

# The Focal Point

The Atlanta Astronomy Club  
Established 1947  
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Editor: Kat Sarbell

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## March Spring Banquet

by Nancy Berninger, Program Chair

It's time for the Annual Spring Banquet! Our theme this year is "A Celebration of Observing".

**When:** Saturday, March 19th

**Where:** 5 Seasons Brewing

**Time:** 6:30 PM

We have a fantastic program for you! We'll start the evening with a Winter Star Party Review by Chris Hetlage. (Be sure to check out Chris's website, "Imaging the Cosmos", at <http://hetlage.com>.)

Our keynote speaker is author Tom Clark. His presentation will be on Amateur Telescope Making. Tom is editor and publisher of *Amateur Astronomy Magazine*, a cutting edge quarterly magazine written for and by amateur astronomers and telescope makers. Tom is also author of *The Modern Dobsonian*, which has been recently revised and updated. Tom and his wife, Jeannie, run Tectron Telescopes, specializing in collimation tools. They currently reside in Chiefland, Florida. For a sneak preview, be sure to visit Tom's web site: <http://www.amateurastronomy.com/>

\* Limited copies of *The Modern Dobsonian* will be available. Email [Programs@AtlantaAstronomy.org](mailto:Programs@AtlantaAstronomy.org) to have a copy set aside for you.

**Cost:** A hot topic each year. I listened and took all your previous comments into consideration. The Banquet cost will be \$3 with your RSVP. We will use this small amount to help cover expenses, not the dinner. Dennis Lange, owner of 5 Seasons Brewing, is allowing us to have individual tabs. By the way, the food and brew are wonderful! So spend a little or spend a lot, the choice is yours.

**RSVP:** \$3 at the door if you are listed on the RSVP roster. \$5 if you are not. RSVP to [Programs@AtlantaAstronomy.org](mailto:Programs@AtlantaAstronomy.org).

### Location:

5 Seasons Brewing  
5600 Roswell Road  
Atlanta GA 30342  
Just South of I-285  
in The Prado  
Shopping Center.



We're all looking forward to an exciting and entertaining evening. See you there!



Tom Clark, Editor of *Amateur Astronomy*, with his old scope, the 36" Yard Scope II.



This new 42" f/4 is under construction at the *Amateur Astronomy Magazine* observatory. (Yep, that's our Tom Crowley on the right.)

## February General Membership Meeting Minutes

by Steve Bieger

Club President Chuck Painter opened the meeting at 8:15PM; about sixty people were in attendance at the meeting opening. There was a giveaway, an AAC coffee mug, to one of our first time visitors.

Chuck introduced Dan Herron as the newly appointed observing chairman. Dan announced upcoming events, especially the Zombie weekend in April. He called for volunteers to help with the Zombie weekend and also for anyone interested in helping out with the VR training program, which is getting started again March 5th.

Larry Owens outlined past and upcoming events for the CEWMA chapter.

Mark Banks announced upcoming sidewalk events at Sierra Club on March 3, at Chattahoochee Nature Center on March 26, and at Phil Bracken's also in March. Details will be posted on the web site.

Chuck Painter outlined the need for a lawn tractor for VR and an air conditioner for Woodruff and asked for any offer to provide either.

Kat Sarbell explained the issue of the newsletter postage and the idea of providing only an on line version on the web site as a cost saving measure. Another idea was to have a two tier membership with a slightly lower cost to those wanting the on line newsletter. Chuck pointed out that this was a current discussion with the club board and that feed back is needed. Ken Poshedly commented the print version should still be available to provide that tangible part of the club membership. Alex Langoussis agreed with Ken and added that many people are not very active in the club and the printed newsletter is a real benefit to those. He also did not agree with the idea of a two tier membership. Tom Crowley said that he has seen groups be successful using the idea of a two tier membership. Mike commented that he is still getting a paper copy, even though he opted out (in other words the book keeping for the newsletter distribution needed some work). Someone suggested a survey, perhaps to be put in the newsletter to get more feedback. Another comment was that the labor put into the print copy could be better spent elsewhere.

Ken Poshedly displayed the March issue of Astronomy and mentioned that it contains an article by club members Rich Jakiel and Jerry Armstrong. He also showed the latest ALPO journal, featuring Walter Haas, the founder of the group.

Chuck Painter introduced Mark Sandburg, the new dark sky rep, taking over from Tom Buchanan. Mark said he will be bringing more information and some new ideas to the coming meetings. He called for anyone interested in the light pollution issue to contact him.

Nancy introduced the guest speaker, Dr. Cortney Henderson.

The meeting closed at 9:55 PM, and many members drove to Athens Pizza for dinner and socializing.

## February Board Meeting

by Steve Bieger

Minutes of the AAC Board Meeting, February 15, 2005

The Quorum present were Chuck Painter, Kelly & Dan Llewellyn, Tom Faber, Kat Sarbell, Dan Herron, Brigitte Fessele, Don Conrad, Larry Owens, Mark Banks, Mike Boni, and Steve Bieger.

Chuck opened with an announcement of several donations of equipment since December; some repair work is needed on three telescopes received.

Efforts to contact Jim Holley have failed, so Chuck made a motion to remove Jim as observing chair; seconded by Don; carried. Chuck made a motion to appoint Dan Herron as new observing chair; Mike seconded; carried. Kat will update the newsletter with the new observing chair.

Nancy was unable to attend; Chuck gave her report for the upcoming speakers.

Dan Herron announced upcoming events; the DSO and open house have so far been planned. Planning is commencing for the Zombie weekend; volunteers are needed before and during the event. An organization conference call will be held for the organizing committee of Dan, Chuck, and Steve. Exact amount of event per night is to be finalized, probably at \$10 per night, and \$20 per weekend per person. Upcoming events include training at VR on Mar 5, DSO & Messier marathon at Woodruff on Mar 12.

Larry said there was nothing new at CEWMA.

Don informed everyone that the 24" at Woodruff needs some work on the secondary, spider, and wiring. Chuck indicated that there is \$100 in the budget for this kind of thing and more can be allocated from the new budget if needed - so raising extra money is not necessary. Don also pointed out there is no procedure for collimating the 24" nor is there a list of who is qualified to do so.

Mark Sandburg was introduced as the new dark sky representative. He is looking for people interested in getting involved. He would like to take the subject beyond just astronomy to bring other benefits. He has handouts and other ideas for promoting the activities and will talk more about this at a future meeting.

The main event, the budget, was reported by Kelly. There were spreadsheet handouts available for all. Kelly and Dan both commented that MS Money was inadequate for the job of keeping the books. Don said he might be able to organize a licensed copy of Quick Books to use instead.

Chuck reminded all that the budget runs on a calendar year and new officers start in June with a preexisting budget.

Dan brought up the point of the newsletter postage and promoted the idea of a conversion to an on line-only version of the newsletter. Mark suggested an extra fee to be charged for members wanted the printed copy. Kat agreed. Chuck suggested that electronic be the default membership in that case. Mike suggested making that change to all existing members, to get reset when they renew, if desired. Chuck also pointed out that some people like having the "tangible" benefit of the printed copy. He would announce this idea at the general meeting and solicit feedback and reactions. The board would vote at the next board meeting.

A follow up is needed with Sharon Carruthers to further define the new member expenses and see if there are ways to trim that expense.

Tom raised the point that the club voice mail system might be outdated and cutting it would trim some cost.

Chuck reminded all that the club decided some time ago that dues pays for general operating expenses, magazines should be self funding, and PSSG profits go to the dark sky fund and capital expenditures. He thought current dues look sufficient to cover expenses; he suggested there were no major deviations from last year.

The next step will be to strike a new budget; Chuck suggested a draft to vote on next meeting.

The board also needs an estimate of AL dues for 2005.

Mike expressed a little concern that we were so far into the year without a final budget. Chuck reassured that last years numbers were a good guideline until April, when the budget will be voted on.

We then discussed the following capital expenses:

A tag is still needed for the new CE trailer; the process needs to be determined for Cobb County registration, and Chuck has the paperwork. No further expense is seen for the trailer.

Club telescopes and mounts need to be inventoried; Dan to follow up with Sharon on the mounts that Peter has. Eyepieces are needed for loaner scopes.

Older club scopes may not be economical to repair; however, there is money available for this because some 2004 money was not spent. Once the inventory is done, perhaps some swapping of components can be done. A hand controller is needed for the 6 inch refractor that was just donated.

The Club needs a replacement tractor at VR and a replacement air conditioner at Woodruff. Woodruff may also need some internal electrical circuits examined for overloading. Perhaps a new circuit can be installed just for the air conditioner. Mark will look into tractor prices, and Don will check on electrical prices.

The Woodruff administration change was posted; an email is required to be sent to John Lentini when members visit on nights other than Club-scheduled events. Chuck will follow up on this matter. Don suggested a real time sign up sheet on a web site for Woodruff. Mike suggested an email address. Dan pointed out that several trees need to be cut down at Woodruff. Chuck will follow up on these issues as well.

The next board meeting will be held at the Remax office in Buckhead at 7:30 PM on April 11th.

## Charlie Elliott Chapter February Meeting Minutes

by Clevis Jones, CEC Recording Secretary

Thirteen Members and visitors attended the programs. Larry Owens, Chapter Director, began the monthly programs of the Charlie Elliott Chapter (CEC) of the Atlanta Astronomy Club (AAC) at about 3:00 PM, Saturday, February 12, 2005.

Larry showed an image of Comet Machholz which he had taken, and then he showed pictures of the trailer Steve Kennedy has donated to the club. The progress on the Byers mount was reviewed. It was announced that Jim Honeycutt, Bill McKibben, Clevis Jones, Steve Kennedy, and Larry Owens have submitted images for the CEC Astro-Imager Focus section of the CEC Web site. Larry also reviewed upcoming events for CEC. Jim Honeycutt and Bill McKibben offered the facilities of Emory University at Oxford for the March CEC meeting.

Debbie Jones gave her usual informative report, this time focusing on Orion, M1 in Taurus, NGC 2237 (the Rosette Nebula in Monoceros), the seasons of Saturn, and Comet Machholz.

Dr. Bill McKibben, professor at Emory University at Oxford, and CEC member, presented "Double Trouble", a *superb* Power Point presentation and lecture about Binary Star Systems.

The sky cleared just after sunset for about 2 or 3 hours of observing by several members.

## Charles Elliot Chapter Future Meetings

NEW FALL/WINTER SCHEDULE – programs begin at 3:00 PM

March 12: Saturday at 3:00 PM.

- NEW LOCATION FOR THE MARCH MEETING: Oxford College Science Building (Pierce Hall).

- Directions: [http://www.atlantaastronomy.org/CEWMA/oxford\\_directions.html](http://www.atlantaastronomy.org/CEWMA/oxford_directions.html)

- Current Events: Clevis Jones

- What's Up Tonight: Observing report by Debbie Jones

- Feature Presentation: "How to Image the Planets" by Larry Owens, Chapter director. Larry will give an encore presentation on how to acquire and process images of the planets. Larry has been imaging the planets as an amateur astronomer for nearly 40 years. His presentation includes a live demonstration of stacking and processing webcam and CCD images using RegiStax, MaximDL and PhotoShop. Please join Larry for a great evening of imaging - everyone is welcome!

April 9: Saturday at 5:00 PM ( NOTE: 5:00 PM is the NEW SPRING-SUMMER SCHEDULE )

- General Meeting Open To The Public - Location Charlie Elliott Wildlife Visitor Center

- Current Events: TBD

- What's Up Tonight: Observing report by Debbie Jones

- Feature Presentation: "This is Your Life", Chapter member Jim Honeycutt, B.S. & M.A.T., Instructor in Astronomy at Oxford College of the Emory University. Chapter member Jim Honeycutt will give a presentation on stellar evolution. Jim currently teaches astronomy at Oxford College of Emory University. Jim received his B.S. and Master of Arts in Teaching in Physics from Georgia State University, and taught at Newton and Eastside High Schools for 31 years. Please join Jim for a great lecture - everyone is welcome!

For updates, please check the CEC website for the most current meeting information!

<http://www.atlantaastronomy.org/CEWMA/>

## 2005 Zombie Party April 7-9th

The zombie party is an annual three day star party hosted by the Atlanta Astronomy Club. It is held at the Woodruff Boy Scout Camp near Blue Ridge, Ga. This year the Zombie party will be held from noon on Thursday, April 7th to Noon Sunday April 10th.

Cost: Single person: \$10 per day – \$20 for all three days; Family: \$20 per day or \$40 for all three days (family consists of two adults and a max of two kids).

Only 75 people per night allowed on the field so make a reservation as soon as possible!! In order to reserve a spot please make your check payable to the Atlanta Astronomy Club and mail to this address, along with your Admission Form and signed Hold Harmless Agreement (Both available in the files section):

C/O Stephen Bieger, 3760 Loveland Terrace, Chamblee, GA 30341, 770-457-9148

The Site: William Calder Observatory (Woodruff BSC) is named in honor of our club's founder Dr. William A. Calder. The Calder Observatory has a microwave, coffee, and snack supplies. In front of it is a concrete pad that is reserved for the setup of the club's 24-inch truss tube telescope; and to the sides are 3 piers (with power) and four concrete pads for small scopes. The site has two port-a-potties; and a freeze tap pipe and sink 40 feet to the northwest of the observatory building. NO drugs or alcoholic beverages are permitted. Attendees should stay within the boundaries of the field unless invited to other areas of the Camp by the Scouts.

Rules: Common courtesy will be expected of anyone using the facility. The Club and the Scouts will advise anyone wishing to use the facility of the following rules of conduct.

1. No white lights should be used on the observing field, except in emergencies.
2. Vehicles may be parked on the observing field.
3. No alcoholic beverages or illegal drugs will be allowed on the Woodruff Scout Reservation.
4. Only certified Club members may operate the Club's equipment.
5. All users of the facility must sign a visitor's log.
6. All users of the facility will adhere to the Scout's Outdoor Code, and will leave the site in the same or better condition than it was upon arrival.
7. All users of the facility agree to follow the applicable safety rules.
8. The Woodruff speed limit of 14 mph will be observed at all times. Drivers agree to exercise extreme caution, due to the presence of many pedestrians.
9. Neither the Scouts nor the Club assume any responsibility for injuries or other losses sustained by anyone using the facility. Users of the facility assume all risks associated with activities that necessarily take place in the dark and/or in the out-of-doors.
10. On site power reserved for observing purposes only! Site power is not guaranteed but is on an 'as available' basis only. Site power not to be used for campers, heaters, electric blankets, etc.
11. Only quiet generators allowed.
12. Dark sky etiquette applies.

13. It is the responsibility of the attendees to provide their own meals. (Available on site are: a microwave, running water and a coffee maker)

14. 2 Port-O-Potties are provided; no showers are available on site.

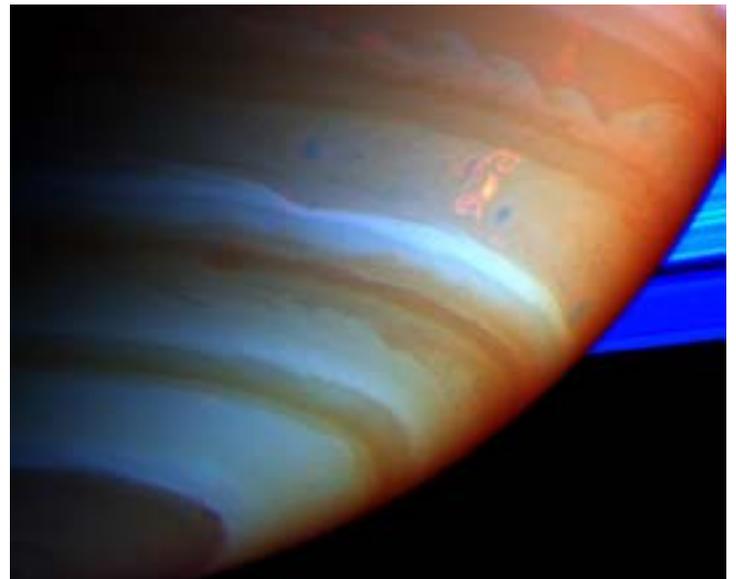
Directions to the Woodruff Observing Field: Take I75 to I575 to GA 515. Follow 515 through Ellijay and Blue Ridge. Go 2.2 miles past the intersection of 515 and GA 60. Take a left on Loving Road, and follow it until it ends. Turn right on GA 325 and go about 50 yards to Boy Scout Road. Turn right again. The entrance to the Scout Camp is about 2.5 miles on the right. Take the main entrance road (Turner Gap Rd.) and follow it past the lake (on your left). The road is paved until the second ranger's house (on the left). Turn left in front of the house (Chestnut Gap Road) and drive about a half mile, and again the road ahead gets rough. Turn right at a sign that says "private property, do not enter". Ignore the sign and go down the road. Less than a hundred yards from Turner Gap Rd, there is a gate. Continue up this road, at the end it opens to the right at field. You will see the observatory building in middle of the field at the north edge.

If you should have any additional questions please call our Observing Chair, Daniel Herron, at (770) 330-9679 or send an email to [Observing@atlantaastronomy.org](mailto:Observing@atlantaastronomy.org).

## The Dragon Storm

A large, bright and complex convective storm that appeared in Saturn's southern hemisphere in mid-September 2004 was the key in solving a long-standing mystery about the ringed planet.

Saturn's atmosphere and its rings are shown here in a false color composite made from Cassini images taken in near infrared light through filters that sense different amounts of methane gas. Portions of the atmosphere with a large abundance of methane above the clouds are red, indicating clouds that are deep in the atmosphere. Grey indicates high clouds, and brown indicates clouds at intermediate altitudes. The rings are bright blue because there is no methane



gas between the ring particles and the camera.

The complex feature with arms and secondary extensions just above and to the right of center is called the Dragon Storm. It lies in a region of the southern hemisphere referred to as "storm alley" by imaging scientists because of the high level of storm activity observed there by Cassini in the last year.

The Dragon Storm was a powerful source of radio emissions during July and September of 2004. The radio waves from the storm resemble the short bursts of static generated by lightning on Earth. Cassini detected the bursts only when the storm was rising over the horizon on the night side of the planet as seen from the spacecraft; the bursts stopped when the storm moved into sunlight. This on/off pattern repeated for many Saturn rotations over a period of several weeks, and it was the clock-like repeatability that indicated the storm and the radio bursts are related. Scientists have concluded that the Dragon Storm is a giant thunderstorm whose precipitation generates electricity as it does on Earth. The storm may be deriving its energy from Saturn's deep atmosphere.

One mystery is why the radio bursts start while the Dragon Storm is below the horizon on the night side and end when the storm is on the day side, still in full view of the Cassini spacecraft. A possible explanation is that the lightning source lies to the east of the visible cloud, perhaps because it is deeper where the currents are eastward relative to those at cloud top levels. If this were the case, the lightning source would come up over the night side horizon and would sink down below the day side horizon before the visible cloud. This would explain the timing of the visible storm relative to the radio bursts.

The Dragon Storm is of great interest for another reason. In examining images taken of Saturn's atmosphere over many months, imaging scientists found that the Dragon Storm arose in the same part of Saturn's atmosphere that had earlier produced large bright convective storms. In other words, the Dragon Storm appears to be a long-lived storm deep in the atmosphere that periodically flares up to produce dramatic bright white plumes which subside over time. One earlier sighting, in July 2004, was also associated with strong radio bursts. And another, observed in March 2004 and captured in a movie created from images of the atmosphere (<http://photojournal.jpl.nasa.gov/catalog/PIA06082> and <http://photojournal.jpl.nasa.gov/catalog/PIA06083>) spawned three little dark oval storms that broke off from the arms of the main storm. Two of these subsequently merged with each other; the current to the north carried the third one off to the west, and Cassini lost track of it. Small dark storms like these generally get stretched out until they merge with the opposing currents to the north and south.

These little storms are the food that sustains the larger atmospheric features, including the larger ovals and the eastward and westward currents. If the little storms come from the giant thunderstorms, then together they form a food chain that harvests the energy of the deep atmosphere and helps maintain the powerful currents.

Cassini has many more chances to observe future flare-ups of the Dragon Storm, and others like it over the course of the mission. It is likely that scientists will come to solve the mystery of the radio bursts and observe storm creation and merging in the next 2 or 3 years.

Credit: NASA/JPL/Space Science Institute

## Rings and More Rings

Cassini images have revealed the presence of previously unseen faint rings in some of the gaps in Saturn's rings -- possible indicators of small yet-unseen moons.

Image A is a contrast-stretched view of the 270km wide Maxwell gap in Saturn's C ring. The right arrow points to the optically thick Maxwell ringlet; the left arrow points to the new diffuse ring seen inside it.

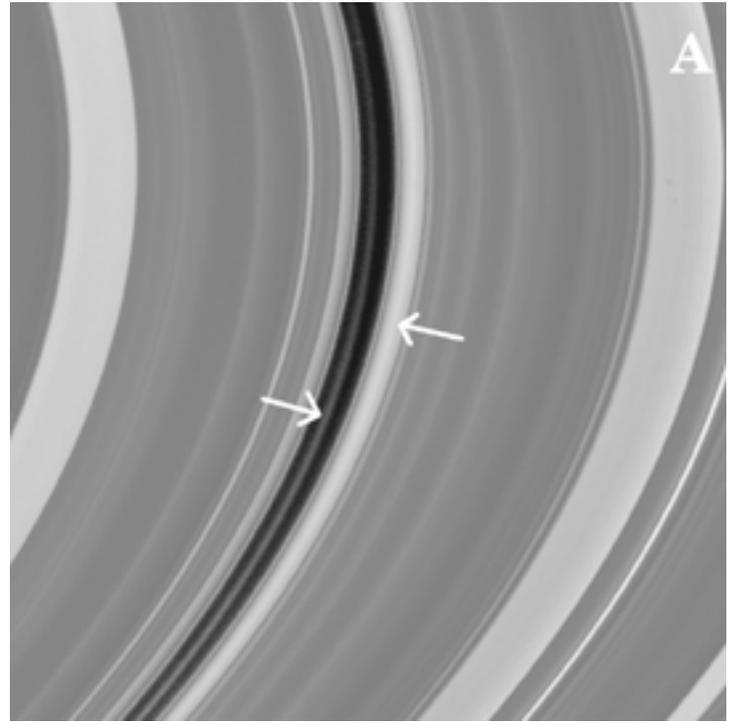


Image B is a view of the approximately 350 km wide Huygens gap, between the outer edge of Saturn's B ring (on the left) and the dark bands (on the right) in the Cassini division. The right arrow points to the optically thick Huygens ring; the left arrow points to the new diffuse ring inside it.

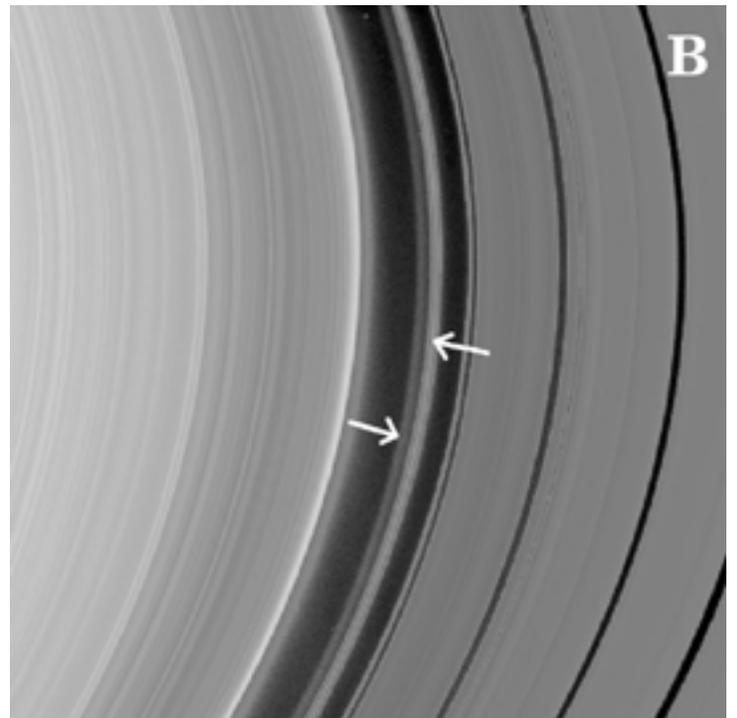
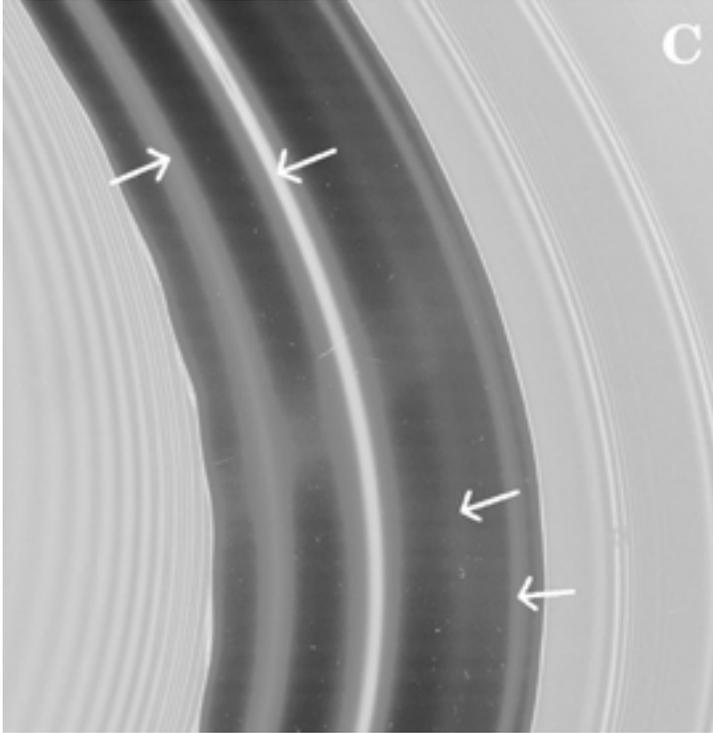


Image C is a view of the ringlets inside the Encke gap. Some of these had been seen by NASA's Voyager spacecraft, but this contrast-enhanced Cassini lit-side image shows the presence of three major ringlets and a rather tenuous one.

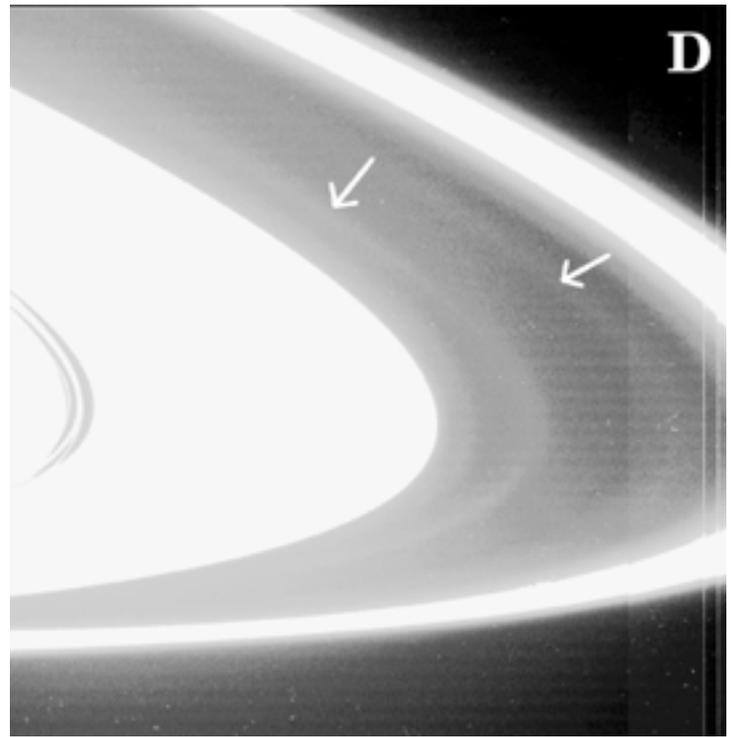
The center ringlet, which in this image has the highest optical depth among the ringlets, is coincident with Pan's orbit. This finding, along with observed variations in brightness along the ringlet, implies that accumulations of particles in the ringlet are maintained in special orbits that prevent them from colliding with Pan.



In Image D, which is a composite of several wide angle images taken of the lit-side of the rings after orbit insertion, there is clear indication of material extending about 400 km beyond the edge of Saturn's overexposed A ring (on the right), as well as two diffuse rings: a 300 km wide ring of material, R/2004 S1, in the orbit of Atlas (left-most arrow) and another ring, R/2004 S2, comparable to the Atlas ring and immediately interior to Prometheus's orbit (right-most arrow). These rings had been reported earlier and are comparable to the Jovian ring. Prometheus's orbit is elliptical, and brings the moon as close to Saturn as the outer edge of R/2004 S2 and as far away from the planet as the inner sharp boundary of Saturn's F ring. These observations indicate that Prometheus has swept material from the region occupied by its orbit.

It is not clear yet whether the origin of all these low-optical depth ringlets is the same. The association of the Atlas ring with Atlas and the main Encke ringlet with Pan would suggest that these rings derive from their associated moon. In other cases, a ring may exist because the material (or small parent bodies within it) are shepherded by a larger moon also present in the gap. The particles in many or all of these diffuse ringlets may have substantial fractions of micrometer-sized dust, implying that non-gravitational forces also may affect the ringlets' dynamics. In any case, the presence of narrow, diffuse ringlets in gaps like Maxwell and Huygens, along with the major Maxwell and Huygens ringlets, and the additional narrow ringlets in the Encke gap, suggests that there may be yet unseen moonlets in these gaps.

Credit: NASA/JPL/Space Science Institute



## New Swift satellite images birth of a black hole

The NASA-led Swift mission has detected and imaged its first gamma-ray burst, likely the birth cry of a brand new black hole.

The bright and long burst occurred on January 17. It was in the midst of exploding, as Swift autonomously turned to focus in less than 200 seconds. The satellite was fast enough to capture an image of the event with its X-Ray Telescope (XRT), while gamma rays were still being detected with the Burst Alert Telescope (BAT).

"This is the first time an X-ray telescope has imaged a gamma-ray burst, while it was bursting," said Dr. Neil Gehrels, Swift's Principal Investigator at NASA's Goddard Space Flight Center, Greenbelt, Md.



"Most bursts are gone in about 10 seconds, and few last upwards of a minute. Previous X-ray images have captured the burst afterglow, not the burst itself."

"This is the one that didn't get away," said Prof. John Nousek, Swift's Mission Operations Director at Penn State University, State College, Pa. "And this is what Swift was built to do: to detect these fleeting gamma-ray bursts and focus its telescopes on them autonomously within about a minute. The most exciting thing is this mission is just revving up."

Swift has three main instruments. The BAT detects bursts and initiates the autonomous slewing to bring the XRT and the Ultraviolet/Optical Telescope (UVOT) within focus of the burst. In December the BAT started detecting bursts, including a remarkable triple detection on December 19. Today's announcement marks the first BAT detection autonomously followed by XRT detection, demonstrating the satellite is

swiftly slewing as planned. The UVOT is still being tested, and it was not collecting data when the burst was detected.

Scientists will need several weeks to fully understand this burst, GRB050117, so named for the date of detection. Telescopes in orbit and on Earth will turn to the precise burst location provided by Swift to observe the burst afterglow and the region surrounding the burst.

"We are frantically analyzing the XRT data to understand the X-ray emission seen during the initial explosion and the very early afterglow," said Dr. David Burrows, the XRT lead at Penn State. "This is a whole new ballgame. No one has ever imaged X-rays during the transition of a gamma-ray burst from the brilliant flash to the fading embers."

When the UVOT is fully operational, both the XRT and UVOT will provide an in-depth observation of the gamma-ray burst and its afterglow. The burst is gone in a flash, but scientists can study the afterglow to learn about what caused the burst, much like a detective hunts for clues at a crime scene.

The origin of gamma-ray bursts remains a mystery. At least some appear to originate in massive star explosions. Others might be the result of merging black holes or neutron stars. Any of these scenarios likely will result in the formation of a new black hole.

Several of these bursts occur daily somewhere in the visible universe. No prompt X-ray emission (coincident with the gamma-ray burst) has been previously imaged, because it usually takes hours to turn an X-ray telescope towards a burst. Scientists expect Swift to be fully operational by February 1.

Swift, still in its checkout phase, is an international collaboration launched on November 20, 2004. It is a NASA mission in partnership with the Italian Space Agency and the Particle Physics and Astronomy Research Council, United Kingdom.

Image: An artist's concept illustrates the Swift mission. Credit: Spectrum Astro

## GASP (Georgia Astronomy in State Parks) Events

GASP events for 2005 will begin around April. For information about these events, contact Joanne Cirincione at [Starrynights@AtlantaAstronomy.org](mailto:Starrynights@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. 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 **\$29** 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 is:** Atlanta Astronomy Club, PMB 305, 3595 Canton Road A9, Marietta, Georgia 30066.

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

Internet Home Page: <http://www.AtlantaAstronomy.Org>

Send suggestions, comments, or ideas about the website to [webmaster@AtlantaAstronomy.org](mailto:webmaster@AtlantaAstronomy.org). Also send information on upcoming observing events, meetings, and other events to the webmaster.

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**Georgia Astronomy in State Parks:** Joanne Cirincione 404-824-4751  
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**Light Trespass:** Mark Sandburg

**Mentor Program:** Keith Burns 770-427-1475  
[Keith\\_B@bellsouth.net](mailto:Keith_B@bellsouth.net)

**PSSG Chairman:** Peter Macumber [pmacumber@nightssky.org](mailto:pmacumber@nightssky.org) **Co-Chairman:** Joanne Cirincione [starrynights@AtlantaAstronomy.org](mailto:starrynights@AtlantaAstronomy.org)

**Sidewalk Astronomy / Board:** Mark Banks 404-257-2766  
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**Woodruff Observ. Coordinator:** John Lentini 770-984-0175  
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**Webmaster Atlanta Astronomy:** Peter Macumber 770-941-4640  
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## Atlanta Astronomy Club Website

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

## Calendar by Tom Faber (All times EST unless noted)

March 5th, Saturday: Training at Villa Rica Observatory. Contact Daniel Herron for details.  
March 10th, Thursday: Moon New.

March 12th, Saturday: Mercury at Eastern Elongation. Dark Sky Observing at Woodruff BSC. Contact Daniel Herron for details. Charlie Elliott Chapter Meeting starts at 3PM. See p.3 for details.

March 17th, Thursday: Moon First Quarter.

March 18th, Friday: Bradley Observatory Open House. 8PM, Agnes Scott College. "You Can't Take It With You: The Legacies of Dead Stars" Robin Shelton - University of Georgia-Athens.

March 19th, Saturday: AAC Banquet. 6 PM. Five Seasons Restaurant & Brewery.

March 20th, Sunday: Equinox at 7:33AM. Equinox Concert at Agnes Scott College, 2PM.

March 25th, Friday: Moon Full (Sap Moon, **Crow Moon**, or Lenten Moon). Sidewalk astronomy at Phil Braeken's office, 7PM.

March 29th, Tuesday: Mercury at Inferior Conjunction.

March 31st, Thursday: Venus at Superior Conjunction.

April 1st, Friday: Moon Last Quarter.

April 4th, Monday, Jupiter at Opposition.

April 7th-10th, AAC Zombie Party - See page 4 for details.

April 8th, Friday: Moon New. Bradley Observatory Open House. 8PM, Agnes Scott College. "The Galactic Center Black Hole and Friends" Ted La Rosa - Kennesaw State University.

April 9th, Saturday: Charlie Elliott Chapter Meeting starts at 5PM. See p.3 for details.

April 11th, Monday. Board Meeting. 7:30 PM. Buckhead ReMax office.

## Atlanta Astronomy Club Listserve

Subscribe to the Atlanta Astronomy Club Mailing List: The name of the list is: AstroAtlanta. The address for messages is: AstroAtlanta@yahoogroups.com . To add a subscription, send a message to: AstroAtlanta-subscribe@yahoogroups.com . This list is owned by Lenny Abbey.

## Focal Point Deadline and Info

Please send articles, pictures, and drawings in electronic format on anything astronomy related to Kat Sarbell at focalpoint@atlantaastronomy.org. **You can submit articles anytime up and including the deadline date. The deadline for April is Thursday, March 24th at 4:00 PM ... Submissions will no longer be accepted after the deadline.**

## FIRST CLASS



*The Focal Point*

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

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