

The Focal Point

The Atlanta Astronomy Club
Established 1947
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Editor: Peter Macumber

From the Prez

By Ken Poshedly

In case you didn't already know, it's going to be a v-e-r-y busy spring for the Atlanta Astronomy Club.

Peach State Star Gaze

Yes, the words that you either dread or look forward to — depending on your desire to hobnob with others in the hobby just for the fun of it. This year, it's April 6-9. While some want to see this event grow to humongous proportions due to the income it will generate, that's just not in the cards until more and more folks come forward voluntarily to offer their assistance. With just under 270 attendees last year, we are about the third largest star party in the southeast (I was told that the Winter Star Party caps theirs at 550 and the Texas Star Party caps theirs at 700).

But it takes more than a few support staff to make the event run smoothly. Fortunately, or unfortunately, the days of 50- or 100-person star parties when I could arrive and pretty much buttonhole one or two folks to help complete setup are gone. Now, with the much larger crowds, it's more important to have folks for specific jobs so it can all come together predictably.

The number of folks who've signed up to help with this year's event — from setup to registration to cleanup — is woefully low. Only four signed up at the last meeting. The club's own Ladies of the Night...Sky can do only so much. But even they can't do it all AND put on the Saturday morning pancake breakfast.

Workshop-givers are not what's needed. What is needed are folks to help get the plastic black-out sheeting up in the dining hall and crafts building, distribute toilet paper to the various lodging buildings, staff the check-in counter for an hour or two, keep an eye on the coffee-and-donuts-and-receipts (one PSSG attendee stole almost \$100 in coffee/snack receipts when no one was looking one night last year — so much for the honor system), and other duties as requested.

Please contact me or one of the Ladies of the Night...Sky folks to find out what you can do.

Spring Banquet

Please mark April 11 on your calendar as the night to meet our most special guests, Antonin Rukl and Walter Haas. Both have graciously agreed to delay their departure from Atlanta and the Peach State Star Gaze so that they may join us for our spring banquet.

If you can't attend the PSSG, this will be THE chance for you to meet perhaps the two most important people in lunar and planetary amateur astronomy. Mr. Rukl, with his highly-acclaimed *Atlas of the Moon*, and Mr. Haas, founder and director-emeritus of the Assn. of Lunar & Planetary Observers, have served

our avocational interest well, and I invite you to dine with us and meet these two gentlemen.

Etc.

Elections — If you think you can do things better in the club, call or write to the nominating committee (Mark Banks, Rich Blackburn and Joanne Cirincione) as soon as possible. Sometimes it's rewarding, sometimes not. But you'll never know until you try. The phone numbers and e-mail addresses for all three persons can be found in your club directory and in this issue of your *Focal Point*.

New Warm-Up Building — After 22 years (that I know of), it looks like we might finally get a larger warm-up building at the Walter F. Barber Jr. Observatory site near Villa Rica. The officers and board of directors are to vote on approval of the new building at the March 16 board meeting at Fernbank Science Center, 7:30 p.m. You're invited to attend and show your support as well. It's really a shame that only 7 — really, that's it — persons can fit in the existing cinderblock warm-up building at one time. If you were one of the 120 or so persons who attended the last POHO event that cold night, you probably know how much this club needs that new building.

Membership Update

This month's new members, please welcome to the club:

Ken & Karen Reynolds Norcross kendive@bisplanet.com

Michael Boni Marietta mboni@mindspring.com

Ken Moss Conyers kmoss@gpc.peachnet.edu

Alesia, Lucius & Linzie Rast Conyers

Donald & Tina Wellham Rutledge twellham@netcommander.com

Joe Pruner Conyers prunerjoe@netscape.net

Don Sherrill Stone Mountain dsher@mindspring.com

Randy & Lora Rucker Stockbridge randyrucker@compuserve.com

Chris Janke Atlanta chrisjanke@aol.com

Jay Randazzo Marietta docj3549@aol.com

Jeff & Jennifer Teague Lithonia abby333@aol.com

Evan Goza Marietta sgoza@mindspring.com

John S. Brown Norcross

If you have not received your new member packets, please e-mail us and let us know. All members should check the directory listing for their correct address and e-mail. I know its dry reading, but the names are in alphabetical order.

The State of Georgia has changed Exit numbers on the InterStates. Villa Rica is now Exit 24. Please make changes in your handbooks.

Bradley Notes

Chris De Pree

Spinning and Flipping:

The Secret Lives of Electrons

Most of the visible universe consists of the simplest atom, hydrogen. A single electron bound to a proton, hydrogen makes up about 90% of the material that we can observe on large scales in the universe. That is, humans and the Earth, being relatively small objects, are deficient in hydrogen, but once we look at large enough objects we see that Jupiter, the Sun, other stars, the Milky Way galaxy and other galaxies are made mostly of hydrogen. So if we want to study these objects, looking for hydrogen is a good bet.

While hydrogen in the Sun is relatively hot (about 6000 K at its surface), most of the hydrogen in the universe is very cold, and at these cold temperatures, the electron sits in its lowest energy level and doesn't do much of anything that we as astronomers can observe. Hot hydrogen has enough energy to force its electron to jump between energy levels like children on hot sand at the beach. But in cold hydrogen, the electron sinks into what is called the ground state and does very little to betray its presence.

But once in a great while, even these cold electrons do something exciting. The proton and the electron can be thought of as spinning tops, and astronomers talk about the "spin" of a particle. If the two particles are spinning in the same way, the atom as a whole has a little more energy. If the electron undergoes a "spin flip", then the two particles are spinning in opposite ways, and the atom has slightly less energy. On average, about every 11 million years, an electron will undergo such a "spin flip". When it does, the atom gives off a tiny amount of energy that moves out into the universe as a radio wave with a wavelength of 21-cm. In 1945, the Dutch astronomer van de Hulst predicted that these waves should be observable and would let us "see" the cold hydrogen in the universe.

He was right, and students in Astronomy 121 and 221 at Agnes Scott College will observe some of these radio waves on February 25, 2000. They will be looking for the cold hydrogen in a distant and beautiful spiral galaxy called NGC 1068 (see picture), and make their observations with a radio telescope called the Very Large Array (VLA). The radio waves that they will catch left the galaxy about 55 million years ago, and are just reaching the Earth now. These observations will allow students to explore the rotation of the galaxy and even determine its mass. Amazing what one can learn from a cold little electron.

To learn more about the VLA, go to <http://www.aoc.nrao.edu/vla/html/VLAhome.shtml>

Elections

Elections for the Atlanta Astronomy Club officers and the board of directors will be held on Friday, May 19. Positions to be filled are president, 1st vice president (program chairman), 2nd vice president (observatory chairman), corresponding secretary, recording secretary, treasurer, and three openings on the board of directors. To submit your name or nominate someone else that you think will serve the club capably, contact the AAC electoral committee:

- > Mark Banks, 404-257-2766, bank4@mindspring.com
- > Rich Blackburn, 770-801-9759, rblackburn@mindspring.com
- > Joanne Cirincione, 770-473-7196, starrynights@mindspring.com

Armchair Astronomy

With a Pinch of Mercury Thrown in

By Keith Burns

VR Coordinator/ Astronomical League Correspondent

It's that time of the month again when the focal point deadline is approaching. I was going to write about the new Universe Sampler observing club that the AL has developed. However, good intentions have not made the article materialize. Many of the new members of the Charlie Elliott section of the club are working on the Universe Sampler program together. We can thank Phil Sacco for leading such an endeavor. Anyone, who is new to astronomy and wants to work on some kind of observing program, you will find that the sampler is a good one to start with. It teaches you all the astronomy concepts. You don't need a telescope to complete it either.

February has been a bland month for astronomy. Unlike the previous months, I have no great observing tales to tell. The tension can be felt on the listserv. Many interesting arguments have materialized with lots of folks participating.

I along with a few other people will be making the trek down to Chief land for some observing. This is a special trip for me. Last time I went to Chief land was when the construction on the Rainmaker scope started. Back then the scope was known as the ex coulter. Recently I had the primary mirror coated and just have gotten it back. This ends the reconstruction process on the Aurora thirteen Scope (formally the Rainmaker). The trip to Chief land will be the first real test of the scope now that everything has been improved. Look out faint dim stuff. Here I come.

The night of the deep sky event at Rockmart provided some pure inspiration. Mercury is one of those planets that only a lucky few get to see. Since it follows the sun so closely, I've spent the last seven years trying to actually see it. About 45 minutes after sunset, there it was up in the sky to the southwest. Mercury was only 10 degrees above the horizon. I mistook it for an airplane at first. It did not move across the sky. Mercury formed a nice line with the other planet's Mars, Jupiter, and Saturn. Chuck Painter pointed his scope at Mercury and we viewed it with high magnification. The planet had all the colors of a rainbow. The dense atmosphere of the earth can provide some really interesting views. Mercury is now close to the sun and will become a morning star in early March. It won't be visible until the end of this month in the evening sky.

This was also the night that just about everyone there was working on some kind of astronomical league observing program. Great to see everyone utilizing the available programs. After all, we are paying for it. If you have any questions, please contact Gil Shillcutt or me for information on these programs.

This month I purchased another scope. The scope is a 6-inch Schmidt-Newtonian on a fork mount. Needless to say, the scope has attracted much attention. On the night of the Eclipse, the scope was shown on the eleven-o'clock news. Now if I can only learn how to polar align the thing correctly.

The forever-rescheduled work party was finally held at Walter Barber Observatory. Recently we had some dirt work done. There will soon be a new parking area on the south end of the property. The driveway has been moved over to where it should be. Now the observing field is five to ten feet wider. New grass seed has been planted in the expanded observing field. I'm arranging to get gravel delivered to us for the new parking area and the driveway all the way down to the east end of the property. Please be patient as this will take some time to accomplish. Note that the observatory is open for business. We have lost some observing space for a couple of months, but the results will be worth the inconvenience. I have marking off the areas where you can drive. The driveway to both the upper field and lower field is marked with flagging tape tied to chairs. I want to thank Paul DiBono, Dan Ford, Charles Painter,

Charles Hinley, Peter Macumber, and Jerry Tarter for helping out in this endeavor.

I was wondering if anyone has ever been able to observe a Messier object from inside his or her house before. A few minutes ago I was down in the Kitchen and look out the skylight. There up in the skies were the constellations of Leo and Cancer. I noticed M44 as the faint smug. So I pulled out my binoculars and viewed it in the kitchen for a few minutes. Is this what they call armchair astronomy? Can anyone top that?

Astro Images

By Geoff Powers



Hey everyone! Feels like spring outside! The calendar doesn't agree, but Orion is sneaking further west every day.

Last month, I listed a "tentative" date for the March Astro Imaging group. Glad I said "tentative". The date I listed is the same night as the club general meeting! Ooops! I realized just after I submitted for publication here.

The confirmed and corrected date is Friday March 10th, 7:30 PM at Fernbank Science Center. Rich Jakiel will be hosting a workshop type gathering on eyepiece sketching techniques. The observatory at Fernbank will be open that evening, and the moon will be about two days before first quarter. Weather permitting, we will move to the observatory after a brief classroom introduction, and Rich will share his skill with some lunar sketches! Those who wish to participate and practice for themselves, bring plain white paper, a clipboard and a good ol number "2" pencil!

This will be a casual and fun way, for many of us, to work with and learn from one of the most talented and accomplished "eyepiece artists" active in the ranks of amateur astronomy today! Rich's renderings keep appearing in our hobby magazines. Come and see for yourself how he does it!

CEWMA

By Phil Sacco

These activities are specifically geared to foster new membership in the Mansfield, Social Circle, Conyers area as potential members in this area are not likely to participate at the other functions of the AAC. All members of the AAC are welcome to attend.

April 22nd, Saturday. PLEASE NOTE: This is a date change. The April 29th session is canceled and rescheduled for the 22nd. Possible seasonal time change to be announced for meeting at the Visitor Center CEWMA. We will attempt to map a few Lyrids tonight. Guest speaker- author, instructor and observer extraordinaire- Rich Jakiel "Viewing Galaxies". Training will conclude the "Universe Sampler" sections on the Sun and Moon. Viewing will follow the training. First Astro Image contest on any astronomical subject, to be held. Come enjoy the new endeavors! Constellations of the month: Leo, Hydra and the Cup. Chapter membership roles checked and consideration of chapter name, and by-laws.

May 6th, Saturday. Visitor Center. We shall begin the 'Universe Sampler' again, and check on everyone's progress. Planned subject- The Astronomical Leagues Observing Programs. Celestial Mythology this month: Ursa Major, Corvus, Virgo, Asterion Et Chara, Thisbe's Veil.

June 24th, Saturday. Visitor Center. Part two of the 'Universe Sampler'. Hand in those programs completed by participants. Subject and speaker to be announced. Constellations of the month: Bootes, Ursa Minor, Libra.

Interview with AAC members

By Richard Blackburn

Welcome the continuation of my interviews with AAC members. This one is Spotlight on Lenny Abbey.

RB: What first got you interested in Astronomy?

LA: I first became interested in astronomy when my father took me to Bradley Observatory shortly after its opening in 1949. Though only 11 years old, I was overwhelmed, and have been an amateur astronomer ever since.

RB: When did you first get involved with the Atlanta Astronomy Club, Inc.?

LA: I joined the AAC at its December 1951 meeting. They seemed awfully sophisticated and highly advanced in knowledge, but the subscription to S&T, which was included in the \$4.75 membership fee, won me over.

RB: What was your first telescope?

LA: My first scope was a 1.75" refractor. It was not an achromat, but compensated for this by operating at f/30. The eyepieces, both of them, were also simple lenses. You wouldn't believe what I saw with that telescope!

RB: What is your favorite telescope?

LA: My favorite scope is my 10" f/8 Cave Newtonian. Tom Cave custom built this telescope for me.

RB: Why do you prefer this scope?

LA: Because it is the most optically perfect instrument I have ever looked through.

RB: What would be your ultimate telescope?

LA: I suppose my ultimate telescope would be an f/8 16" Newtonian, with 1/40th wave optics. Telescopes bigger than this fall victim to BTS (big telescope syndrome) which prevents them from operating at their full potential. Long focal ratios always make better telescopes.

RB: What is your favorite object in the sky?

LA: The companion of Sirius.

RB: What is so special about it?

LA: Sirius' companion is special because all of the skills of an advanced observer are required to observe it. Acute vision, extremely high-quality optics, very steady seeing, experience in visually observing difficult objects, doing your homework so that you know where and what to look for, and perseverance are all required.

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

LA: The Sun.

RB: What about it do you not like?

LA: There is not much to see on the Sun.

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

LA: Seeing Apollo 12 shed the four panels, which covered the Lunar Module. They were about 1/3 the way to the Moon at the time.

RB: What do you do to preserve your observations?

LA: I have notebooks in which my observations are recorded. They cover every clear night from 1951 to 1965. I almost did not graduate from high school because of my intense observing activities!

ATLANTA ASTRONOMY CLUB

BANQUET TO HOST RUKL AND HAAS ON APRIL 11

Internationally-acclaimed lunar atlas author Antonin Rukl and founder and director-emeritus of the Assn. of Lunar & Planetary Observers (ALPO) Walter Haas will be the honored guests at the Year 2000 Atlanta Astronomy Club Annual Banquet, Tuesday evening, April 11.

The event will be held at the Steak & Ale Restaurant, Northlake and Lavista roads, Tucker, at 6:30 p.m.

The dinner will give those who were not able to attend the Peach State Star Gaze a chance to meet with perhaps the two most important individuals involved with lunar and planetary observing.

Mr. Rukl, in Atlanta as the featured speaker at the Y2K Peach State Star Gaze the previous week, will be accompanied by his wife, Sonja, and return to their home in Prague, Czech Republic, the day after the club banquet.

His book, "Atlas of the Moon", was published in 1990 in Europe and distributed in the United States by Kalmbach Publishing; it is also now carried by Sky Publishing. It remains perhaps the most-cited book of lunar maps by serious lunar observers, although a number of lunar atlases have been published. That and his many other books and publishing contributions have aided countless amateurs and beginners.

Mr. Haas founded the ALPO in the late 1940s as a means for amateur astronomers to exchange observing reports and drawings of the Moon, planets and other solar system objects. Today, his now worldwide organization has grown to become a vital part of serious lunar and planetary studies. Its database of observing reports was even accessed by NASA during the decision making process for the landing site of the Mars Pathfinder Mission in 1996.

Dinner entrees include the following:

Choice 1 — Sirloin steak (6 ¾ oz top sirloin)

Choice 2 — Hawaiian Chicken (2 chicken breasts marinated and grilled)

Choice 3 — Stuffed Flounder Maitre D' (flounder stuffed with crabmeat, shrimp and cheese, then baked)

Side items include:

- Baked potato or rice pilaf
- Coffee, tea or soft drink
- Salad bar or Caesar salad

Cost of the dinner is \$16 (including gratuity) payable in advance. Please make checks payable to the Atlanta Astronomy Club and send them, along with your dinner choices, to AAC treasurer Sharon Carruthers, 1057 Trestle Drive, Austell, GA 30106. Please reply by March 31.

For more information about the AAC banquet, contact Ken Poshedly; phone 770-979-9842; e-mail ken.poshedly@mindspring.com

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 30th is the deadline for the April Focal Point

Scout Show March 18

By John Lentini

The Atlanta Astronomy Club will again be a participant in the Atlanta Area Council Scout Show at the World Congress Center. More than 50,000 Boy Scouts, Cub Scouts and their parents and adult leaders are expected to attend.

The Scouts have provided the Club with two venues:

An indoor venue to demonstrate amateur telescope making and to promote the Club by showing off equipment and slides of deep space objects

An outdoor venue where our solar astronomers will run a sidewalk event.

This will also be our first opportunity to promote attendance at summer camp merit badge clinics to be held at our newly approved observatory at the Woodruff Scout Reservation, where we now have access to some of the darkest skies in Georgia.

Any Club member wishing to participate in this event (partial day participation is welcome) should contact our Scout Liaison John Lentini via e-mail at johnlentini@yahoo.com, or by phone at 770-984-0175.

The Lighter Side

Bill Warren

Smitty's item about AAC members caught on camera and identified as double-naught spies in the March issue of Sky & Tel was both clever and cute. Still, I'm surprised that Smitty, an experienced and skilled observer, failed to identify Phil Sacco on p. 86.

Phil was wearing dark glasses and a black dress for the occasion (nice touch, Phil, trading in that toga for something in basic black). Phil was standing next to Hillary Clinton on one side and a shivering boy in a plaid shirt on the other side who appeared to be trying to keep his eyepieces warm.

AAC MEMBER FLIES ON SPACE SHUTTLE & WALKS IN SPACE

Well, when the double-naught spies of our Impossible Mission Force (IMF) showed up for our next mission, we were all decked out in our best Country & Western attire. Cowboy hats & boots, and shirts and vests with more spangles & dangles on them than you could shake a tripod at. The Operations Director told us that this would be a very special mission and that our double-naught spy careers would get a real launch from it. Boy, was he telling the truth! This mission was "out of this world". There's a picture of me in the April issue of Astronomy magazine on page 26, and yes, it's awfully hard to put one of those space helmets on over a cowboy hat. (What NASA's telling you is one thing, what we were really doing is another. I can't tell you what I was working on, it's Top Secret. I will say that it's big, looks like an espresso machine, and has more firepower than the star-ship Enterprise.) The bad thing is that I was the one doing all the work! One of my space-walks was over 8 hours long and I would swear that during it, the rest of the double-naughts who were still inside the Discovery were having a party! Why would I say that? Well for one thing, every now and then I would see Lenny Abbey floating by a window with a serving plate of hors d'oeuvres. The decisive factor though, was when Rich Jakiel ejected a case of empty champagne bottles and lobster shells out the shuttle bay doors. Of course, by the time I was finished and got back inside everyone was back to business. Figures don't it.

Surely one of our missions will remain low key and nobody's picture will be taken and published. Maybe we'll go as professional wrestlers for the next mission. At least if we're spotted we can go into politics!

Steven Smith (Saratoga Smitty)

Joanne Cirincione
starrynights@mindspring.com.

It's that time of year again to call out for our AAC members who are attending the PSSG to please volunteer for some positions for the 2000 Peach State Star Gaze (April 6-9).

Although you may not know right now when to volunteer, you may know at a later date!

Please remember that with the many positions we have, only a handful of us are working on this at the moment. The more volunteers we get the smoother it will run.

Transportation to Airport:

Picking up speakers from the airport Thursday and brought directly to the PSSG. So far we only have one speaker to mention that needs picked-up.

Walter Haas Arrives on Thursday, April 6, at 4:30p Delta 1860

You would be required to meet him at the gate, with a sign with Walter's name. He will be flying in from New Mexico. (Most of the speakers will have already arrived in Atlanta.) Allow room in the vehicle for the speakers luggage.

Bedding

If you have any extra bedding you want to donate to the PSSG for the speakers quarters, this would be most appreciated. We need, twin size: bed sheets, comforters (or sleeping bags), pillows and pillow cases.

Check-in Assistance

Staff the check-in counter at the dining hall, hand out information packs to incoming registrants; 2-hour shifts requested;NEED 2 PEOPLE PER SHIFT
Thursday, April 6

- 12 Noon - 2 p.m. 1)Ralph Bowman 2)
- 2 p.m. - 4 p.m. 1)Philip Sacco 2)Art Zorka
- 4 p.m. - 6 p.m. 1)Jim Moore 2)
- 6 p.m. - 8 p.m. 1) 2)
- 8 p.m. until ?

Friday, April 7

- 8 a.m. - 10 a.m. 1)Jim Moore 2)
- 10 a.m. - 12 p.m. 1) 2)
- 12 Noon - 2 p.m. 1) 2)
- 2 p.m. - 4 p.m. 1)Sandy Pruss 2)
- 4 p.m. - 6 p.m. 1) 2)
- 6 p.m. - 8 p.m. 1) 2)
- 8 p.m. until ?

Saturday, April 8

- 8 a.m. - 10 a.m. 1) 2)
- 10 a.m. - 12 p.m. 1)Sandy Pruss 2)
- 12 Noon - 2 p.m. 1) 2)
- 2 p.m. - 4 p.m. 1) 2)
- 4 p.m. - 6 p.m. 1) 2)
- 6 p.m. - 8 p.m. 1) 2)
- 8 p.m. until ?

Work Crews

THURSDAY

Set-up meeting hall. Distribution of toilet paper to lodging and other buildings. Hang plastic black-out sheeting in dining hall and craft building. Setup of the "Coffee House". Install RED Lights. "Coffee House" Monitors. Other duties as assigned.

FRIDAY

"Coffee House" cleanup. Setup dining hall for talks. Friday afternoon (after last talk) setup dining for Pancake Breakfast. Setup of the "Coffee House".

SATURDAY

"Coffee House" cleanup. Setup for Pancake Breakfast. Breakfast cleanup. Setup dining hall for talks.

SUNDAY

"Coffee House" cleanup. Collect RED Lights. See that all chairs and tables are stacked in storage area off the main area. Sweep dining hall floor, then wet-mop the floor. Ensure that kitchen area is clean. Sweep out counsellor cabins. Sweep out bunkhouses. Sweep out crafts building. Police field for lost items, etc. Trash Collection.

FIELD

We require number of people for Thursday, Friday, Saturday and Sunday to work on the field. These people would;

- Assist in field layout on Thursday.
- Monitor and direct traffic on the field.
- Assist people in finding a "campsite".
- Monitor observation equipment.
- Assist the attendees with information and directions.
- Police the field on Sunday for lost items and garbage.

PANCAKE BREAKFAST

START AT 7:00AM

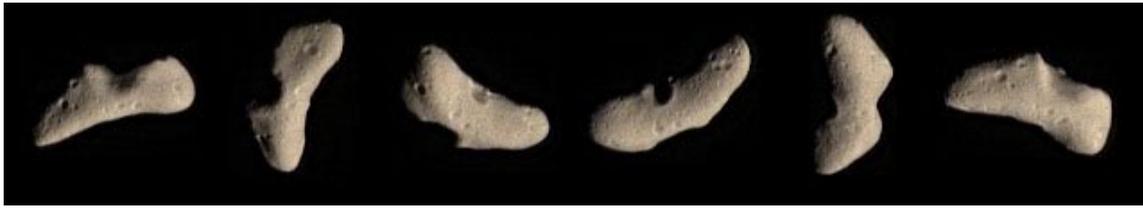
Dinning Hall Setup. Dining Hall Clean-up. Kitchen Setup. Kitchen Cleanup. Dish Washers. Pot Scrubbers. Servers. Assistant Chefs.

Please Note: The kitchen including the freezers and coolers will be OFF LIMITS to all persons, excepting the Pancake Breakfast Crew Saturday Morning!

"Coffee House"

This will be an area setup inside, as in past years, where people can come and get a hot drink, warmup and tell lies about what they just saw through their telescopes. We need people to help keep the area clean and stocked with supplies. Also to check on the amount of coffee or hot water left and prepare fresh. This area needs to be monitored throughout the night!

You can help! With enough volunteers, we can all enjoy ourselves. Give up just two hours of your weekend for the club, for the Peach State Star Gaze, for yourself.. This year promises to be one of the best, if not the best! I personally don't know of a way to get to meet alot more people and share your common interest in astronomy than to run out with a roll of toilet paper to restock a washroom or to brew a fresh pot of hot coffee on a chilly night. Contact Joanne today!



NASA News

Edited by Gil Shillcutt

NASA's Near Earth Asteroid Rendezvous spacecraft (NEAR) went into orbit around asteroid 433 Eros (pictured above) on Valentine's Day, February 14th. Orbiting such a small rock (about 40 x 14 x 14 kilometers), with its minimal gravity, will be quite a feat. A 100-pound (45-kilogram) object on Earth would weigh about 1 ounce on Eros.

Early returns from NEAR indicate that 433 Eros is no ordinary space rock. Ignoring the fact that it looks like a spud, there have been a number of surprises in the early data and images returned. Meanwhile, NEAR fired its engines to decrease its distance from Eros to around 200 kilometers. Check it all out, including the cool red/blue stereo images, at <http://near.jhuapl.edu/>

Mars:

A new set of images from Mars Global Surveyor have been released, showing both "active" and "inactive" Martian sand dunes. Makes me want to head to the beach. Pics at the MGS page: <http://mars.jpl.nasa.gov/mgs/>

Jupiter:

"New findings support prospect of life on Jupiter's moon Europa" — sure, there may be water under Europa's icy crust, but where's the energy source that could power life? The sun may be too far away; this new paper argues that charged particles raining down from Jupiter's magnetic field could provide the necessary juice.

<http://www.stanford.edu/dept/news/pr/00/000126Europa.html>

Jupiter's massive storms resemble Earth's but are powered by the planet itself, not the sun.

<http://www.news.cornell.edu/releases/Feb00/Jupiter.storm.bpf.html>

Galileo successfully flew by Jupiter's moon Io on Monday, February 22, shrugging off the radiation once again as it passed only about 199 kilometers above Io's surface. Nice driving! <http://www.jpl.nasa.gov/galileo/>

Saturn:

Cassini performed a flyby of a main belt asteroid last week, as it makes its way towards Saturn. Although the spacecraft got no closer than about 1.5 million kilometers, there's still something to be learned about asteroid 2685 Masursky. Story at <http://www.spaceviews.com/2000/01/29b.html>

Cassini page at <http://www.jpl.nasa.gov/cassini/>

The Sun:

By compiling all the solar wind data gathered in the space age, NASA scientists have concluded that even though the solar magnetic field is constantly changing, it always returns to its original shape and position. Weird. JPL press release at <http://www.jpl.nasa.gov/releases/2000/sunmagfield.html>

Our Sun-Earth Connections theme seeks to understand our star, and its interaction with Earth and the near-Earth environment. Among other reasons, this understanding may be important for frequent airline flyers. There's no reason to be an alarmist about it, but it is an interesting story.

<http://www.cnn.com/2000/TRAVEL/NEWS/02/03/airlines.radiation.reut/index.html>

The STARSHINE satellite, designed to study the influence of solar activity on our planet's atmosphere and built by school kids, burned up upon its return to Earth on February 18. The final tracking of Starshine occurred on February 18 at 15:08 UTC when it was approaching the equator while moving south-eastwards over the western Pacific Ocean. At the time it was experiencing very high drag forces and it must have reentered over the following few minutes as it crossed the equator and headed towards the bright daylight sky

above southern Chile and Argentina. It may even have reached the southwestern Atlantic Ocean.

http://www.space-science.com/headlines/y2000/ast16feb_1.htm

Comets, etc.:

SOHO recently discovered its 100th comet. SOHO is the most prolific comet finder in the history of astronomy. <http://sohowww.nascom.nasa.gov/hotshots/>

Autonomous Nomad Robot Successfully Finds Meteorites in Antarctica – Craig Tupper of NASA Space Science mentioned this effort a while back, it's nice to see that it worked, it has a lot of promise.

<http://whatsnew.andrew.cmu.edu/RoboticsEngineering.qry?record=33227>

NASA's Comet Nucleus Tour (CONTOUR) mission just took a big step closer to its launch; the project has received approval to begin building the spacecraft. CONTOUR will launch in July 2002, and make close passes by at least two comets.

press release at <ftp://ftp.hq.nasa.gov/pub/pao/pressrel/2000/00-026.txt>

CONTOUR page at <http://www.contour2002.org/>

Stardust's aerogel ("frozen smoke") collectors were successfully extended on February 22; the capture of interstellar dust grains, to eventually be returned to Earth, has begun. This is another first.

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

The Earth:

New research supported by our Astrobiology program reveals that the earth got so cold 2.4 billion years ago that even the equator was icy – a condition now known as "Snowball Earth." It would've been a bad day for a lot of microbes.

http://broccoli.caltech.edu/~media/Press_Releases/PR12031.html

X-Ray Astronomy:

The first images from the European X-ray Multi-Mirror mission were released today, and are available at <http://sci.esa.int/missions/xmm/>

We contributed some hardware to XMM, a mission that complements our Chandra X-ray Observatory nicely.

Chandra Reads the Cosmic Bar Code of Gas around a Giant Black Hole - a bit of x-ray spectroscopy, for your scanning pleasure at

<http://chandra.harvard.edu/photo/cycle1/0170/index.html>

Hubble Space Telescope:

HST is providing a great view of the evolution of supernova 1987A. The ring around the supernova is starting to heat up, as the fastest moving debris from the immense stellar explosion starts to collide with it.

<http://opposite.stsci.edu/pubinfo/pr/2000/11/index.html>

Miscellaneous:

Atom-smashing experiments at a particle accelerator in Switzerland may have created free quarks, the form of matter that is believed to have filled the universe for the first fraction of a second of its existence.

<http://www.cern.ch/CERN/Announcements/2000/NewStateMatter/>

Launch of Cluster II this summer is on track following the maiden flight of the Fregat upper stage. Cluster is a European-led mission to study space weather; we have contributed a number of science instruments and other hardware.

<http://sci.esa.int/cluster/>

A newly discovered quasar in the constellation Cetus is the most distant ever found. Really, really far away. Run, don't walk to another plain ol HQ press release at <ftp://ftp.hq.nasa.gov/pub/pao/pressrel/2000/00-030.txt>

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

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Geoff Powers	Astrto Imaging	770-454-6107

March 11 — Training

5:00pm, VR

March 16 -- Board Meeting

Fernbank Science Center

March 18 -- Scout Show

March 30 -- Focal Point Deadline

April 1 — ATM Workshop

April 6 - 9 — Peach State Star Gaze

Camp MacIntosh, Jackson, GA

April 11 -- AAC Banquet

April 15 — ATM Workshop

April 22 — Quarterly Work Party

9:00am, VR

April 22 -- Viewing Galaxies

5:00pm, CEWMA

April 29 — POHO

5:00pm, VR

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

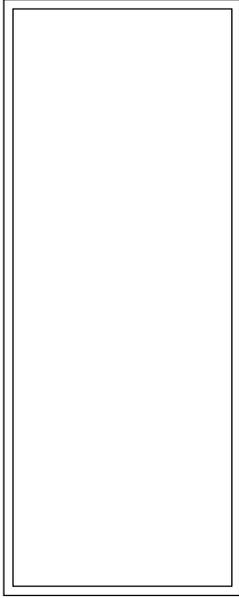
June 10 — ATM Workshop

June 24 — Training

6:00pm, VR



FIRST CLASS



FROM:

Peter Macumber - PMacumber@NightSky.Org
1057 Trestle Drive
Austell, GA 30106

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

Atlanta Astronomy Club
PMB 305
3595 Canton Road A9
Marietta, GA 30066

**Atlanta Astronomy Club
March Meeting
Friday, March 17th**

Many members have expressed a desire to make more frequent visits to the Fernbank planetarium. Therefore, our March meeting will be held on **March 17**, at 8:00 p.m. at **Fernbank Science Center's planetarium**. Club members, and their guests, will be admitted to the program without charge. Just stop at the ticket desk and tell them you are with the AAC. Since the program will begin promptly at 8:00, it is best to plan to be there a little early.

The title of the program is: **City in the Sky**. Here is how Fernbank describes it:

Currently orbiting the Earth are the components of the International Space Station. What will life be like aboard this spacecraft? How will it benefit our lives on Earth? And what impact will it have on the exploration of our Solar System and beyond? Come and find out as we explore a "City in the Sky"

Find out more about Fernbank on the web at: <http://fsc.fernbank.edu>

Learn more about the International Space Station at: <http://spaceflight.nasa.gov>

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://stlspb.gtri.gatech.edu/astrotxt/atlastro.html>

Subscribe to the Atlanta Area Astronomers Mailing List!

Send a message to AACList-subscribe@listbot.com

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