Subsequent study revealed that it was an EX or a young out bursting star. Spitzer Space Telescope and countless ground based observatories. Observations with the Chandra X-ray telescope, Hubble Space Telescope, new nebula. Indeed, the announcement of this discovery triggered and led to an intense scientific campaign to understand the nature of this discovery. amateur astronomer Jay McNeil noted the emergence of a new nebula in his field. The discovery of this nebula garnered worldwide media attention and led to an intense scientific campaign to understand the nature of this new nebula. Indeed, the announcement of this discovery triggered observations with the Chandra X-ray telescope, Hubble Space Telescope, Spitzer Space Telescope and countless ground based observatories. Subsequent study revealed that it was an EX or a young out bursting star.

Pre-main sequence stars undergo eruptive events that dramatically increase their luminosity for periods of months to years. These outbursts are triggered by a rapid increase in the stellar accretion rate. The eruption in November 2003 of V1647 Orionis, the young star that illuminated McNeil's Nebula, lasted two years. During the eruptive phase, the star brightened across all wavelengths by a factor of approximately 15 and the stellar accretion rate increased from \( \sim 10^{-7} \ M_\odot \ yr^{-1} \) to \( \sim 10^{-5} \ M_\odot \ yr^{-1} \). Observations of atomic lines showed that a hot out flowing wind was produced during the early phase of this event. After the hot wind disappeared, no further winds were expected to develop. However, observations of the near infrared ro-vibrational bands of CO reported here demonstrate that a new, warm wind was generated nearly two years following the initial outburst, after the accretion rate had returned to its pre-outburst level. Such a remarkable chain of events has never been observed before in any rapidly evolving young star.

In this talk I will discuss the process of star and planet formation and how our understanding of this process has been illuminated by the study of McNeil's nebula. I will also highlight the important synergy between professional and amateur astronomers illustrated by Jay McNeil's discovery.

Speaker Biography:
Sean Brittain is an Assistant Professor at Clemson University in the department of Physics & Astronomy. He received his BS in Chemical Physics from LeTourneau University in Longview, Texas and his MS and PhD in Physics from the University of Notre Dame in Notre Dame, Indiana. His dissertation was focused on the application of high-resolution infrared spectroscopy to the study of the chemistry of molecular clouds, the evolution of young protoplanetary disks, and the detection of exoplanetary atmospheres. Following graduate school, Sean was awarded a Michelson Post-Doctoral Fellowship for the study of planetary detection and formation. As a post-doc he continued his study of planet formation and extended his work to the study of disks around post-AGB stars and the magnetic field strength of Herbig Ae/Be stars. Sean moved to Clemson University March 2006 and is advising two PhD students and four undergraduate students.

Upcoming Speaker and Program:
The May meeting is on May 18th. Elections for club officers and board members will be held during this meeting. We will also have a May speaker. Here again the program chairman is actively working on the program. Updates will be posted on the AAC website, listserv, and sent via telegraph wire.
March General Membership Minutes

By Richard Jakiel, AAC Recording Secretary
The March 16th General Meeting of the AAC started at 0805 PM, with President Peter Macumber (photo right) presiding. Over 50 AAC members and their guests were in attendance. Peter discussed the results of the most recent (3/6/07) Board of Directors (BOD) meeting. The BOD has approved the budget for the 2007 fiscal year, and the newly formed committee for the DAV (Deerlick Astronomy Village) ‘build-out’ for the next 5 years. One issue that came up during the BOD meeting was whether or not to charge extra for the printed version of the Focal Point. The printing and mailing costs are one of the largest items in the yearly budget, and a considerable drain on the AAC’s financial resources. The proposal is that those members who get the printed version with be charged an extra 5 to 10 dollars, while the electronic version will experience no dues increase. This proposal will be voted upon at the next general meeting of the AAC.

Other AAC business matters discussed:
- The International Sidewalk Astronomy Night is coming up on May 19th, and it is hoped that “1000 scopes” will participate worldwide.

- GASP events have been scheduled for the year – the first event will be at Unicoi State Park. Stay tuned for further notices on upcoming events.

Our March speaker in silhouette, Jim Hutchinson, begins his talk about his work on the Voyager Photopolarimeter Instrument. Photos by Tom Faber.

After the business portion of the meeting, the Mighty Kosmic Cud-chewing Bovine (editor’s note: Rich is referring to Keith Burns, program chair) introduced the night’s speaker – Jim Hutchinson. He was a project engineer for the Mariner 11 and 12 probes – better known today as Voyager 1 and 2. Instead of rehashing the discoveries of the Voyagers, he discussed the trials and tribulations of building high-tech, state of the art instrumentation with severe weight, power, and space restrictions. Not only had the equipment (a type of photometer) had to perform flawlessly, but survive the extremely energetic radiation belts of Jupiter. Many of the instruments still work today, nearly 30 years after their launch into space – a testament to design and having a “nearly unlimited budget”.

Board of Directors Meeting Minutes
by Richard Jakiel, AAC Recording Secretary
August 6, 2006 - Attendance - 10 BOD, 15 members total

Old Business:
1) DAV Updates:
Membership on the BOD: one member of DAV needs to be on the AAC BOD, and the reverse situation also applies; The AAC BOD needs to establish rules for the nomination of a DAV member on the BOD, and vice versa; The DAV - AAC Agreement needs to finalized by the end of the month (August 06); Sharon will start taking dues for "Field Membership"; The Next DSO (Sept 06) will be held at the club's DAV site; DAV site use protocols (Dan Herron) should be in place by the end of August.

The DAV Build-out Committee is prioritizing the site build out on the club's property. 2 or 3 power pads; Electrical panel; Storage building (for 24-inch, etc.); Overall site planning.

2) Blackjack Mountain is a work in "progress".

3) PSSG Status Report: Website is ½ updated; Brochures should be on route in the next two weeks (August); NASA Bus is "confirmed" for the event.

4) The Up Keep of the Yahoo Atlantaastronomy Group List (aka "Lenny List"): Moderator and owner is Lenny; Moderator #2 is Peter Macumber.

5) Corporate Sponsorship for the AAC - Brad Isley: Formation of the committee; Set goals; Documentation of AAC events, including the PSSG, DSO's, Zombie Parties, sidewalk and cooperative ventures with Fernbank, Emory, etc. Members: Peter Macumber, Brad Isley, Tom Crowley, Dan Herron and Rich Jakiel

New Business:
No AAC meeting in October due to the overlap of the PSSG. November 12 is tentatively scheduled as the next meeting of the BOD.
**Charlie Elliott March Minutes**

by Larry Owens, CEC Director

Saturday, March 10, 2007

ATTENDANCE: Fifteen guests and members attended the March CE chapter meeting.

BUSINESS: Chapter director, Larry Owens, opened the meeting with a discussion of the optical tube assembly design for the Byers mount. Larry also announced a successful 3rd annual Hightower Elementary Space Camp event which occurred on the evening of Friday, March 9th in Conyers, GA.

After the business meeting a Sunset Alert was given.

The 2007 remaining schedule for the CEC meetings is April 14 (back to 5 p.m. for the summer), May 19 (JAKES DAY – volunteers needed, and ELECTION of Officers), June 9, July 7, Aug 18, September 15, October 6 (note: Peach State on the 13th), November 3 (back to 3 p.m. for the winter), December 15.

FEATURE PRESENTATION: Black Hole Survival! Steve Bieger gave an excellent presentation based on the NASA Night Sky Network "Black Hole Survival" education kit, provided to the chapter through its membership in the network.

OBSERVING REPORT: Steve Bieger did double duty by also presenting his monthly "What's Up" segment. This month included announcements of upcoming club events, native myths and legends related to this time of year, constellations and objects for viewing in March and a science feature.

CURRENT EVENTS: Clevis Jones wasn't able to make the meeting, but he did create a current events Power Point that Larry Owens presented to the group.

OBSERVING SESSION: Despite a weather forecast of clouds and rain, the skies over Charlie Elliott were clear!

**Charlie Elliott Future Meetings**

by Larry Owens, CEC Director

All meetings and events are open to the public and free of charge.

April 14th, 5:00-7:00 PM

Place: Charlie Elliott Visitor's Center

"A Dark Matter" - Join Instructor in Astronomy Fred Buls for a talk on Dark Matter! Did you realize that most of the matter in the universe is invisible? By observing the motions of galaxies, astronomers long ago realized that in order for the laws of universal gravitation to be correct, there must be a lot of matter in the universe that we cannot see.

Sunset Time Alert: After dinner, a "Sunset Time Alert" will be issued. We'd love for everyone to stay for the entire meeting, but if you want to setup your telescope on the observing field before dark, this will be your cue to check the time and leave the meeting early if necessary. Sunset will occur at 8:07 PM.

"What's Up & Astronomy Current Events" - The program continues with Stephen Bieger, the chapter's Observing Supervisor presenting a short program on what's available for observing from Charlie Elliott, with a bit of science and history for good measure. Clevis Jones, our recording secretary, will also update us on the latest events in astronomy and space exploration.

"Observing at Charlie Elliot" - Everyone is invited to the Charlie Elliott observing field for observing (weather permitting). It's not necessary to bring a telescope; on clear nights there are usually several telescopes on the field and everyone is welcome to take a look, ask questions and enjoy the night skies over Charlie Elliott.

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**Bradley Observatory Open House Series Spring 2007**

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

All talks are free and open to the public. Lectures begin at 8 p.m.; doors open at 7:30 p.m. Bradley Observatory and Delafield Planetarium at Agnes Scott College. Here is the schedule for Spring 2007.

April 13, 2007 - Lecture topic TBA

May 11, 2007 - "Of Druids and Priests: Ancient Astronomy and its Tools" by C. G. De Pree of Agnes Scott College

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**Upcoming Telescope & Instrument Workshop Meetings**

by Sharon Carruthers

The next couple meetings of the Telescope and Instrument Workshop will be 11 AM Saturdays, May 5 and June 2 at the Bradford Map & Telescope Atlanta store, 300 Hammond Rd, Sandy Springs. We are planning to build loaner scopes. Or bring your scope problems and we will try to help you out. For more info you can contact me at 404-843-9610 (work) or scarruthers@AtlantaAstronomy.org.

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**Observing Events for 2007**

by Daniel Herron, Observing Chair

Here are some dates in 2007 for Observing events (all dates subject to change). I am sure some will be added or changed during the course of the year but I will try and stick to them if possible. I will update the locations and times later as well as add them to the AAC web site and the Yahoo Astro Atlanta List.

**DSO Dates (locations noted if known/decided)** April 12-15th @ DAV(Zombie Party), May 12th @ Woodruff, June 16th, July 14th, August 11th, September 8th, October @ DAV (PSSG), November 10th, December 8th

**GASP Events (only 2 known as of today, more to come)** June 23rd - Tallulah Gorge State Park, November 3rd - Red Top Mtn State Park.

**New member Orientation/Open Houses (all at Villa Rica for now unless noted)** May 4th @ Fernbank Science Center, May 26th (Open House), July 21 (New member Orientation), September 22nd (Open House), October 20 (New member Orientation), December 15th (Open House - New member Orientation).

**Sidewalk events (known as of today)** April 21st - Astronomy Day 2007 @ Fernbank Science Center.

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**The Next AAC Board Meeting**

The next Board Meeting of the Atlanta Astronomy Club is scheduled for Sunday, April 29th at 5:00PM at Bradford Map, Globe & Telescopes, 300 Hammond Dr, Sandy Springs. Contact Tom Crowley for details.
Messier Marathon from Mentone
by Daniel Herron

Well we had a fun the night of March 17 despite the weather. It was cloudy as I arrived around 5 in Mentone, Al. Clear Sky Clock was still promising. Roger and a few friends were already there and set up, and as I set up on the field, Ray Major showed up and began setting up. Michael Silverman followed shortly after with about 5 family members. My bother Trey drove down from Chattanooga to join us.

As it began getting dark the clouds began breaking up and we started looking for Venus. We soon found it and watched it as clouds drifted by. As it got even darker the sky began opening up more and scopes soon turned to Saturn.

And we’re off....

What can I say about the Messier Marathon from Mentone? Well the run started with an immediate trip, but we quickly got up and started again, ran well for a few miles only to run into heavy fog and get lost.

The marathon began as soon as the first stars appeared as the fevered hunt for M77 and M74 started, however the thin clouds and light glow prevented us from seeing them. On to the next. We quickly grabbed M31, 32, 110, and 33 before they got too low and started on some of the easier targets. M45 and M44 were naked eye and an easy find. M42, 78, 41 & 1 were the next to be checked off. Well I am not going to bore you with a bunch of M numbers but around 9:30 it clouded over and stayed that way until after 2 AM. By then most of us were asleep. Oh well, maybe next year!

My total number of Messier Objects? 26 - a fitting number given it was a Marathon!

Saturn Image by Dan Llewellyn

Lunar Images by Rich Jakiel

With the promise of superb seeing the night of March 28, plus a close conjunction of the Moon and Saturn, it was time for hi-resolution planetary imaging. As you can see, these lunar images approach my 12-inch scope’s theoretical resolution (0.38”) with many craters considerably less than 1 kilometer across. Imaging stats: 12-inch LX200 at f/20, 840 TouCam Pro II. Stacks are between 400 to 500 frames and processed by Registax 4.0, AIP4Win 2.0 and Photoshop.
GASP at Unicoi State Park

GASP volunteers gave a talk and set up scopes for the campers to enjoy the stars on Saturday, March 24. Photos submitted by Keith Burns.
Storm Spectra by New Horizons

NASA/Johns Hopkins University Applied Physics Lab News Release

These images, taken with the LEISA infrared camera on the New Horizons Ralph instrument, show fine details in Jupiter's turbulent atmosphere using light that can only be seen using infrared sensors. These are "false color" pictures made by assigning infrared wavelengths to the colors red, green and blue. LEISA (Linear Etalon Imaging Spectral Array) takes images across 250 IR wavelengths in the range from 1.25 to 2.5 microns, allowing scientists to obtain an infrared spectrum at every location on Jupiter. A micron is one millionth of a meter.

These pictures were taken at 05:58 UT on February 27, 2007, from a distance of 2.9 million km. They are centered at 8 degrees south, 32 degrees east in Jupiter "System III" coordinates. The large oval-shaped feature is the well-known Great Red Spot. The resolution of each pixel in these images is about 175 km; Jupiter's diameter is approximately 145,000 km.

The image on the left is an altitude map made by assigning the color red to 1.60 microns, green to 1.89 microns and blue to 2.04 microns. Because Jupiter's atmosphere absorbs light strongly at 2.04 microns, only clouds at very high altitude will reflect light at this wavelength. Light at 1.89 microns can go deeper in the atmosphere and light at 1.6 microns can go deeper still. In this map, bluish colors indicate high clouds and reddish colors indicate lower clouds. This picture shows, for example, that the Great Red Spot extends far up into the atmosphere.

In the image at right, red equals 1.28 microns, green equals 1.30 microns and blue equals 1.36 microns, a range of wavelengths that similarly probes different altitudes in the atmosphere. This choice of wavelengths highlights Jupiter's high-altitude south polar hood of haze. The edge of Jupiter's disk at the bottom of the panel appears slightly non-circular because the left-hand portion is the true edge of the disk, while the right portion is defined by the day/night boundary (known as the terminator).

Possible Caves on Mars

Northern Arizona University News Release - April 2, 2007

Northern Arizona University researchers Glen Cushing and Jut Wynne, working at the U.S. Geological Survey, propose that photos from the Mars Odyssey reveal football-field size holes that could be entrances to caves.

"If there is life on Mars, there is a good chance you'd find it in caves," said Wynne, an NAU graduate student in biological sciences and project leader for the USGS Earth-Mars Cave Detection Program. He said the possible discovery could lead to more focused Mars explorations. Martian caves are considered the "best potential havens for life" because they would be protected from surface radiation and other factors, he said.

"The Martian surface is an extremely harsh environment, so the significance of caves is in their protective nature," said Cushing, a graduate teaching assistant in NAU's Department of Physics and Astronomy, who was the first to spot the black areas on the photographs. "Caves on Mars could become habitats for future explorers, or could be the only structures that preserve evidence of past or present microbial life."

Cushing and Wynne, along with Tim Titus, an astrophysicist with USGS, and Phil Christensen, the chief scientist for the NASA imaging instrument and a researcher from Arizona State University, recently submitted their findings in a research paper at the 38th Lunar and Planetary Science Conference.
The Earth-Mars Cave Detection Program's overall objective is to develop techniques for systematically detecting caves on Earth in the thermal infrared and then applying these techniques to searching for caves on Mars, Wynne explained.

The team reported possible caverns ranging from 330 to 825 feet wide and 425 feet deep. They've been named after loved ones of the researchers: Dena, Chloe, Wendy, Annie, Abbey, Nikki and Jeanne.

Christensen said the first avenue for further observations could be provided by NASA's latest Red Planet probe, the Mars Reconnaissance Orbiter.

"The spacecraft's high-resolution camera could take a closer look at the seven sisters, including sidelong glances that might show whether the features open up into wider chambers beneath," Christensen said.

Georgia Astronomy in State Parks (GASP) Events

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

**June 23rd** - Tallulah Gorge State Park
**November 3rd** - Red Top Mountain State Park

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

**The GASP volunteers at FDR State Park on Labor Day weekend 2004 - From left to right:** Joanne Cirincione, Keith Burns, Harold and Claudia Champ with Ginger; Peter Macumber; Sharon Carruthers, Tom Faber, Kat Sarbell, and Holly and John Ritger. Photo by Holly Ritger.

Atlanta Astronomy Club Website

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

AAC Officers and Contacts

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**Woodruff Observ. Coordinator:** John Lentini 770-984-0175 johnlentini@yahoo.com
**Webmaster Atlanta Astronomy:** Peter Macumber 770-941-4640

Directions to White Hall at Emory

Meeting Location Information:

Turn onto Dowman Drive from North Decatur Road at the five way intersection (across from Everybody’s Pizza). White Hall is located on the right across from the new Science & Math building. Parking is available along Dowman Drive on both sides of the road. There is also a gated parking lot on the left behind the Admissions Building. After 6PM there is no fee to park there. For more detailed directions on how to get to Emory University, visit www.atlantaastronomy.org.
FROM: Kat Sarbell  
506 Treeridge Parkway 
Alpharetta, GA 30022

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

Atlanta Astronomy Club  
P.O. Box 76155  
Atlanta, GA 30358-1155  
www.atlantaastronomy.org

Calendar by Tom Faber (All times EDT unless noted)

April 2nd, Monday: Full Moon (Grass, Egg, Easter, or Paschal Moon)
April 10th, Tuesday: Moon Last Quarter.
April 12th-15th, Thursday-Sunday: Zombie Party at Deerlick Astronomy Village - Contact Daniel Herron for Details.
April 13th, Friday: Open House at Bradley Observatory, Agnes Scott College, 8PM, Lecture TBA.
April 17th, Tuesday: New Moon.
April 18th, Wednesday: Moon below M45.
April 19th, Thursday: Moon near Venus and M45.
April 20th, Friday: AAC Meeting at White Hall, 8PM, Emory University.
April 21st, Saturday: Astronomy Day 2007 at Fernbank Science Center - Contact Daniel Herron for Details.
April 23rd, Monday: Lyrid Meteors.
April 29th, Sunday: AAC Board Meeting 5PM at Bradford Map & Telescope, 300 Hammond Rd, Sandy Springs. - Contact Tom Crowley for details.

May 2nd, Wednesday: Full Moon (Planting or Milk Moon)
May 3rd, Thursday: Mercury Superior Conjunction.
May 5th, Saturday: Moon near Jupiter.
May 6th, Sunday: Eta Aquarid Meteors.
May 10th, Thursday: Moon Last Quarter.
May 11th, Friday: Open House at Bradley Observatory, Agnes Scott College, 8PM, Lecture: "Of Druids and Priests: Ancient Astronomy and its Tools" by C. G. De Pree of Agnes Scott College.
May 12th, Saturday: Moon near Uranus. DSO at Woodruff - Contact Daniel Herron for Details.
May 16th, Wednesday: New Moon.
May 17th, Thursday: Moon near Mercury.
May 18th, Friday: AAC Meeting at White Hall, 8PM, Emory University.
May 19th, Saturday: Moon 3/4 deg north of Venus at 10:30PM.

Atlanta Astronomy Club Listserve

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

Focal Point Deadline and Submission Information

Please send articles, pictures, and drawings in electronic format on anything astronomy related to Kat Sarbell at focalpoint@atlantaastronomy.org. Please send images separate from articles, not embedded in them. Articles are preferred as plain text files but Word documents are okay. You can submit articles anytime up and including the deadline date. The deadline for May is Thursday, April 26th at 4:00 PM .... Submissions will no longer be accepted after the deadline.