a handout with a lot of very useful resource web sites. He covered upcoming Astro Events, Dancing in the Sky (Native Mythology and Legend), Constellation Targets, Featured Scientists, and Double Star and Eclipsing Binaries sections. This months Full Moon is called by various names: Hunter Moon being among the most used. The Navaho had a creative myth that had the Big Dipper as the male and Cassiopeia as the female of the family. Thanks Steve!

CURRENT EVENTS: Clevis Jones presented another of his infamous, fracture filled, featurettes covering: the Moon is Alive, DISCOVERY HAS LEFT THE BUILDING, images from various sources (including chapter members) of the Mercury transit along with Debbie reading a sample of the Mercury chapter from Dava Sobel's book *The Planets*, October treats of pumpkin pi, and NASA's announcement of a May 2008 servicing mission to the Hubble. HUBBA, HUBBA, HUBBLE! I'M A HAPPY BOY. Thanks Beet Farmers.

OBSERVING SESSION: Foul weather did not permit any observing.

Charlie Elliott Future Meetings

by Clevis Jones, CEC Recording Secretary

Meeting dates and programs:

December 9th at 3:00 p.m. (winter schedule) at Charlie Elliott Visitor's Center.

FEATURE PRESENTATION: Fred Buls of Georgia Perimeter College will give a talk on methods used to discover planets around other stars including a new method called gravitational microlensing. This new method may yield discoveries of "Earth-sized" planets. Time permitting after the feature presentation, Observing Report: *What's Up Tonight* by Steve Bieger and *Current Events* by Clevis Jones

January 13th, 3:00 p.m.: TBD

For updates and directions please check the CEastronomy website for the most current information: <http://www.CEastronomy.org>

Bradley Observatory Open House Series 2006-2007

“Astronomy Through Time” - Humans have looked up at the heavens for as long as they have had eyes to see and minds to wonder. The Open House Lecture Series this year concentrates on astronomy through the centuries, the history of astronomy. Explore the impact of changing technology on astronomical understanding, hear inspiring human stories of discovery and exploration and delve into the myths and architecture of ancient cultures.

All talks are free and open to the public. Lectures begin at 8 p.m.; doors open at 7:30 p.m. Bradley Observatory and Delafield Planetarium. Here is the schedule for Fall 2006. The programs for Winter/Spring 2007 will be announced later.

December 8 - Christopher De Pree, Associate Professor of Astronomy and Chair, Agnes Scott



Peach State Star Gaze 2006 - Part 2

Here are more images from the last Peach State Star Gaze, which was held from October 16th through 22nd at Whitewater Express camp in Tennessee. All photos by Frank Marchese unless otherwise noted. Above: PSSG initials “painted” with a red flashlight by Daniel Herron.



This is a view of the observing and camping field as the sun was setting.



The vendors set up their tables in the coffee shed.



One night, the ISS rose from the constellation Scorpius...



...and disappeared into the Earth's shadow near Cassiopeia.



A representative from NASA (right) set up a display filled with brochures and exhibits.



The volunteers and speakers of the Peach State: (back row, standing, from left to right) Sharon Carruthers, Peter Macumber, John Ritger, Bob Berman, Holly Ritger, Lynn and Tom Crowley, Joanne Cirincione, Daniel Herron, Mark Sandburg, Katherine Sarbell, Tom Faber, Mark Banks, Alex Langoussis, Rich Jakiel, Phil Bracken. (front row, kneeling) Ken Poshedly, Frank Marchese, Keith Burns, NASA representative.



The "Peach State Paparazzi" found plenty of subjects to take photos of - including each other!



Volunteers worked at the check-in table in the coffee shed.



Peach State Co-Chair and AAC President, Peter Macumber (left) and volunteer Tom Crowley (right).



A great night of observing begins!

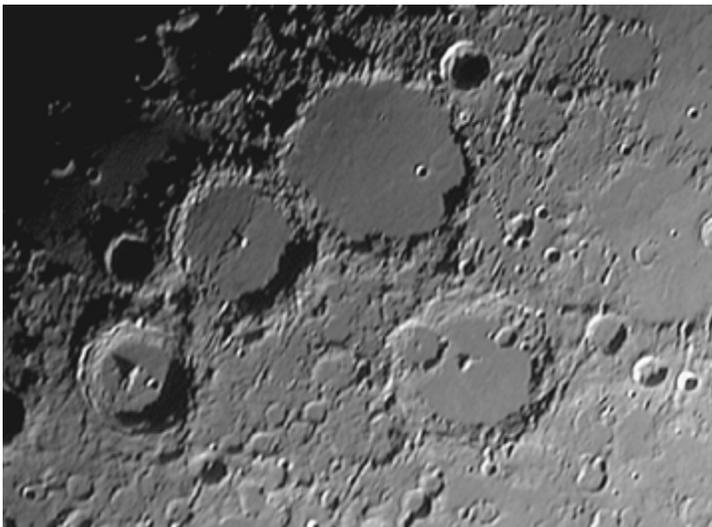
Speakers of the Peach State Star Gaze



Bob Berman (above) was our keynote speaker. Jon Serrie (left) performed space music on Friday night. Our other speakers included (clockwise from far right) Tom Crowley, Rich Jakiel, Daniel Herron, Chris Hetledge, Steve Bieger, Mark Sandburg, and Keith Burns.

Lunar Images by Rich Jakiel

These images were taken with my 102mm refractor. Each was an .avi of 600 frames, stacked/processed by Registax.



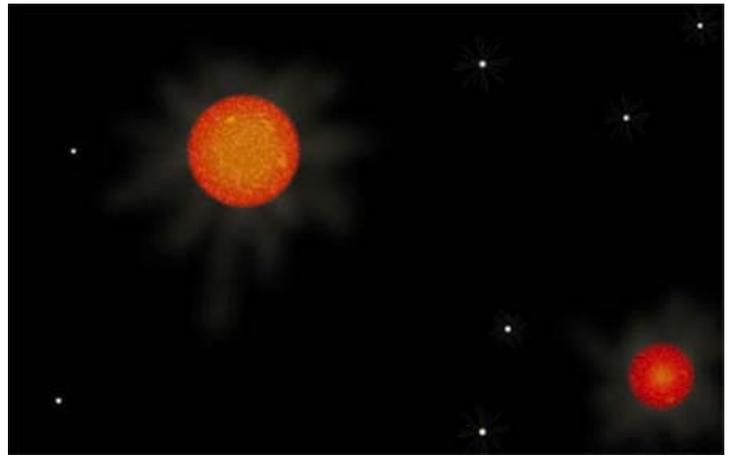
Twenty New Stars in the Neighborhood

National Optical Astronomy Observatory News Release - November 14

Astronomers have identified 20 new stellar systems in our local solar neighborhood, including the twenty-third and twenty-fourth closest stars to the Sun. When added to eight other systems announced by this team and six by other groups since 2000, the known population of the Milky Way galaxy within 33 light-years (10 parsecs) of Earth has grown by 16 percent in just the past six years.

The discoveries were made by a group called the Research Consortium on Nearby Stars (RECONS), which has been using small telescopes at the National Science Foundation's Cerro Tololo Inter-American Observatory (CTIO) in the Chilean Andes since 1999. These new results will appear in the December 2006 issue of the *Astronomical Journal*.

"Our goal is to help complete the census of our local neighborhood and provide some statistical insights about the demographics of stars in our galaxy - their masses, their evolutionary states, and the frequency of multiple star systems," says RECONS Project Director Todd Henry of Georgia State University in Atlanta. "Due to their proximity, these



The binary red dwarf represented in this artist's concept is SCR 0630-7643 AB, a system discovered and measured by the RECONS survey. Credit: Zina Deretsky/National Science Foundation

systems are also excellent targets for exoplanet searches, and ultimately, for astrobiological studies of whether any planets that are found could support life."

The 20 newly reported objects are all red dwarf stars, which now comprise 239 of the 348 known objects beyond our Solar System within the 10-parsec boundary of the RECONS survey. Thus, red dwarfs likely account for at least 69 percent of the Milky Way's residents.

"Red dwarfs are among the faintest but most populous objects in the Milky Way," Henry explains. "Although you can't see a single one with the naked eye, there are swarms of them throughout the galaxy."

The distances to these stars were measured via a classic trigonometric parallax technique using the 0.9-meter telescope at CTIO. The parallax technique for measuring the distance to a star takes advantage of the simple geometry of Earth's changing position in the cosmos as it orbits the Sun each year. The apparent back and forth motion of a nearby star during the year reflects the motion of the Earth around the Sun, much like how your finger appears to jump back and forth in front of your eyes if you blink one eye, then the other.

From Earth, nearby stars appear to make tiny ellipses in the sky because the Earth does not jump from one side of its orbit to another, but slides smoothly around the Sun. The extreme points of the Earth in its orbit are much like the positions of your eyes in your head, and the size of the apparent motion of your finger depends on how close you hold it to your eyes - when nearer, it seems to jump more, relative to distant background objects.

With observations over several years, it is possible to make parallax measurements with an accuracy of 1 milliarcsecond (0.000003 degrees), or about one two-millionth the width of the full Moon. This allows astronomers to measure distances accurate to better than 10 percent out to more than 300 light-years.

The team of astronomers includes Henry, Wei-Chun Jao, John Subasavage and Thom Beaulieu of Georgia State University, Phil Ianna of the University of Virginia in Charlottesville, and Edgardo Costa and Rene Mendez of the Universidad de Chile. The RECONS long-term parallax program began under the auspices of the National Optical Astronomy Observatory (NOAO) Survey Program in 1999, and continues via the Small and Moderate Aperture Research Telescope System (SMARTS) Consortium.

"We expect to announce more systems within 10 parsecs in the future," notes Henry. "The pool of nearby stars without accurate parallaxes is nowhere near drained."

Continued on next page

The purpose of this survey is to discover and characterize overlooked stars and brown dwarfs in the vicinity the Sun. Objects are scrutinized by measuring their positions (and wobbles), their brightnesses and colors, and by taking spectroscopic fingerprints to examine their atmospheric composition. The estimated "missing" population of solar neighborhood members is expected to be composed primarily of very low mass stars with spectral type M (known as red dwarfs), and objects of spectral types L and T, many of which are actually brown dwarfs with too little mass to start long-term thermonuclear reactions.

These L- and T-dwarfs shine feebly, glowing only because of energy leaking out since their gravitational formation, many billions of years ago. RECONS has also found several nearby white dwarfs, which are the burned-out cores of intermediate-mass stars, lurking in the solar neighborhood.

Georgia Astronomy in State Parks (GASP) Events

The GASP events for 2007 are being planned. Scheduled so far is:

March 24th - Unicoi 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.

Atlanta Astronomy Club Website

While this newsletter is the official information source for the Atlanta Astronomy Club, it is only up to date the day it is printed. So if you want more up to date information, go to our club's website. The website contains pictures, directions, membership applications, events updates (when available) and other information. <http://www.atlantaastronomy.org>

The **Atlanta Astronomy Club, Inc.**, the South's largest and oldest astronomical society, meets at **8:00 P.M.** on the 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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AL Observing Programs Assistance: Keith Burns 770-427-1475
Keith_B@bellsouth.net

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Co-Chair: Joanne Cirincione starrynights@AtlantaAstronomy.org

Sidewalk Astronomy: Brad Isley - Contact Info TBA

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

Webmaster Atlanta Astronomy: Peter Macumber 770-941-4640
pmacumber@nightsky.org

Directions to White Hall at Emory

(Note this month only we are meeting in the Math & Sciences building across from White Hall)

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 Math & Science 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.

Calendar by Tom Faber (All times EST unless noted)

December 3rd, Sunday: Moon Occults M45.

December 4th, Monday: Full Moon.

December 7th, Thursday: Earliest Sunset (~5:27 PM EST at Atlanta)

December 8th, Friday: **AAC Christmas Pot Luck Dinner, 7:00 PM at Emory Math and Sciences Building - see pg 1 for details.** Bradley Observatory Open House, 8PM, Agnes Scott College, Christopher De Pree - Associate professor of astronomy and chair, Agnes Scott.

December 9th, Saturday: **CEC Meeting - see pg 2.** Mercury near Mars & Jupiter.

December 12th, Tuesday: Moon Last Quarter.

December 13th, Wednesday: Geminid Meteors.

December 20th, Wednesday: New Moon.

December 21st, Thursday: Solstice 7:22PM.

December 23rd, Saturday: Ursid Meteors.

December 27th, Wednesday: Moon First Quarter.

December 31st, Sunday: Moon near M45.

January 3rd, Wednesday: Full Moon. Earth at Perihelion. Quadrantids Meteors.

January 4th, Thursday: Latest Sunrise (~7:42 AM EST at Atlanta).

January 6th, Saturday: Moon near Regulus.

January 7th, Sunday: Mercury Superior Conjunction.

January 11th, Thursday: Moon Last Quarter.

January 13th, Saturday: **CEC Meeting.**

January 15th, Monday: Moon near Antares and Jupiter.

January 18th, Thursday: New Moon. Venus near Neptune.

January 19th, Friday: **AAC Meeting at White Hall, 8PM, Emory University.** Moon near Mercury.

January 20th, Saturday: Moon near Venus.

January 25th, Thursday: Moon First Quarter.

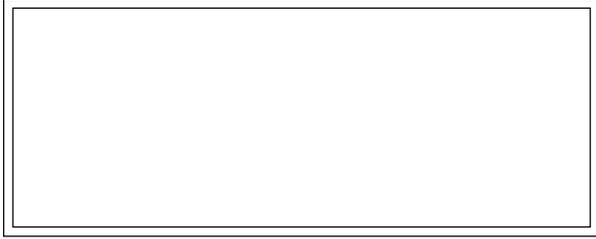
Atlanta Astronomy Club Listserve

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 Submission Information

Please send articles, pictures, and drawings in electronic format on anything astronomy related to Kat Sarbell at 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 any time up to and including the deadline date. **The deadline for January is Thursday, December 28th at 4:00 PM ... Submissions will no longer be accepted after the deadline.**

FIRST CLASS



Newsletter of The Atlanta Astronomy Club, Inc.



FROM:

Kat Sarbell

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Atlanta, GA 30309

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

Atlanta Astronomy Club

P.O. Box 76155

Atlanta, GA 30358-1155

www.atlantaastronomy.org