

The Focal Point

The Atlanta Astronomy Club

Established 1947

February 2000

Vol XII No. 9

Editor: Peter Macumber

An eclipse only lunatics could love

Keith <keith_b@bellsouth.net>

Thursday was a hectic day at work as the previous three days had been. I had been working some late hours and was excited about the up coming eclipse that night. The weather in Georgia can be cruel on such days. The morning started with rains, then winds and soon followed by cold air. The skies cleared by 4PM. I left work at 5PM and headed for home. I stopped at home for only an hour. I quickly packed the equipment in the truck. I tripped on one of the steps on the stairway. At that time, I decided to slow my pace a little. Therefore, my walking speed went from 50 mph down to 40 mph. I left for the observatory after 7 P.M.

I arrived at the observatory about 7:45PM. The southern part of the observing field had just recently gotten a face-lift. The south end of the field was now about 20 feet wider. The so-called grass was no more to be seen in this area. It looked more like the planet Mars. The rest of the observatory grounds were untouched. This slight change in landscape would make it hard for other folks to find the observatory later.

My first task was to put on lots of warm clothing. Four clothing layers later the task was done. Then I unloaded the scope and placed it on a concrete pad. The only scope of choice to use was a 6-inch Schmidt-Newtonian on a fork mount. Well being new to this polar alignment stuff, I more or less eyeballed the placement of the scope. The scope mount would face that direction. The alignment was close enough for government work as far as I was concerned. Now it was time to go into the warm-up shed to see who was there. Of course, I also needed to put on my winter boots. There were four people inside the warm-up shed waiting for the eclipse. Dr. Schumde had the 20-inch scope setup to do brightness readings of the edge of the lunar disc. Bill McFarlane was there with his 4-1/2" scope. Carlos used the 10-inch scope in the observatory. As for the rest of the people, I know your faces and voices but I am drawing a blank on names right now.

We went back outside and started to observe. I pulled out the rest of my equipment and put on the final two layers of clothing. Now I know how a penguin feels. The moon was bright. Trying to observe the moon in the scope without a filter was much too painful. The time was now 8:30PM. Other people showed up at the observatory. A reporter and news crew arrived from channel 46. They interviewed a few of us about the eclipse. I managed to project an image of the moon onto the back of a clipboard. With the projection, I was able to show everyone the detail of the moon. You could see all the seas (maria) of the moon. At this point, everyone was telling stories of past eclipses. Kenpo, Phil B., and Kemper soon appeared on the scene.

The eclipse started at 9:03PM but we didn't see the shadow in the scope until 9:45PM. The lunar sea Oceanus Procellarum began to darken in the scope. At this point, we were looking at the penumbra shadow. I was using a moon filter to dim the brightness some and bring the out detail of the moon I also had a 17-mm plossel eyepiece. This is the first time that I've noticed that the penumbra and umbra shadows moved in the opposite direction of the travel of the

moon phases. The phases move from east to west while the eclipse shadow moves from west to east.

In the background, you could hear the sound of the time clicks on Dr. Schumde's short-wave radio. He had it tuned to WWV. Besides the tick sounds, there was a loud whistling sound. It sounded like a cat being strangled. This did not make for good star gazing music but it was entertaining.

I was taking time readings of the shadows crossing certain features on the moon and noting any color of the shadow. At 10:15P.M., I noticed a distinct dark band on the front of the Umbra shadow. It ran from moon edge to moon edge. Behind this band, the rest of the shadow took on a grayish orange appearance with some white on the edges on the moon. Several other folks noticed the dark band in their scopes. I timed totality to start at 11:03PM. At this point, the moon took on Grey color in the western zone. The middle section of the moon was light orange with some pink color. The eastern zone was whitish Grey in color. I observed M44, which was only a few degrees east of the moon. Channel 46 did a live report from the observatory. I ended up getting on the 11 o'clock news. Scary, isn't it? We went back into the warm-up shed for a few minutes. Soon Peter, Matthew, and Sharon arrived on the scene. Everyone went back outside. Stars were visible everywhere. I pointed the scope at the Crab Nebula. WOW you could see it clearly and easily. The temperature dropped and the wind picked up again. The Channel 46 folks left. Kenpo quickly followed. One by one, people started to leave. I pointed my scope at different deep sky objects. How often can you observe galaxies and nebulas during a full moon? Dr. Schumde hit upon the idea of doing a mini Messier marathon during a lunar eclipse. The final object we looked at just before totality ended was the Orion nebula. The moon looked like an orange brown Grey ball in the middle with white edges.

Soon after totality ended, we could see our own shadows cast upon the ground again. Another strange illusion we saw was the white edge on the southwestern edge of the moon that migrated south and then southeast. At least that is how it appeared to move when you looked at the moon naked eyes. The Umbra moved quickly across the surface of the moon. This was only visible in a telescope. The dark shadow band was visible again at this point. Only Dr. Schumde, Peter, Matthew, Sharon, and I were still there when the Umbra shadow disappeared from the moon at 1:24 A.M. At this point I began to pack up the equipment and removed some of my clothing. It takes a while to remove three layers of clothing. When I finished packing and changing clothes, Dr. Schumde and I were the only two people left. I said good bye to him and drove off in the truck. It was 2:30 P.M. when I left the observatory. Dr. Schumde was still taking brightness measurements with the 20-inch scope. Now that is what I call dedication. The night had been fantastic and exciting. I was eager to get home and find a warm bed. It was just too darn cold outside. The drive home was interesting. Outside you could see a blue white landscape. The full moon shown brightly overhead. The countryside took on an appearance of a wintry scene with cold air to prove it.

Interviews with members of the AAC

By Richard Blackburn

Welcome to the first installment of my interviews with Atlanta Astronomy Club members. In the upcoming months, I may be calling on you to answer some questions!

Interview with Phil (Just a member) Sacco:

RB: When did you first get interested in astronomy?

PS: When I was nine I sold Christmas cards door to door to get my first telescope. Unfortunately, I had no adult support of supervision, and I got lost in the stars not being able to find anything other than Luna. . Which explains my Lunatic status today...? 8). I have always retained a love of the heavens, which was rekindled in Scouts. It took becoming an adult and being able to afford expensive 'toys' that has allowed me to pursue astronomy these last 5 years. I have been a member of the AAC for the last 5 years.

RB: What was your first telescope?

PS: The scope I got from selling those cards is a 4" Newtonian. I still have it, and it gives great images.... of the moon....

RB: What is your favorite telescope?

PS: My C-8.... (I lie.)

RB: Why is your C8 your favorite scope?

PS: I don't have to baby sit it during sidewalk astronomy, and it allows me to capture the moment with astrophotography....

RB: What would be your ultimate telescope?

PS: Realistic or Fantasy...I would like a HUGE Newtonian, which packed up in a trunk. Full motor drives and DSC.... I guess I would settle for John Ritgers scope...but he's not selling...

RB: What is your favorite object in the sky?

PS: Jupiter

RB: Why is Jupiter your favorite object?

PS: It is a dynamic object, changing quickly and with a tremendous amount of detail. It is a good pleaser for the newbees I am usually entertaining. I have yet to get my BEST picture of this object...

RB: What is your least favorite object in the sky?

PS: Pick a Herschel...any Herschel... Why? I like to be able to really study the objects I am viewing, and these guys really need a LOT of aperture, and even then, they could 89% all fit in one category.... dim, hard to locate, soft edges.... Why bother...?!

RB: What do you consider the most challenging object you have observed?

PS: M 33

RB: What do you do to preserve your observations?

PS: I record them verbally on a pocket recorder, and then I transpose them to paper in a notebook. I may eventually put them in my SKY program, but that would be an AWFUL lot of trouble.... I have my first two years of observing on index cards and that works nicely as you can have all the observations for an object in one spot. You can find them this way.

RB: Any additional comments?

PS: I think amateur astronomy is on the uprise. We should see more great discoveries made by the AA community in the not too distant few years. We folks have been getting larger and larger and more sophisticated equipment. In addition, do the things the 'professionals' don't find any money in....It is just a matter of time. I think the biggest stink about light pollution is going to come from us.

Scout Show March 18

John Lentini

On March 18, about 50,000 Boy Scouts, Cub Scouts and leaders will be at the World Congress Center for the annual Scout Show. The Atlanta Astronomy Club has been invited to participate. We went to the last Scout Show in the Fall of 1998, and had a good time, although we had less than 2 weeks notice.

This year we have a chance to put on a good show for the Scouts, and hopefully sign up some new members. It will also be an opportunity to develop more support for our proposed new observatory at the Woodruff Scout Camp.

We need 3 or 4 Astronomers to show up with telescopes, for inside, and a few with solar filters (of course it will be clear) for outside. Mark Banks will be there to organize the sidewalk event, and Tracy Wilson will be there to show how telescopes are built.

I will be running a continuous Powerpoint slide show. I have plenty of astronomical images, but am looking for some images of people doing things at AAC events, and some optical diagrams of various telescopes. If you don't have these images in electronic format, you can mail them to me and I'll scan them. (833 Countryside Ct., Marietta, GA 30067)

Please let me know if you want to participate. E-mail me or call me at 770-984-0175. The show runs for 8 hours, and the floor is concrete, so if you want to just come for the morning, or just the afternoon, that will be fine.

johnlentini@yahoo.com

Astro Images



By Geoff Powers

Hello to all who read this synodic discourse of Astro Imaging activities! Our group has been in a bit of a lull with time out for the holidays and hiatus from Agnes Scott's Observatory during remodeling. I do have some news to relay this month, however.

Skies cleared at almost the last possible moment for January's total lunar eclipse. The ill wind earlier that day even diminished considerably. My plan was to view and photograph the event from our Villa Rica Observatory. Last minute equipment snarls meant working from home instead. I shot two rolls of 24, which haven't been developed yet! If I didn't shoot a keeper, it was still way cool visually.

Our quarterly meeting schedule is on track, with Rich Jakiel presenting his skills and techniques with "Sketching at the Eyepiece." I'll have to finalize with Ralph Buice, but the plan is 7:30 PM Friday March 17th at Fernbank Science Center. The 7:30 start time should us to turn our group out around the same time as that nights planetarium show, Also, the observatory will be open for an hour or so afterward, if skies are clear. The moon will be waxing gibbous, and it happens to be St. Patrick's day! The only other club activity that weekend that I am aware of is the Scout Show the following day. Rich is *very* accomplished at accurately drawing celestial objects as they appear to the eye through the telescope. I am personally looking forward to this event as learning experience and hope to see a good turn out for this casual, yet informative session.

When I make final confirmation with Ralph, I will contact Stephen Blalock and have this added to the events area on the Club's website. Not having our Astro Imaging meetings posted online is an oversight that I won't permit from this meeting on. Look for upcoming dates there as well as in the Focal Point.

Phil Sacco asked me to help with imaging activities at Charlie Elliott. Of course, I agreed! Look for events there starting February 12th with "Getting Started in Astro Photography". Phil has some fun ideas and as he works out details with others and me, we will pass along dates and activities here and on the web, Hope to see ya soon!

AAC picture in Sky & Tel

Steven Smith <starship-saratoga@dellnet.com>

Eagerly looking through my newly arrived March Sky & Tel magazine, I was dumbfounded when I ran across the picture on pages 86 and 87. We had been caught! I looked again, this time more closely. Yep! There in the middle of the front row of people sat Peter Macumber, coolly staring at the camera. Standing, on the far right end wearing his security badge, was Michael Covington. "Oh no!" I exclaimed to myself, "I'm there too!" as I looked at myself wearing my favorite plaid shirt, the second person down from Mr. Harrington. The more I looked -- the more I saw. Centered in the middle of the picture on page 86 wearing his suit and tie was Art Zorka, to the right and behind him wearing a white blouse was Joanne Cirincione. "At least Art Russell is making an effort to hide," I thought, as he was in the back row third from the left, peeking over a woman's head. On the far left, standing, was Phil Bracken - he and others are evidently studying the geometrical shape of a "heavenly body" somewhere in the distance. "Well, everybody is going to know who we are now!" I muttered, "Us double-naught spies are suppose to maintain a low profile and here we are in a picture while on a mission in Russia!" Now it sure would seem that being an astronomer would be very low profile wouldn't it? Go figure! I guess that the next time we're on a mission we'll go as Country & Western singers. Steven "Saratoga Smitty" Smith

Eclipse

Charles Painter <cpainter@avana.net>

I took some video from the (relative) comfort of my driveway. This shot is a sample taken about 11:01PM (actually 4 frames stacked. The image was taken through an Eagle Optics ST-80 with a 40mm eyepiece and my Sony Video camera zooming in on the disk. I'd love to see any and all stills people produce.

One of the cool (sorry I had to use that word) things about the eclipse was how the ambient light diminished from floodlight to dark sky: during totality I did a little deepsky tour, taking in M45, M42/43, M1 and M81/82!



Bruce Lane

What a wonderful sight! Looking at the Moon through the LX-200 10"/f10 with 35mm eyepiece during total eclipse I saw the eerie reddish light illuminating the moon and STARS just above the lunar horizon. It seemed as if I was on the moon looking at the horizon and the starry sky above. Just fantastic.

Peter & Sharon

Work prevented me from following my game plan of going to VR early to view the eclipse. I did at the last minute bolt through the door and escaped to VR, meeting Sharon and Matt halfway inbetween. When we arrivcd, about 1130, we viewed from the mid-point until it was over. It was amazing to see the Beehive naked eye, along with many other objects. It was just as amazing to watch them all disappear as the moon brightened as it moved out of the shadow. It would have been a fantastic demonstration of 'light pollution effect' if the whole sky could have been time lapsed photographed during this event. Well, there will be another chance, next eclipse.

Deepsky 2000

Software by
Steve Tuma & Dean Williams
1425 Greenwich Lane
Janesville, WI 53545
USA

Review by Richard Blackburn

With the ease of use of a spreadsheet and the power of a database, this is one great piece of software. This package includes planning, logging, and star charts.

For planning, you can search the 413,000+ object database of variable/double stars and deepsky objects. You can use built in queries to select Herschel or Messier objects including a "What's Up?" wizard. It also has a very powerful query builder to search for objects, or you can write your own query using SQL. When using the query builder, you can select objects by constellation, catalog, and object type. You can filter by magnitude, size, R.A., Dec. Once you have the objects displayed you can just select the "PLN" column to add the object to your observing plan. Once you have your plan, you can save it for later use.

If you own a Meade LX200 or Autostar, or a Celestron Nexstar system you can even guide your telescope using the plan and a slide show. You can control the selection of the objects from the hand-controller. From your plan, you can easily add items to your logbook by clicking the "OBS" column (which records the current date/time) of each object viewed or you can select the EZ Logbook to update objects with more information including telescope, eyepiece, seeing, etc.

The logbook section allows you to record information about the objects that you have viewed. You can create multiple logbooks to store your information. You can log general information on the object (Date/Time, etc.), along with notes about your session and your observation. You can record images (CCD/photography). Your observation and session notes are recorded using Rich Text (word processing) tools that allow you to change fonts, size, and styles of your text.

With all of the planning and logging capabilities, Deepsky 2000 also includes a very powerful star charting section. You can have it plot all items listed on your spreadsheet along with plotting the Messier and Herschel objects. You can zoom in and out with standard one-click sets of 1, 5, 10, 25, 50, & 75 degrees and +/- buttons for anything above and between. Right click centers on the object, left click brings up a window with information about the current object. You can also put up Telrad circles and eyepiece circles using your telescope and eyepiece to size the circle. You can print star charts, and also print three panel finder charts.

These just scratches the surface of what you can do with this powerful software. Other things include:

- Solar System info
- Image Processing
- Internet Features/Links
- .. Digital Sky Survey
- .. NGC Online
- .. Skyrover Sketches
- Nightvision Mode

Once of the best parts is the cost! This software costs \$45 for the CD version, and \$25 for the download version. You can download a demo of it from www.deepsky2000.com.

Membership Update

It may have taken forever, well for me it seemed like forever and then some. We have produced a brand new Membership Packet. My thanks go to all the people who contributed, both literally and physically.

The packet contains the completely re-written Membership Handbook and a Membership Directory (Current as of mid January.) These have been mailed this past week and you should receive yours shortly. These packets were mailed via bulk mail, and will take some time to be delivered. For those people who joined after the cutoff of the bulk mailing, you should receive a packet by the end of the month, via regular mail.

With everything that has been going on, I have not done another run of membership cards. I do have lots of cards, that I almost always have with me, for people I don't see very often. Check with me at the next meeting, maybe I have yours.

This month we have added 11 new members to the club. Welcome:

Lilja, Kenneth & Teresa Snellville klilja@atl.mediaone.net
Adams, Ken & Sharlene Jonesboro sharken@bellsouth.net
Bell/Williams, John, Sarah & Wendy Atlanta johnbell.log@juno.com
Wattles, Austin Atlanta awattles@mindspring.com
Forrest, Arthur Lawrenceville forrest@mindspring.com
Jenkins, Michael Marietta mjenkins@mindspring.com
Glover, Walter & Gloria Rome walterglover@aol.com
Crowe, Susie & Sam Alpharetta scrowes@mindspring.Com
Taylor, Fred Covington jftaylor@mindspring.com
Dillard, Jim, Kim & Casey Athens jdillard@athens.net
Van Vleck, Frank Marietta fvanvleck@e3corp.com

This brings the membership total to 386 (364 Family plus 22 Student). We have e-mail addresses for all but 91 of these people. However, only 87 people are getting their Focal Point via the web.

As the club slowly grows, so does some of the work. This months Focal Point mailing of over 300 newsletters includes 65 renewal notices.

Again last month, I had Focal Points returned by the Postal Service. If you move, please send us your new address. I try to contact the people I can via e-mail, but that is not always successful. Take a look right now on the label of your Focal Point and make sure your full address is there and correct.

AAC Membership & Magazine

You are sent a membership renewal two months before your membership expires. Your magazine renewals are sent to you by the publisher. Magazine renewals must be paid by the club.

Remember to send renewals to the club with a check payable to the club.

S&T is \$30

Astronomy is \$29

Club membership is \$25 or \$10 for student.

New At Elliott

By Philip Sacco

The Chapter meeting at Charlie Elliott on February 12th will feature Geoff Powers as guest speaker. His topic will be AstroImaging for the beginner. The March image competition will be announced and details on future image competition will be discussed. There will be a 3 part presentation from the 'Universe Sampler Observing Program' by the Astronomical Leagues SouthEastern Regional Representative. Viewing and imaging will follow the meeting as weather permits. Constellations of the month will be highlighted in this continuing series.

Meeting starts at 5pm and we plan on meeting at the Visitor Center for the program.

Members joining before April will be introduced as Founding Chapter Charter Members. Please invite your friends to come and participate.

Here is the current line up of upcoming sessions at Elliott:

February 12th, Saturday. 5pm Aquatics Bldg. CEWMA, Lessons 4-6 of the "Universe Sampler". Viewing to follow the meeting.

March 4th, Saturday. 5pm Aquatics Bldg. CEWMA. This event is conjunction with the AAC DSS for the month to be held at CEWMA. The training session will include reading star maps and the guest speaker planned will be Art Russell who will host a class on Star Hopping. Participants versed in scope work will be entreated to join in at the DSS at our location on Marben Farm Road, or view from the area around the Aquatics Bldg.

April 29th, Saturday. 5pm Aquatics Bldg. CEWMA. Speaker Rich Jakiel, "Viewing Galaxies". Training will conclude the "Universe Sampler" sections on the Sun and Moon. Viewing will follow the training.

The sessions are set up to repeat the basic training every season, so that as the year progresses, the stars of each season will be highlighted and the Universe Sampler program repeated. This will ensure anyone coming on a regular basis will learn something new. If you would like to help with the training sessions, or would like to be a guest speaker, please feel free to contact me.

Thanks and here's to Clear Skies!

PSSG 2000

Ken has been very busy (along with a cast of volunteers). All the brochures and registration forms have been mailed for the upcoming Peach State Star Gaze. If you are in a hurry, or you somehow were not on the list, a registration form can be printed from the Club's web site. (They should start showing up in mail boxes within the next couple of weeks.)

The *Ladies of the Night ... Sky* are preparing to organize their efforts for this years millenium event. If you want to help out, contact Chrissy via e-mail at chrissy@nightsky.org. There are many different ways you can help. They need people to organize getting supplies, running errands, chauffering and volunteering at the event to assist with the many background duties.

If we get a hundred volunteers, you only have to put in a couple of hours. If we get couple of volunteers, they will have to put in a hundred hours. **So make the big sacrifice of two hours for this years Peach State!**

NASA News

Edited by Gil Shillcutt

Mars:

The Mars Polar Lander flight team has ended all attempts to regain communications with the spacecraft. JPL press release at <http://www.jpl.nasa.gov/releases/2000/implend.html>

Mission managers have decided to send another set of commands to Mars to investigate the possibility that a signal detected by a radio dish at California's Stanford University came from Mars Polar Lander. There's no real hope that any science can be salvaged, but it would be interesting to know that the spacecraft landed successfully.

<http://www.jpl.nasa.gov/marsnews/mpl/status/mpl20000125.html>

Sixteen experienced engineers, scientists and executives have been named by NASA Administrator Daniel Goldin to form the Mars Program Independent Assessment Team. The team will evaluate several recent successful and unsuccessful NASA missions to deep space, including Mars Pathfinder, Mars Global Surveyor, Mars Climate Orbiter, Mars Polar Lander, Deep Space 1 and Deep Space 2. It will analyze the budgets, content, schedule, management structure and scientific organization of these missions. It will then assess how these roles and responsibilities are related to mission safety, reliability and success. Team membership and a few other details are in the HQ press release at <ftp://ftp.hq.nasa.gov/pub/pao/pressrel/2000/00-006.txt>

Jupiter:

Galileo made another close pass by Jupiter's moon Europa on January 3, and survived the awful radiation environment quite well. And the good news is that it picked up powerful new evidence that a liquid water ocean lies beneath Europa's icy crust. Get yer fishin' poles ready! In other Galileo news, we have decided to extend the mission and continue to operate Galileo beyond January 31, the previously planned termination date. Stories available at the Galileo page, <http://www.jpl.nasa.gov/galileo/>

Y2K:

Like all other NASA systems, all our operating spacecraft survived the transition to the Gregorian year 2000 without a hitch. They're all listed at <http://spacescience.nasa.gov/missions/opmsns.htm> For a little background on calendars, try http://es.rice.edu/ES/humsoc/Galileo/Things/gregorian_calendar.html

Hubble Space Telescope:

Hubble Space Telescope is back in business, as made dramatically evident in stunning new celestial pictures of remote galaxies and a colorful dying star released Monday. I often stay away from superlatives, but I just gotta leave that "stunning" in there for these images, especially that "dying star".

galaxies: <http://opposite.stsci.edu/pubinfo/pr/2000/08/index.html>

dying star (Eskimo nebula): <http://opposite.stsci.edu/pubinfo/pr/2000/07/index.html>

Stardust:

NASA's Stardust spacecraft has successfully completed a three-part deep space maneuver designed to keep it on target for an Earth gravity assist in January 2001. After whipping by the home planet, Stardust will head for a meeting with comet Wild-2 in January 2004.

status report: <http://www.jpl.nasa.gov/status/std/sd20000126.html>

Stardust home: <http://stardust.jpl.nasa.gov/>

Chandra:

Several new images from Chandra were released, including:

Chandra Images Seething Cauldron of Starburst Galaxy (M82) -

<http://chandra.harvard.edu/photo/cycle1/0094/index.html>

Chandra Finds "Cool" Black Hole at the Heart of Andromeda (M31) -

<http://chandra.harvard.edu/photo/cycle1/0007/index.html>

Chandra Discovers X-ray Source at the Center of Our Galaxy (looks like a black hole) - <http://chandra.harvard.edu/photo/cycle1/0204/index.html>

Chandra Finds Oxygen Ring in Ashes of Exploded Star -

<http://chandra.harvard.edu/photo/cycle1/0015/index.html>

Chandra Finds X-ray Star Bonanza in Orion Nebula -

<http://chandra.harvard.edu/photo/cycle1/0054/index.html>

High Energy Transient Explorer (HETE-2):

NASA has decided to delay the High Energy Transient Explorer (HETE-2) launch to the mid-May time frame, in order to perform additional testing. Once we get it up there, HETE-2 will go about its business of detecting and localizing gamma-ray bursts (enormously energetic cosmic explosions).

Learn more at <http://space.mit.edu/HETE/>

AAS Results and Papers:

The American Astronomical Society met from January 11-15 in Atlanta, Georgia. Many exciting scientific results were announced at this conference. More information on the conference is at the AAS website, <http://www.aas.org/AAS-homepage.html>

As expected, a ton of results were released the conference. Of course, not all of them involved NASA spacecraft data... but many of them did, and there was a lot of exciting stuff!

In what has been hailed as a major discovery, NASA's Chandra X-ray Observatory has resolved most of the X-ray background, a pervasive glow of X-rays throughout the Universe, which was first discovered in the early days of space exploration. Before now, scientists have not been able to discern the origin of the hard, or high-energy, X-ray background, because until Chandra no telescope has had the technology to resolve it. At the same time, Chandra may have revealed the most distant objects ever seen in the Universe, and discovered two puzzling new types of cosmic objects. http://chandra.harvard.edu/press/00_releases/press_011400bg.html

The planetary dust disk around the star Beta Pictoris is dynamically "ringing like a bell," according to astronomers investigating NASA Hubble Space Telescope images. They think that the disk may have been "rung" by the passing of a nearby star around 100,000 years ago.

<http://opposite.stsci.edu/pubinfo/pr/2000/02/>

Teams of astronomers conducting a systematic search for supermassive black holes has discovered three more of the mysterious objects lurking in the centers of nearby elliptical galaxies, and suggest that black holes formed early and influenced galactic evolution.

<http://www.umich.edu/~newsinfo/Releases/2000/Jan00/r011000c.html>

Astronomers using a new technique to measure cosmic distances (based on Hipparcos data) are finding that the universe may be expanding faster than previously thought. <http://cfa-www.harvard.edu/cfa/ep/kstanek0100.html>

Astronomers using data from COBE and 2MASS have announced the discov-

ery of a new cosmic signal that should lead to a better understanding about the creation of stars in the early universe.

<http://www.uclanews.ucla.edu/Docs/SWHL005.html>

A primordial soup of complex organic chemicals that could be the precursors of life is cooked up very quickly after the birth of stars, new research based on ISO data suggests.

http://dailynews.yahoo.com/h/ap/20000112/sc/life_out_there_1.html

Peering deep into a distant galaxy, astronomers have obtained a glimpse of what may be the youngest massive star clusters ever observed.

<http://www.news.wisc.edu/thisweek/view.msml?id=3538>

Astronomers using Hubble found that the ages of three globular clusters in a nearby galaxy are very different, with one of the clusters being only about 100 million years old. The findings have implications for theories of galaxy evolution.

<http://www.washington.edu/newsroom/news/2000archive/01-00archive/k011200.html>

Two international teams of astronomers using the Hubble Space Telescope and ground-based telescopes in Australia and Chile have discovered the first examples of isolated stellar-mass black holes adrift among the stars in our galaxy. <http://opposite.stsci.edu/pubinfo/pr/2000/03/index.html>

Astronomers using the Hubble Space Telescope imaged the Bubble Nebula, an expanding shell of gas from a dying star, with unprecedented clarity. For the first time, they are able to understand the geometry and dynamics of this very complicated system. More info and beautiful pics at <http://opposite.stsci.edu/pubinfo/pr/2000/04/>

NASA scientists taking a census of large asteroids in our solar system neighborhood have cut their estimate in half.

<http://www.jpl.nasa.gov/releases/2000/neat.html>

NASA currently has two large scientific balloons flying simultaneously over Antarctica. One is studying the Sun, the other is looking at Earth's aurora. You can keep track of the flights through the NSBF web site by going to <http://192.149.107.80/default.html> and clicking on "Operations," then "Antarctica Operations," then whichever flight track you wish to view first. Fun!

The extended halo of half-million-degree gas that surrounds the Milky Way was generated by thousands of exploding stars, or supernovae, as our galaxy evolved, according to new observations by our Far Ultraviolet Spectroscopic Explorer (FUSE) spacecraft.

<ftp://ftp.hq.nasa.gov/pub/pao/pressrel/2000/00-005.txt>. More FUSE results announced at the AAS are available at the FUSE page, <http://fuse.pha.jhu.edu/>

A sequence of colorful images detailing a stellar explosion in another galaxy show a supernova's massive, morphing shock wave, providing scientists with a case study in the structure and evolution of the events. Story at http://explorezone.com/archives/00_01/07_supernova_evolution.htm

Astronomers from around the world will gather in Japan later this month to present the most detailed images of quasars ever seen, produced with data from the Very Long Base Interferometry Space Observatory Program. JPL press release at <http://www.jpl.nasa.gov/releases/2000/spacevbi.html>

Focal Point

If you have an interesting story, send it along to me for publication in the Focal Point. I can accept most formats and even handwritten articles. A number of people compliment the articles written by our own club members, whether it be about observations, technique or just plain human interest.

March 1st is the deadline for the March Focal Point

The Focal Point is available in color online in PDF format. The free Adobe(R) Reader allows you to view, navigate, and print PDF files across all major computing platforms.

Visit **NightSky.Org/aac** on the web. In a private sub-web, the past year of Focal Points can be found. Check it out. If it works for you, send me an e-mail and I will stop sending you a copy snail-mail. It will also save the club a dollar. The Focal-Point web can be entered by using the Username of **AAC** and a password of **mizar**. These names are case sensitive! Type AAC in capitals, type mizar in lower case.

Peter

Club Officers

Ken Poshedly	President	770-979-9842 <i>ken.poshedly@mindspring.com</i>
Eugenia Abbey	VP Program Chairman	404-634-1222 <i>eabbey@bellsouth.net</i>
Gil Shillcutt	VP Observing Chairman	404-467-1437 <i>Gil.Shillcutt@choicepointinc.com</i>
Sharon Carruthers	Treasurer	770-941-4640 <i>SCarruthers@NightSky.Org</i>
Peter Macumber	Corresponding Secretary	770-941-4640 <i>PMacumber@nightsky.org</i>
Art Zorka	Recording Secretary	404-3251595 <i>magicart@mindspring.com</i>

Board of Directors

Bob Smith, Chairman	770-886-8191	<i>rsmith@mci.net</i>
Phil Bracken	770-941-6517	<i>philb@mindspring.com</i>
Tom Faber	770-923-6832	<i>tfaber@america.net</i>
Art Russell	404-373-4119	<i>artrussell@mindspring.com</i>
Bear Simmons	404-299-7511	<i>info2000@mindspring.com</i>
Tracy Wilson	770-270-9402	<i>tracy2@mindspring.com</i>

Standing Committees

Richard Blackburn	Dark Sky Site Search	770-801-9759 <i>rblackburn@mindspring.com</i>
Mark Banks	Sidewalk Astronomy	404-257-2766
Stephen Blalock	AAC Webmaster	770-948-9820. <i>stephen.blalock@gtri.gatech.edu</i>
Tom Buchanan	Light Pollution	770-521-2136
Lynn Crowley	Beginner's Contact & Socials	404-233-6886
Julie Moore	Hospitality and Refreshments	770-242-6735
Ken Poshedly	Publicity	770-979-9842 <i>ken.poshedly@mindspring.com</i>
Chrissy Mondell	Ladies of the Night ... Sky	404-296-6332 <i>chrissy@NightSky.Org</i>
Geoff Powers	Astrto Imaging	770-454-6107

February 12 — Astro Techniques

5:00pm, VR

February 12 -- Universe Sampler

5:00pm, CEWMA

February 19 — ATM Workshop

March 4 — ATM Workshop

March 4 — Dark Sky

CEWMA

March 11 — Training

5:00pm, VR

March 18 -- Scout Show

April 1 — ATM Workshop

April 6 - 9 — Peach State Star Gaze

Camp MacIntosh, Jackson, GA

April 15 — ATM Workshop

April 22 — Quarterly Work Party

9:00am, VR

April 29 — POHO

5:00pm, VR

April 29 -- Viewing Galaxies, 5:00pm, CEWMA

April 29 — ATM Workshop

May 6 — Dark Sky with VBAS, Little River Canyon, AL.

May 13 — ATM Workshop

May 27 — ATM Workshop

May 27 — Astro Techniques, 6:00pm, VR

June 3 — Dark Sky @ CEWMA

June 10 — ATM Workshop

June 24 — Training, 6:00pm, VR

June 24 — ATM Workshop

**Atlanta Astronomy Club
February Meeting
Friday, February 18th**

Our February meeting will be held on **Friday, February 18, at 8:00 p.m.** at Emory University's **White Hall.**

Our speaker will be **Dr. Harold A. McAlister**, of Georgia State University's Center for High Angular Resolution Astronomy. His topic will be:

Georgia State's CHARA Array on Mt. Wilson.

The six-telescope interferometric array constructed by Georgia State University on historic Mount Wilson, California is now nearing completion. The first results from the combination of a pair of telescopes have been demonstrated, and CHARA plans to undertake parallel programs of science and engineering to complete the project and carry out its initial scientific goals. This talk will give an overview of the current status of the Array and CHARA's research plans during the coming years. The facility has been constructed with support from the National Science Foundation, Georgia State University, The W.M. Keck Foundation, and the David and Lucile Packard Foundation.

Dr. McAlister is Regents' Professor of Physics and Astronomy as well as founder and Director of the Center for High Angular Resolution Astronomy (CHARA) at Georgia State University. A native of Chattanooga, Dr. McAlister received his PhD in astronomy at the University of Virginia in 1975.

Further information on Dr. McAlister: <http://www.chara.gsu.edu/~hal/mcalister.html>

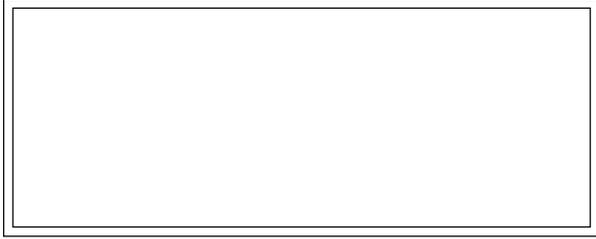
CHARA's website: <http://www.chara.gsu.edu/CHARA>

Astronomy at GSU: <http://www.chara.gsu.edu>



Newsletter of The Atlanta Astronomy Club, Inc.

FIRST CLASS



FROM:

Peter Macumber - *PMacumber@NightSky.Org*

1057 Trestle Drive

Austell, GA 30106

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

Atlanta Astronomy Club

PMB 305

3595 Canton Road A9

Marietta, GA 30066

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 (check the hot line for details). Membership is open to all. Annual dues are \$25 (\$10 for students). Discounted subscriptions to Astronomy, and Sky & Telescope magazines are available.

Hot Line: Timely information on the night sky and astronomy in the Atlanta area is available on a twenty-four hour basis on the

Atlanta Astronomy Club hot line: **770-621-2661.**

Internet Home Page: **<http://stlsfpb.gtri.gatech.edu/asfrotxt/atlastro.html>**

Subscribe to the Atlanta Area Astronomers Mailing List!

Send a message to AACLlist-subscribe@listbot.com

For further information send an e-mail to [Lenny Abbey LAbbey@Mindspring.com](mailto:LennyAbbey@Mindspring.com)