

# The Focal Point

The Atlanta Astronomy Club  
Established 1947  
December 2002

Vol XV No. 7

Editor: Keith Burns

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## Christmas Potluck Dinner

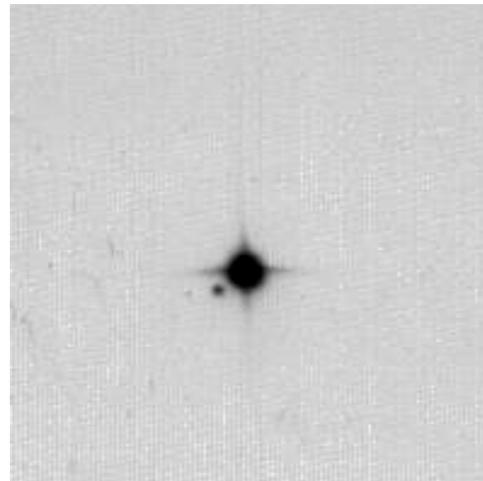
On Friday, December 20<sup>th</sup> at 7:30 we will hold our annual potluck dinner and planetarium show. Ham and turkey will be furnished by the club – all you have to do is bring your favorite dish! After dinner, we will adjourn to the planetarium and enjoy the show with either/or Amy or Chris. Come join us for this festive event! Any questions, please contact Carol Abernathy.



Gingerbread Bradley created by Amy Lovell.

Upcoming in January, we will visit the new planetarium and check out the new Zeiss telescope at Emory University with Richard Williamon. More details to come next month!

## The North Star (Polaris) and companion star.



The image at left was taken by Jack Schmidling with a 10" Newton at f/6. It was exposed 60 seconds on Tmax 400 film.

## General Meeting – 16 November, 2002

Approximately 45 members and guests attended the August General Membership Meeting of the AAC held at Emory University's White Hall. **"Bear" Simmons, President**, opened the meeting and welcomed 2 new members as well as several guests to the evening's meeting. The business meeting was short and continues to emphasize Bear's efforts to shorten that portion of our meetings. Additionally, the meeting emphasized the presentation of three short features presented by club members. **Harry Falise's** short feature "Whassup?" provided members with a quick review of astronomical events of note for the next month. **Rich Jakiel's** short feature "Astronomy 101" explained the Hubble system of galaxy classification; and **Tom Faber's** short feature "NASA 101" reviewed current NASA missions and their status. **Philip Sacco, Charles Elliot Wildlife Management Area (CEWMA) Chapter representative**, announced that the next chapter meeting would be on 16 November at 5PM and will focus on CCD photography. Additionally, **Rich Jakiel, Dark-Sky Committee Chairman**, announced that he will hold an organizational meeting at CEWMA just prior to the chapter meeting. **Carol Abernathy, Programs Vice President**, announced that the December General Meeting will be held at Agnes Scott College's Bradley Observatory

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and will consist of a potluck dinner to be followed by a presentation in the planetarium. The club will provide turkey and ham for the potluck and attendees were asked to bring a side dish. **Carol** then introduced the evening's speaker, **AAC member Michael Covington** who discussed his two recently published books on astronomy: "How to use a computerized telescope" and "Celestial objects for modern telescopes." **Bear** closed the meeting at about 9:40PM. Many members met afterwards at Melton's App & Tap on North Decatur Road to continue discussion of the evenings' topics and things astronomical. For more information see Michael's website at (<http://www.CovingtonInnovations.com>).

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## Scouter's Winter Campout

AAC members are requested to assist with teaching astronomy to the adult leaders, known as scouters. Anyone who would like to participate should contact John Lentini ([johnlentini@yahoo.com](mailto:johnlentini@yahoo.com)) or call 770-984-0175. (Posts to this list will not work.)

January 10-12, 2003. the "Scouter's Winter Campout", about 300 adult leaders—no boys—will happen at Woodruff. This is always a good time. The AAC has been there for the last three years.



Where did I put that telescope?

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## AAC Board of Directors Meeting – 27 October, 2002

**General.** AAC Chairman of the board, Chuck Painter, called the meeting into order at 3:15PM and closed the meeting at approximately 5:30PM. AAC members attending were Bear Simmons, Ken Poshedley, Sharon Carruthers, Harry Falise, Gil Shilcutt, John Lentini, Chuck Painter, Carol Abernathy, Keith Burns, and Art Russell. **Actions.** The following actions were made or reviewed during the meeting. **AAC Vice President – Observing, Sharon Carruthers.** Loaner Telescope Program:

Revise and publish guidelines for the club's Loaner Telescope Program. Equipment Spreadsheet: Distribute the Equipment Spreadsheet to board members and determine replacement value of listed items, as well as note errors and omissions. Survey 20 inch telescope at Villa Rica: Tentatively scheduled for 16 November. Determine location and disposition of 6 inch Dobsonian telescope. Determine location and disposition of 12 inch telescope. **Treasurer, Harry Falise.** Resolve identity of cash on hand funds with previous treasurer. Investigate investment opportunities and make a recommendation to the Board about club funds currently in savings and checking. Revision of Membership Packet. Reimbursement of AAC Member Tom Crowley for Atlanta Astronomy Expo related expenses. **AAC BOD Member, Ken Poshedley.** Research actions to secure copyright of AAC Logo. **AAC BOD Member, John Lentini.** Research the cost of building additional telescope pads on the observing field. **AAC BOD Member, Rich Jakiel.** Organize the Dark Site Committee and prepare a recommendation on duties and responsibilities of the Dark Site Committee to the board modeled on that of the Membership Committee. Act as Chairman of a committee to coordinate documentation of AAC activities. **Agenda-Officers' Reports. President, Bear Simmons.** Bear is pleased with the results of this year's Peach State Star Gaze (PSSG). He is also pleased with the initial results of the latest changes to the format of club's monthly General Meeting. These changes continue to emphasize a shorter overall meeting format, but with the addition of two new program features; "What's Up," and "Astronomy 101." He is also hopeful that a club member can be found to host a "NASA Minute" to provide club members with a quick review of current NASA initiatives with an emphasis on those with an astronomy focus. **Vice President - Programs, Carol Abernathy.** In reviewing the nature of previous speaker presentations, it was suggested that the Programs Chairperson should ask future speakers how they would like to handle audience questions. Carol still has a number of books autographed by previous Peach State Star Gaze (PSSG) speakers Wil Tirion and David Levy. Discussed was how these books might be best disposed of to the club's best advantage. Suggested was sale of the books as well as their use as door prizes, or objects of raffles. Funds are still to be received for the purchase of books at the PSSG. November General Meeting - The featured speaker will be AAC member Dr. Michael Covington who will speak about the publication of his latest two books. December General Meeting - The annual Christmas General Meeting is tentatively scheduled for 20 December at Agnes Scott College's Planetarium. **Vice President - Observing, Sharon Carruthers.** 15 AAC members attended the annual picnic, resulting in questioning the continued popularity of the event. Sharon reviewed the observing events for the next month that are listed elsewhere in the newsletter and on the AAC's website

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at <http://www.atlantaastronomy.org/docs/calendar.htm>. Improvements at the Walter Barber Observatory were discussed including a privet hedge and a survey of the 20 inch telescope. Also discussed was the addition of a 50mm or 80mm finder scope to the Woodruff 24 Inch Tectron telescope. Discussed was the disposition of three AAC telescopes not currently kept at either the Walter Barber or Woodruff Observatories: (1) 6 inch Dobsonian. Telescope was converted to a Dobsonian mount from previous German Equatorial Mount configuration. Intended to be a club loaner scope, its current location is unknown. (2) 8 inch C8 Celestron on a Super Polaris Mount. This scope is currently in the club's loaner program and is currently on loan to AAC member Steve Biegar. (3) 12 inch telescope of unknown configuration. This scope was donated to the AAC and was located at AAC member Jerry Armstrong's several years ago for storage purposes. Revision of the club's loaner telescope program was discussed as well as an accounting of club equipment. **Recording Secretary, Art Russell.** Minutes from the 15 September, 2002 board meeting were presented and accepted. **Corresponding Secretary, Keith Burns.** Deadline for submission of articles for publication in the November, 2002, Focal Point is 28 October, 2002. Reproduction costs for this month's Focal Point was \$123. Keith is continuing to research way to cut the publication costs and noted that fewer Focal Points were mailed as an increasing number of AAC members have chosen to download the newsletter from the AAC website. **Treasurer, Harry Falise.** Income and Balance Statement: Harry presented a revised Income and Balance Statement, discussion of which consumed a major portion of the meeting. A copy of the current Income and Balance Statement is available upon request from him. Discussed also were revision of the membership packet and reimbursement of Tom Crowley for expenses associated with the Atlanta Astronomy Expo. **AAC BOD Member, Ken Poshedley.** PSSG: Ken provided a short review of the 2002 PSSG and noted its successes and shortfalls. Going forward he will inquire about acquiring exclusive use of the 2002 PSSG site for subsequent PSSGs. He also promised an article to come describing the event for publication in the Focal Point. It was also observed that now was the time to create a standing committee to run the PSSG with Ken Poshedley as its chairman. He asked that the "Ladies of the Night Sky" consider taking on the mission in an official capacity, given that they have unofficially performed in that capacity for the past several years. Ken will also continue to research actions to secure copyright of AAC Logo. **AAC BOD Member, John Lentini.** John is researching the cost of building additional telescope pads on the observing field at Woodruff. **Agenda-Old Business. Vice President - Observing, Sharon Carruthers.** Sharon discussed details of the capital budget for the club's Woodruff and Villa Rica facilities. Interested members should contact Sharon and Harry Falise for the details as discussed at the meeting. **Agenda-New Busi-**

**ness.** The next board meeting will focus on establishing the 2003 operating budget. Treasurer, Harry Falise, will solicit ideas from officers and committee members for their requirements for the budget. **Next Board Meeting.** The next meeting is tentatively scheduled for 8 December, 2002, in the Druid Chase Office Complex meeting room.

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## Dec 8th Board Meeting Rescheduled

The December 8th board meeting has been rescheduled to January 12th. For more information, contact Chuck Painter via email or phone. Both are listed in the AAC Contacts section of this publication.

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## The Cream of the Crop

By Philip Sacco, SERAL

As the South Eastern Representative of the Astronomical League, or SERAL, I have the pleasure of getting many interesting late breaking pieces of news from the Astronomical League. One which was reported last year was the funding for the first ever orbiting telescope to be dedicated for amateur use. The project is well under way, and I look forward to seeing the many interesting projects turned out by the scope.

Recently, another rather interesting piece of news passed into my hands. In the wake of debate over the merits of pursuing the AL Observing Programs, and why some do and other don't bother, I thought this little tidbit would help put all things in perspective. For those new to the AAC, what I am referring to are the observing clubs sponsored by the AL which will see a new inductee recognized with a wall certificate and a lapel pin. Many club members have finished at least one such club, and at one time the AAC had the distinction of having over 10% of the national total awardees of the Lunar Pin. I am in the process of researching exactly how many awards have been gleaned by the AAC, and how we stand compared to the national numbers.

In doing so, I came across the following information.

Currently, the AL has over 21,000 members. I have not gotten a total tally of the number of awards overall that the AL has presented,



but I did find out who the top standings went out to. The AL has 19 active observing clubs. The recent inductees are noted quarterly in *The Reflector* under the various observing club headings. The clubs include- the Sunspotter, Asteroid, Earth Orbiting Satellite, Meteor, Lunar, Planetary, Messier, Binocular Messier, Universe Sampler, Deep Sky Binocular, Southern Sky Binocular, Urban, Herschel I, Herschel II, Arp Peculiar Galaxies, Caldwell, Double Star, Galaxy groups and Clusters, and the

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coveted Master Observing Program.

In first place, we have a tie- each with 16 pins. First Place is held by **Peter Detterline** of Lehigh Valley Amateur Astronomical Society, and **Jim Ketchum** for the Astronomical Society of Kansas City.

Second place finds a three way tie with each awardee holding 13 pins each. Here we have **Bill Warren** of the Flint River Astronomy Club, **Scott Kranz** of the Astronomical Society of Kansas City, and **Jonathan Cassleman** of Spokane Astronomical Society.

Holding third place all on her own with 12 pins to her credit we have Katarina DeWitt of the Neville Public Museum Society.

Bringing up the rear in fourth place I was most surprised to find yours truly, Philip Sacco, tied with seven other AL members with 11 observing clubs to our credit.

Speaking for myself, a lot of observing hours go into completing any one of the programs. The Herschel I program took me over 6 years to complete, and the Lunar Club took over 13 months. I confirmed my personal experience with others whom I know, and the average seems to be about a solid year of steady observing being required to finish any but the toughest programs.

Our most recent awardee is **Art Zorka**. Art was inducted into the Universe Sampler Club, and with this award, Art has joined the rare league of club members holding 6 or more club pins.

Now- why all the hoopla you may ask, especially if you disdain the AL programs, or don't know of them. The simple reason is this- there is a growing number of members finding the value in the programs. To complete the typical program will take planning, dedication, and a lot of **OBSERVING**. If for no other reason, I would say this is reason enough, just to know that participating in one of the AL programs has driven a number of our members to become avid in their approach to observing, even if off a list composed by someone else. The simple fact is, it is nice for beginners to have a goal to work toward, especially one which will lead to experience with their equipment, time under the sky, and a specific list of criterion to be met. All of the observing clubs require some form of accurate record keeping verifying the observing requirements, and when you think about it, aren't all of these habits followed by ANY serious amateur? Even if you are not participating with the AL observing programs, when you go out to observe, I will wager you 1) have some sort of list you work from, 2) have some sort of personal goal or agenda you are following, and 3) make some sort of notes on your observations.

That leaves only that small cadre of amateurs who argue against observing unless you are 'contributing to science.' Now...how many of us are doing that. Very few, very few indeed. Not that there is anything wrong with observing for personal gratification, enjoyment, and education, but the simple fact of the

matter is that by following the AL observing criterion for the various Observing Clubs, the ground work is laid for any observer to have the basic skills to turn their observations over to an organization doing 'true science' such as ALPO, or the AAVSO. Very little can be learned from an unstructured observing session, and this too is something those of us learn after completing an observing program.

The key is not to see how many pins one can acquire, but what can be learned along the way. With the growing list of special interest observing clubs, I know I will personally look forward to expanding my horizons by trying them all. I have created an expanded 'Lunatic Challenge' for the truly moon eyed, and to date not one person has completed it. Recently, I have begun to create two additional clubs for consideration by the AL. Who know's, maybe one of them will whet your fancy.

It may be a little thing, but it is nice to show off my pins and discuss them with our members, especially knowing what a small cadre of the 21,000 members sport as many. This too is a sentiment I know is shared by at least one other among this elite list of individuals, and most any of our club members having at least two pins will attest and agree. Getting out and doing the observing is what we love the most. If working from a set list will expose me, or anyone else, to a type of observing special interest that may not have been considered, then I say the AL is onto something with the programs and will gladly support them.

Try one...you might just like it! If nothing else, it is always fun to recognize our members for their accomplishments, and I am sure you will display your pins as proudly as I display mine.

Clear Skies, and good hunting!

**Master Observer #11**

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 fee's 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 & Tel or Astronomy can be purchased through the club for a reduced rate. The fees are **\$30** for Sky & Tel and **\$29** for Astronomy. Renewal forms will be sent to you by the magazines. Send the renewal form along with you check to the Atlanta Astronomy Club treasurer.

**Club address is:**

Atlanta Astronomy Club  
PMB 305  
3595 Canton Road A9  
Marietta, Georgia 3006

**Treasurer's address is:**

Harry Falise AAC  
4300 Jimmy Carter Blvd, Apt #107  
Norcross, Georgia 30093

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.

## **GASP (Georgia Astronomy in State Parks)**

Joanne Cirincione

### **Unicoi State Park - November 2, 2002**

We had a great crowd at Unicoi State Park. Over 130 campers came to see us. We didn't have "The Luck of the Irish" with the skies but they were thrilled with Sharon's presentation on Basic Astronomy. They hung out for a while with us and we showed them the scopes that we had set up. I want to thank our members who showed up on a very cold winter weekend. Thanks to: Sharon Carruthers, Peter Macumber, Keith Burns, Frank and Ann Marchese, Charles Hinley, Holly & John Ritger, Tom Faber, Kat Sarbell and Harry Falise.

Below is a letter of thanks from Ellen McDonnell, Ranger from Unicoi:

Georgia Department of Natural Resources

### **Parks, Recreation and Historic Sites Division**

#### **DNR Unicoi State Park**

November 6, 2002

Dear Joanne, Sharon, and all of the Astronomy Club,

We want to thank you for your time and energy that you volunteered for our Astronomy Night again this year. We unfortunately can't control the weather. However, I was excited to finally get to meet all of you and to be able to put faces with names.

Thank you for your efforts in getting out all of your equipment, not knowing what the outcome would be. We hope that you enjoyed the accommodations and Unicoi for the weekend. Sharon, I enjoyed your slide presentation, as I'm sure the attendees did as well. I look forward to seeing the "Sidewalk Astronomy" program next year!

I did pass along your information to our Interpretive Specialist, Cindy Reittinger, in our Atlanta Office. I hope you will get more invitations from other Georgia State Parks.

We look forward to working with you next year! Thanks again so much for your help and let me know if I can ever do anything for you!

Sincerely,

Ellen McConnell,

Recreation Director

### **Red Top Mountain State Park - November 16, 2002**

Red Top was a rain out, but we managed to have a blast anyway. It rained most of Friday and Saturday but stopped Saturday afternoon. We were able to have a campfire all day and even watch the Dawgs! For a foggy, wet and dreary evening we managed to get about 15 campers to come watch the slide presentation. Not bad for a wash out. Members attending: Peter Macumber, Sharon Carruthers, Harold and Claudia

Champ, John & Holly Ritger, Keith Burns, Charles Hinley, Kat Sarbell and Tom Faber.



### **GASP in 2002**

Whether or not we had good weather or bad, we always seem to bring astronomy to the public. Whether it is 12 people or 130 we feel that our events are a success. We have met so many

people and have brought the Atlanta Astronomy Club's name to many, many people. We already have bookings for next year. We do need your help. Please come out and join us at some or all of the events next year. We can always use the help and company. This is a great place to relax and get to know each other on a different level. As we wrap up this season's event, we are looking ahead to next year. As soon as we have dates scheduled, we will be posting them on the GASP listserv and on our website. Just keep in mind that the campgrounds fill up fast. So if you are at all interested in joining us, plan ahead.

Thanks for a great year to all who helped make GASP a success once again! If you have questions please feel free to e-mail me at: [starrynights@atlantaastronomy.org](mailto:starrynights@atlantaastronomy.org).

SEE YOU IN 2003!

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## **The Sky 101: A Beginners Introduction**

### **Part I: How the Sky Moves**

Many beginning amateurs get confused when they try to figure out where to find celestial objects and how they move through the sky during the year. There are 3 primary motions, that work in conjunction:

- 1) the *rotation* of the Earth on its axis
- 2) the *revolution* of Earth around the Sun
- 3) the *proper* motion of each specific object

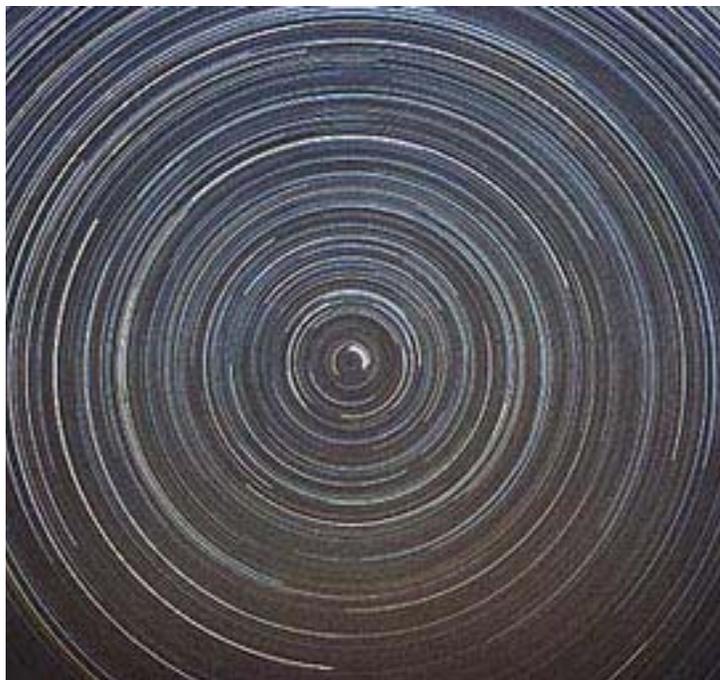
(N.B. While rotation and revolution are really due the Earth's movement, astronomers traditionally describe celestial motion based on a stationary Earth and moving sky.

**ROTATION:** The Earth rotates counter-clockwise on its axis once every 23 hours and 56 minutes, relative to the stars. This is a *Sidereal Day*, sidereal meaning "star". However, the Earth also moves in its orbit while it is rotates, so it takes an extra 4 minutes to return to the same point relative to the Sun. Therefore, a *Solar Day* is 24 hours. This means that objects rise 4 minutes earlier every night .

The distance from the polar axis, marked by the star Polaris, to the northern horizon, is equal to your latitude ( i.e. in Atlanta, Polaris is 35 degrees above the horizon, the same as our latitude). All the objects within this 35 degree radius are visible all

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year and revolve counter-clockwise around Polaris once a day. (On a star chart, this would be everything higher than 55 degrees *Declination*).



Stars moving around the north star in picture above.

Any object below this, in the southern sky, rises in the east, moves across the sky and sets in the west on a daily basis.

**REVOLUTION:** The Earth orbits the Sun once every 365.259 days. While celestial objects are in the sky all year, the glare of the Sun washes out their light unless they are positioned on the Earth's night side. The Earth's atmosphere, bounces sunlight around the terminator (the line between the dark and light) of the Earth, causing morning and evening twilight. As a result, we see less than half of the sky each night.

As the Earth revolves around the Sun, it moves through a tad more than one degree each day; or about 30 degrees each month. As explained above, this causes the stars to rise 4 minutes earlier each night or two hours earlier each month. From our point of view, the Sun moves 30 degrees *eastward* across the background stars each month, covering up the constellations to its left-hand limb (which we see in the evening sky after it sets), and uncovering those to its right.(which we see in the morning sky before it rises).

**PROPER MOTION:** Every celestial object has its own intrinsic or proper motion. Almost all objects in the Solar System (except for a few moons, asteroids and comets) move counter-clockwise around the Sun. Over time, they move *eastward* across the background stars. This is called prograde motion.

However, because the Earth moves faster in its orbit than the outer planets; when they are in opposition (i.e. in line with the Earth and the Sun), it overtakes and passes them. Like a car passing a slower car in another lane, the planet appears to slow

down, then move backwards for a short time (moving westward against the stars). This is called retrograde motion.

**IN SUMMARY:** All celestial objects move from east to west on a daily basis due to the rotation of the Earth. The constellations move westward over the course of the year due to the Earth's revolution around the Sun. The Sun, Moon and planets move eastward over longer periods of time that depends on their own unique orbits.

### Newsletter Deadline and Info

Please send articles, pictures, and drawings on anything astronomy related. All formats are acceptable. Pictures can be sent as either JPEGs, GIFs, or other formats. I can also scan hard copies of pictures. Articles can either be sent to Keith Burns 3740 Burnt Hickory Road Marietta, Georgia 30064 or email at **Keith\_B@bellsouth.net**. You can submit articles anytime up and including the deadline date. The **deadline** for the **January issue** is **December 28th**.

### Get the Focal Point Online

The Focal Point is available online in PDF format. The PDF version is also in color. The free Adobe(R) Reader allows you to view, navigate, and print PDF files across all major computing platforms. Download the free reader at [www.adobe.com](http://www.adobe.com)

Visit [www.AtlantaAstronomy.org](http://www.AtlantaAstronomy.org) on the web. The link to Focal Points is located at the top of the front page of the website. If it works for you and you want to get the FP via email, send Peter Macumber an e-mail at [pmacumber@AtlantaAstronomy.org](mailto:pmacumber@AtlantaAstronomy.org). The Focal-Point web can be entered by using the Username of **AAC** and a password of **Moon**. These names are case sensitive! Type **AAC** and **Moon** exactly as you see it here.

[From Brobdingnag to Lilliput:](#)

[My Travels Through 30 Years of the Space Program](#)

**By Diane K. Fisher**

In the early 70s, as minor character in the Apollo Program, I worked in the Vehicle Assembly Building at KSC. Stepping into the VAB, I felt like the incredible shrinking woman. The space inside accommodated six 45-story office towers with vast open spaces to spare. In the vertical spaces between the office towers, the 363-foot high Saturn Vs were assembled.

From my third floor office in one tower, I often delivered documents to higher floors in other towers. Between riding the stomach-dropping glass elevators and dashing across to other tow-

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ers on narrow, open catwalks at the 28th or 44th floor levels, I soon overcame my fear of heights.

On these excursions, I would see the Saturn Vs come together in the 500-foot high bays. After hundreds of engineers and technicians had toiled around the clock for months, the morning of high-bay rollout would arrive. Slowly, the Crawler Transporter would bear forth the Mobile Launch Platform and the majestic Saturn V rocket. The morning sun reflecting off its gleaming white form would take my breath away.

The last Apollo mission was 30 years ago. As the Apollo program ended, some thought human missions to the Moon, Mars, and beyond would continue apace. Though they didn't continue, the Apollo program remains a single, large step in our technological evolution as a species. It is a great tribute to the intelligence, ingenuity, and dedication of the people responsible for the Apollo missions that they were so successful and the disasters so few. NASA's program today continues to build on the technological and managerial legacy bequeathed us by Apollo.

And just where are we now? Among its other tasks, the International Space Station is teaching people to live in space for long periods. Robotic space missions are studying issues like land use and global warming and discovering the wonders of the universe, its history, and our place in it. With humanity's many other pressing needs, such quests must be done efficiently.

Part of NASA's mission is to develop the technologies to do cost-effectively what has never been done before at all. NASA's New Millennium Program develops and validates new technologies for space. Missions such as Deep Space 1 and Earth Observing 1 carry and test multiple new technologies (such as ion propulsion and advanced imaging instruments) previously untried in space. And, unlike the Saturn V, the ultimate gas-guzzling muscle car of the 70s, the new technologies must be the "zero emission" vehicles of the 21st century—small, efficient, and capable beyond anything done before.

Many of the New Millennium technologies are described for adults at [nmp.nasa.gov](http://nmp.nasa.gov) and for children at The Space Place, [spaceplace.nasa.gov](http://spaceplace.nasa.gov).

*Diane K. Fisher is the developer and writer for The Space Place web site.*

*This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.*

exceptions, most people will grant you permission.

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**Woodruff Observ. Coordinator:** John Lentini 7-984-0175  
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**Webmaster Charlie Elliott:** Maria Zorka [dotters@surfbest.net](mailto:dotters@surfbest.net)

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## *The Focal Point*

Newsletter of The Atlanta Astronomy Club, Inc.

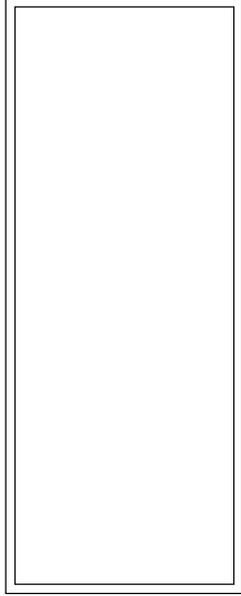
FROM:

Keith Burns  
3740 Burnt Hickory Road  
Marietta, Georgia 30064

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

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

**FIRST CLASS**



## Calendar

**December 14th- CEWMA open house.**

**December 20th- Banquet and Christmas Program** at Bradley Observatory. See article on page one for more details and person to contact.

**January 4th- Deep Sky Observing** at Woodruff.

**January 10-12th- Scouter's Winter Campout** at Woodruff. Sidewalk astronomy with the scout leaders and camping in the cool winter air. Contact John Lentini for more information.

**January 12th- Board Meeting.** Time 3PM. Location Carol Abernathy's Office Conference Room. See Carol and Chuck Painter for more details.

**January 17th- General Membership Meeting.** Starts at 8PM. Chance to see the new science building digs at Emory University.

**January 17th- Planning meeting** to follow membership meeting. Setting up the events calendar for the next six months is the agenda.

**January 25th- Open House and Orientation** at our Villa Rica Observatory location. "How to Use a Telescope".

**February 1st- Dark Sky at Woodruff.**

**February 8th or 22nd- GASP** - Sidewalk astronomy at Skidaway State Park near Savannah. Exact date to be confirmed later.

**February 21st- General Membership Meeting.** Starts at 8PM.

**March 1st- Dark Sky Observing** at Woodruff.

**March 8th- Open House and Orientation.** To be held at our Villa Rica Observatory.

Visit the new Charlie Elliott Chapter Website for more information on upcoming meetings and happenings. <http://touchmoon.com/ce/index.shtml>