

# The Focal Point

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Editor: Peter Macumber

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## From the Prez

Happy New Year, everybody! Did you get that new eyepiece that you told Santa about? Or was it a special eyepiece case or thermal underwear for those really cold Villa Rica or CEWMA observing sessions? Me? Heck, I'm the only guy on my block to get a rolling ladder. It's interesting to learn how original our spouses, significant others and friends can be at this time of the year. With the backyard observatory now virtually complete, it became obvious that a painter's ladder was not going to suffice anymore and that a certain kind of ladder was needed – especially because the scope is of the non-rotating tube variety. That means observing objects at a high celestial altitude puts YOU at a high altitude as well. And that was proven when Mr. Sacco miscounted the number of steps he was at and took a slightly nasty fall one night here in Snellville (sorry Phil. I guess I owe you some more bandaids). But now, thanks to my wife's ingenuity – and assistance from at least one other AAC member – I'm now the proud owner of a five-step, metal ladder complete with wheels and metal railing. And now upward we go!

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Officiandos of the famous book *Atlas of the Moon* by Antonin Rukl have often wondered what he looks like. Or what more there is to his background beyond the sort of abbreviated description on the book's paper dustcover. Unfortunately, the dustcover also does not include a photo of this famed cartographer so dear to our lunar-oriented hearts. So for the first time that I know of, we present to you more on Mr. Rukl – he goes by the name Tony, by the way – and a nice color photo of him with his wife Sonja who will accompany him here. (Those of you who get this via snail-mail



will have to make do with a simple black-and-white image.)

In a recent e-mail reply to me, Tony told me more about himself: "I suppose you discovered some basical data about me printed on the jacket of my *Atlas of the Moon*. After 39 years work in the Observatory and Planetarium of Prague my retirement is very close. I was acting many years as a head of the Planetarium Prague and I am now a vice-president of the International Planetarium Directors Conference /IPDC/. In November I will take part in the IPDC'99, organized by the Buehler Planetarium, Florida. This will be the official end of my career as a professional planetarian. Then I hope to have

more time for my writing and cartography of the Moon and solar system bodies, because all my books and charts were produced at home, not as a part of my job."

He continues: "I am 66 years old with a wife Sonja /also 66, retired/, a daughter /Jane, 30 years, doctor of medicine/ and a son /Mike, 28 years, computer specialist, system analyst and my personal teacher and consultant in my computer-activities/. As an observer I cannot compete with you. Yes, through the fiftieth and sixtieth I spent a lot of time observing the Moon and planets with the telescopes of the Prague observatory but later there was no time for this. Also, the lunar cartography methods changed substantially in the space age. Our flat (apartment) close to the city center, surrounded with the tall buildings, without the backyard gives very limited opportunities for the sky observations. I haven't any telescope at home if not counting a pair of binoculars, but I am thinking of purchasing a small, portable instrument for occasional observing."

A footnote: Tony did attend the IPDC meeting at Fort Lauderdale, Florida, last November, and he is now officially retired though he remains a part-time worker at the Prague Planetarium. Those of you planning to attend the PSSG, I'd advise you to either bring your own copy of his book or else contact AAC treasurer Sharon Carruthers (770-941-4640) to order your copy from either Kalmbach Publishing or Sky Publishing (both companies now carry it). This is ONE book you're going to want autographed!

Tony does visit the AAC website, so I just wanted to say, "Hi Tony and Sonja! We can't wait to see ya!"

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## Eyecatching AAC Website

### Now Even Easier to Use

**By Stephen Blalock**

HAPPY NEW YEAR!! To kick off 2000, I would like to announce that the club's website has received a face-lift. Since I haven't met many of you, let me take this opportunity to tell you a little about myself. I work at the Georgia Tech Research Institute and live in Mableton, GA where I fight the light pollution with my Meade 10" Starfinder and ETX-90/EC. I have been a member of the club and have maintained the club's website since 1996. This is the second redesign that has occurred on my watch, and I hope that it is an improvement in both style and content.

The URL for the site is <http://stlspb.gtri.gatech.edu/astrotxt/astrotxt.html>. However for easier access you can reach it via <http://aac.cjb.net> or <http://astronomer.cjb.net>. If you're already familiar with the old AAC website, the first thing that you will notice about the site now is that the look and feel has totally changed. The homepage has two sections, the navigation bar and the notices bulletin board. The navigation bar allows the user to easily access the other areas of the site while the bulletin board gives important announcements and club news.

The five main areas of the site are **Events, Membership, Almanac, Links, AAC Swap Shop, Feedback, ATM, and Features.**

## Events

This area contains details about upcoming club events. The area is formatted as a table of contents linked to supporting pages. The details of each event, including directions and maps in some cases, are contained on the supporting pages. Documents in the following formats can be accepted. Simple text, MS Office 97 (.doc, .xls, etc...), Adobe PDF, or HTML. Submit the event at least 3 days prior to event date to ensure that it will be posted in time. Images to be submitted should be in .jpg format. I have some maps / directions that are used for the following locations.

**Villa Rica Observatory:** Map & directions

**Emory University White Hall:** Map

**Dauset Trails:** Map

**CEWMA:** Directions

If you have maps / directions to other areas please include them with your event listing in the e-mail.

## Membership

This area contains general information about membership to the AAC. Fees and contact information are given as well as an application that can be printed and mailed to the club.

## Almanac

The almanac area contains information vital to observing. There you will find a list of Sun and Moon risetimes for Atlanta and near real-time satellite and radar views of the state. The weather forecast is also linked into this page.

## Links

This area contains links to astronomy related websites. This list was current as of January 1, 2000, but please let me know but please let me know of any links that are no longer active so I can delete them.

## AAC Swap Shop

This area is maintained to allow members and others across the southeast to post items either wanted or for sale. You may e-mail me your posting to the address on the webpage. Please include the following information with your ad. Item for sale or wanted, details

such as accessories or requirements, price, and contact information ( name, phone / e-mail ). Also, please notify me when an item is no longer available so I can remove it from the site.

## Feedback

Please send any comments or suggestions about the site to me.

## ATM

This area provides information to those who are interested in Amateur Telescope Making. It includes club contacts, vendors, related websites, and books.

## Features

This area contains articles written by club members on various subjects. PDF formatted documents are preferred.

Again, I welcome comments and suggestions on ways to improve the site and I hope that the new site improves the flow of information about the club. Have a great 2000!!

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## A Bright Mysterious Light In The Night Sky

### *By Philip Morgan*

At four in the morning, Sunday, December 5<sup>th</sup>, I had insomnia and got up to raid the cookie jar and study the stars. I started at the Big Dipper, the first star my mom pointed out when I was a child. Actually the dipper is an orientation star for me. I draw an imaginary line between the two stars at the end of the dipper's bowl farthest from the handle. By continuing this line I find the bright Polaris, the pole star, and from there I pursue learning to identify the constellations. On a clear and moonless night at about 4000 feet, the mountains are a much better viewing place than any of the cities I've lived in. This is my time in life to study the heavens.

After staring at a starry sky, around 5:10 AM Sunday morning the cookies had disappeared. I decide to give sheep counting another try. Just as my head hit the pillow, I looked out across Balsam Gap and "wow" a huge yellow orange fireball with a trail of blue and green sped across the mountains.

My first reaction was disbelief and then I became fearsome like early man must have under the same circumstances. It's was scary, as something strange was happening in the sky.. I called 911, "got any reports of planes down?" I asked. "No sir, but we will check it out," the 911 dispatcher said politely. I explained the fireball direction was west to east in the south sky and it looked close like it went down in the Waynesville reservoir. I waited for a big splash that never came. Such sightings locations are visually difficult to pinpoint and can be deceptive by hundreds of miles, I'm told. Later, I figured I only miscalculated by about 350 miles.

After I hung up the phone, I wondered if the dispatcher believed me. Actually I was questioning myself and feeling a little embarrassed that I had bothered him. Then I got wired, I hit the internet and my search words were falling stars, astronomy, and meteorites. Got it! I said to myself when fireball meteorites were described.

The publisher of Meteorite Magazine emailed me this message "Most of the time fireballs completely disintegrate in the atmosphere but there are some, depending on the physical circumstances, which make it to Earth. When it lands on Earth, it becomes known as a meteorite." said Joel Schiff of Auckland, New Zealand. "A meteorite is a big deal and depending on size can be worth thousands of dollars. Usually when one lands, it is like flies to a honey pot," he said.

Monday morning, I started calling around like a reporter should but this time I was on a personal star trek mission. My disbelief increased as I hit dead ends. No confirmed sighting in Haywood County, I was finding out. Maybe I was dreaming, I thought. Finally on a call to UNC-A, the student who answered the physics department phone, yelled out "anybody hear about a fireball meteorite". Back on the phone with me, he said "someone saw something on television. this morning". My mind lit up. All right! I hit the internet again. On a homepage for WFSA-TV, Montgomery, Ala. was the story. Hundreds of people from Georgia, Florida and Alabama had observed a mysterious bright light and called 911. I had my observation collaborated. This impressive three second event is at the top of my personal list of this years most memorable experiences.

Where did it go I wondered. As a star search sleuth, I found a fellow named J.O. Bailey. We talked on the phone. Mr. Bailey was happy to be a celebrity witness to the event.

He is a 74 year old retired CSX railroad electrician who lives alone on Jordan Lake near Titus, Alabama. I drew a straight line on my map from Waynesville to Titus. We were on a similar line of sight. Now Bailey and I know each other as the result of a common happening. Traveling on the same green planet in space we were awake at the same time Sunday morning.

Mr. Bailey had gone outside for a "smoke". Suddenly, toward the lake about 150 yards away he experience "a brilliance of light like two hundred arc welders concentrated in one small spot". "I could have counted every blade of grass. It's what my mother use to call a falling star," he said. After Mr. Bailey had gone inside he heard "a muffled rumbling sound like distant thunder". Then it was over.

I wanted to name the object a Christmas Star but if nothing is found it will in factual terms remain a December delivery of debris from space. Someone suggested that something got knocked off of Mars by the failed red planet lander that has left many scientist and engineers red faced. Actually a baker's dozen of meteorites have been proven to have originated from Mars, including one dubbed Lucky Thirteen found in the Sahara desert. A meteorite fell and killed a dog in Egypt and a forty pounder landed ten feet from a farmer working in his corn field in Nigeria. In 1992 one increased the value of a Mrs. Knapp's old Chevy in Peekskill, New York. Most come from asteroids, a few from comets and about fifteen are of Lunar origin. Worldwide there are over twenty thousand rocks from space in collections.

Truth is this piece of what ever it was could have been falling for thousands of years. At a particular moment in time it entered the earth's atmosphere to the amazement of a few fortunate fellow travelers.

By a power of nature, by accident or by design, I felt I had received a gift from outer space. For sure, I was on the same timeline with some action far beyond. This light in the night made me wonder why.

## Astro Images

By Geoff Powers



Happy New Millenium, astronomical enthusiasts! Hope everyone enjoyed our holiday season, and "Y2K bugs" have been nothing more than hype!

Our last AstroImaging session at the pre-renovated Bradley Observatory was rather uneventful. (A scheduling conflict with Fernbank.) However, HEY! ...speaking of Fernbank, I spoke with Ralph Buice, Fernbank employee, and AAC liaison for that fine institution, about the possibility of moving our AstroImaging group there during the Bradley remodeling. This is worktable, but due to Fernbank's schedule policy for such events, a semi-permanent, regular meeting, (like first Friday) is not possible. I have to schedule each meeting individually, on a meeting to meeting basis. As the days grow longer and the weather slowly warms again, my work schedule intensifies, These factors combined have led me to schedule our get togethers on a quarterly agenda until work is complete at our old digs, The Bradley. This means meetings in March, June and (if necessary) September at Fernbank. This also allows me to avoid prime observing weekends and other schedule conflicts. Specific dates will be announced in future Focal Points. This is also assuming I'll continue as AstroImaging chair after our next club elections in May.

I hope to involve other experienced, advanced club members during these meetings at Fernbank. I want to delve into through-the-scope deep sky exposures on film, as well as CCD imaging. Possibly for March, I would like to have Rich Jakiel take the reins for instruction on sketching to the eyepiece, the original and still very effective form of AstroImaging. I'll speak with Ralph and Rich and announce the date for this event when all is confirmed. If anyone reading this has never seen Rich's techniques, look in the December 1999 Sky & Telescope, pages 126 and 127!

Since our group is going quarterly for the interim to Fernbank, I hope to schedule very interesting and informative sessions with lots of involvement form several members to share their interests and experience with our Club members. I'll announce dates and times as far in advance as possible and work with other group leaders to avoid scheduling conflicts so as many people as possible can attend and hopefully enjoy as much as I, the fascinating art and science of imaging the cosmos.

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## ATMers,

Meetings for telescope making are still taking place at various locations and anyone who wishes can spend a day with us making mirrors or other Telescope related gadgets. Solar observing may become a part of the entertainment on clear days. Generally we meet from 9 until 3 on Saturdays.

You don't have to bring anything to attend!

Contact me at Home 770-270-9402 or Email [tracy2@mindspring.com](mailto:tracy2@mindspring.com)

Tracy Wilson

## New At Elliott

### By Philip Sacco

A lot has happened in the last year and a half in working with the folks at the Charlie Elliott Management Area. I am pleased to announce the formal organization of a new chapter is in the works for that area to be hosted by the CEWMA. This will have a tremendous impact on the AAC.

The idea is to allow those potential members living far to the East of Atlanta a chance to join the club and help promote astronomy in their area as well as bring more unity to the field of amateurs in general.

The following information concerns this new venture for the AAC. We are formally beginning a membership drive of the AAC to support a new chapter at the CEWMA, beginning with our first session on January 15<sup>th</sup>, 5pm, at the activity bldg. south of the camping area.

To facilitate this event, a series of ongoing training/viewing sessions to promote and encourage the development of the Chapter are planned and ongoing. The activities will be hosted at the CEWMA Aquatics Bldg., just south of the Camp Area. There is parking, restrooms, a classroom, covered picnic tables, and external power available.

The typical meeting will include an informal guest speaker, a revolving training session with lessons from the Astronomical Leagues "Universe Sampler" observing club which is designed to assist people new to astronomy learn the ropes, followed by observing and practical experience with star charts, star hopping, etc.

Participants beginning the sessions in January should be able to complete their first National Observing Award by the end of spring. These activities are specifically geared to foster new membership in the Mansfield, Social Circle, Conyers area, as potential members in this area are not likely to participate at the other functions of the AAC. All members of the AAC are welcome to attend and support the efforts of the new chapter. I already know of about half a dozen new members we have picked up from that area just because of our activities at the CEWMA, and have spoken to a representative of a club in Rockdale County who expressed the desire of their membership to join as a chapter as well. They may carry as many as 35 new members from the Rockdale and Newton County area. I have feelers out in two other areas as well, both of which have expressed an interest in forming a chapter, whether themselves and in conjunction with our efforts at CEWMA.

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

**January 15<sup>th</sup>**, Saturday, 5pm Aquatics Bldg. CEWMA, Guest speaker-Phil Sacco, "Celestial Mythology its Purpose, and the true meaning of Astronomy". Lessons 1-3 of the Universe Sampler.

**February 12<sup>th</sup>**, Saturday. 5pm Aquatics Bldg. CEWMA, Guest speaker to be announced. Lessons 4-6 of the "Universe Sampler". Viewing to follow the meeting.

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

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

The sessions are set up to repeat the basic training every season, so that as the year progresses, the stars of each season will be highlighted and the Universe Sampler program repeated. This will ensure anyone coming on a

regular basis will learn something new. If you would like to help with the training sessions, or would like to be a guest speaker, please feel free to contact me.

Thanks and here's to Clear Skies!

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## What's going On?

### By Philip Sacco, SERAL

For those of you that have not heard, I have been elected as the SouthEastern Regional Astronomical League representative. I have eight States and 48 astronomy clubs to coordinate and communicate with as your SERAL.

One of the goals I hope to achieve in the next two years as SERAL, will be the continued support and promotion of the Astronomical Leagues observing programs. Now you have me and Keith to bug you 'for your papers, please'....GO BACK...GO BACK....There's TWO of them!! <g> (and yes, Martha, they are both 'Lunatics'). Keith has been doing a great job as our club AL rep, and I figured as SERAL, I should be able to give us all a shot in the arm with him.

The bigger picture will be to attempt to coordinate the communication of the various clubs to provide a united front on the ongoing campaign against LIGHT POLLUTION.

I feel that the development of the chapters of the AAC go hand-in-hand with this goal as providing a model for other areas to help coordinate education and the promotion of astronomy.

I will need help in this endeavor. It doesn't have to take a lot of your time. What I need are volunteers to help me contact the various clubs and get to know what concerns they have. If YOU are interested in having a lot of fun, and meeting many great people, call me. Won't cost you a dime. This is your chance to help in a small way to turn things around for us all and MAKE A DIFFERENCE. Now how many times do you get a chance like this? Sooooo... If you have any suggestions, comments, or would like to get involved, let me hear from you. This is a big project, and I am willing to lead the charge, but I can't fight the battle alone, let alone win it. If this effort fails, it will not be because this one man didn't try, but because nobody else did.

A few years ago there was some discussion as to whether or not the AL was meeting our needs and fulfilling its role. My suggestion was that if we as a club didn't like what the AL was doing, we should take more of a leadership position. Accepting this position as SERAL I have heeded my own words and 'put up'...Will you help?

Philip Sacco, SERAL, Lunatic #82- [ppsacco@mindspring.com](mailto:ppsacco@mindspring.com), 404-296-6332.

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## Comet Keith and Other Objects in the Dim Zone

### By Keith Burns

A few of us individuals made the trek out to Villa Rica and the Walter Barber Jr Observatory on December 27. Hard to believe we actually had clear skies and dry conditions. It was cold but there was no wind. The seeing was rock steady. No, this is not a work of fiction. It really did happen. Just ask Dan Ford, Paul DiBono, Charles Painter, Bobby Williams, Keith Burns, and George for any of those folks can tell you how good it was.

Chuck and I both are suffering from what those of us Herschel list people call waiting for the spring skies to rise so we can get on with the observing program. Since the moon was going to rise before midnight, there was no chance for me to work on the Herschel list. We started the night observing the dim messier M74 and even brighter M77. This immediately leads to my natural

luck and gift to find the really obscure and faint objects of neither the Messier type nor the Herschel type. Perhaps it's the excitement one feels when faced with such a challenge. Who knows? I moved to the constellation of Cetus the Whale for my next targets. First on the finding list was galaxy NGC 1087 and then its fainter companions' galaxy NGC 1090. I was able to find these gems but could not find the bright galaxy M77 for about 30 minutes. I used the Aurora 13 scope with 56 powers. Charles had to point out M77 to me before I could find it. He also would try to locate the same objects in his 8-inch Meade LX 50 scope and was somewhat successful. I quickly returned to more obscure NGC's.

We moved to the constellation of Triangulum. The first target was galaxy NGC 890. It is a galaxy about one to 2 degrees below the bottom corner star in the triangle. The visual view was that of a round stellar object. It appeared to have a companion to the lower left but we couldn't identify the other object. We looked in Night Sky Observer's Guide and found nothing. We looked in Observing Handbook and Catalog of Deep Sky Objects (by Brian Skiff and Christian Luginbuhl). We found no objects at that position. We looked in Uranometria 2000 Atlas and found nothing. Finally in a desperate act I tried Peterson Field Guide of Stars and Planets with no success. So what is this other galaxy or object? I had visions of new discoveries dancing in my head. Chuck was pushing the limits of his scope to find some of these faint galaxies. Next on the list was the larger and dimmer galaxy NGC 925. It was a barred spiral galaxy and you could actually see the barred arms with only 56X in the Aurora 13 scope. It was located about one to two degrees east of NGC 890.

Occasionally the observing would be interrupted by the need for heat. Even with new boots and plenty of warm clothes, the cold air always seemed to find that weak spot. Later on this would be the reason we left the observatory. It's too darn cold out but we are having too much fun.

I decided it was time to move to objects that were bright and first on the list came was NGC 1023 in Perseus. Very bright compared to anything else we had been looking at for two hours. I tried for peculiar galaxy NGC 1275 in the constellation of Perseus. Galaxy 1275 has two black holes at its core. This galaxy seemed to be the perfect target to look for. My hopes were soon dashed when we found that NGC 1275 is the brightest member of the Perseus galaxy cluster. Perseus a galaxy cluster is 300 million light years' distances. I abandon the search.

It's time to pull out those nebula filters. Then we moved onto the constellation of Auriga. The constellation was overhead. I tried to locate the reflection and emission nebula IC 405. It is known as the Flaming Star nebula. After I failed to find it in Aurora 13 scope, Bobby Williams tried to find it in his 12.5 inch scope. Using about 70X power and a UHC (Ultra High Contrast) filter, the nebula was not visible to us at first. We cross checked various sources we had at our disposal and discovered that the nebula was caused by the variable star AE Auriga. So we located the star again and this time actually saw the nebula. The nebula was large and filled the fov(field of view ). Flaming star also was shaped like the continent of Africa. Uranometria 2000 Atlas volume one was the source that came through for us. The nebula had a textured look like cottage cheese but without the smell. The nebula became visible the more you look at it in the telescope. Just a couple of degrees to the southeast is another nebula named IC410. This nebula has no fancy name but does surround the open cluster NGC 1893. We used the same power of 70x and the UHC filter to find the nebula. It appeared to be much brighter than the other nebula was. IC 410 also had a cottage cheese texture to it. The nebula covered the entire fov. NGC 1893 was easy to see.

I also tried to find Hind's variable nebula near the Hyades star cluster in the head of the constellation of Taurus. My search ended in failure. This is an object which I've tried to find before. It is a nebula cloud associated with the star T Tauri. The star is a variable and so is the nebula. The nebula changes shape, location, and brightness. This makes it a challenge to find. We ended the night with views of Orion Nebula. The edges of the nebula had a slight red and purple appearance to them. The size of the nebula doubled with the use of an

OIII nebula filter. The Aurora 13 scope preformed well.

In the east the moon rose. Cloud bands moved in from the north. Dry air shrank the cloud bands down to strips that quickly disappeared. In less than five minutes sky was clear again. Branches of trees sparkled when the faint light from passing cars on the road shone upon them for a second. The moon also cast a surreal faint blue white light upon the wintery scene. On the ground there was frost. The frost was thick enough to pass for freshly fallen snow. Brrrrr.....We packed up the gear and headed for Waffle House. There we found hot coffee and great conversation of the night's events.

Here's a little note about the mysterious object near NGC 890. Well I had visions of discovering a new galaxy in my head. On the computer the next day I found an email from Charles Painter about the mysterious object in question. He checked into several sources and found that it was Comet C/1999 S4 (Linear). This comet is supposed to be visible to the naked eye this summer. How about we call it Comet Keith? Comet KC (Keith and Charles)? I take it the Linear telescope won't mind that.

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## Astronomy Software

### By Peter Macumber

There has been some discussion; as of late on the web, about what software is best. This is an open-ended question, with qualitative measurements having more influence at times than the quantitative aspects of the software. It also depends on what particular type and content you want to have. Having said this, the following offer is available to all club members. We can purchase, through the club, SkyMap Pro Version 6 at a discount. The order has to be placed through the club with a **minimum of 6 orders**. The retail price is \$94. With an order of 6 copies, we can get a discount of 25%, with an order of 11 copies; we can get a discount of 35%. This is a significant deal.

SkyMap Pro 6 has all the great features of SkyMap Pro 5, plus a powerful and flexible set of observation planning facilities, and an observing log database. You can also track artificial Earth satellites, display detailed maps for solar eclipses and much, much more. For more information, visit <http://www.wwsoftware.com/>

If you wish to order this software through the club, please send me an e-mail as soon as possible, so I can determine if there is enough interest to warrant a club purchase. If the software is to be ordered, I must receive a check, made payable to the Atlanta Astronomy Club, before January 31<sup>st</sup> for **\$75.50**. (This is \$94-25%+\$5 s&h). If I receive more than five requests, I will order the software. If there is not enough interest, your check will be returned.

Any price differential worked out between the club and World Wide Software Publishing will be reflected in the actual amount you will be charged. You will be credited/charged with any difference.

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## AAC Membership & Magazine

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

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

S&T is \$30

Astronomy is \$29

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

## Edited by Gil Shillcutt

First: Plenty of news on **Mars**:

There are a lot of disappointed folks [at NASA]. Most of you probably know that NASA failed to hear from either the Mars Polar Lander or the Deep Space 2 microprobes after their arrival at Mars on December 3. Mission controllers for Mars Polar Lander acknowledge that they hold out very little hope of communicating with the spacecraft. The Deep Space 2 microprobes have also been silent, and are probably lost as well. The latest JPL status report is at: <http://www.jpl.nasa.gov/marsnews/mpl/status/mpl991207.html>

Attempts made to spot MPL using the Mars Global Surveyor failed. There's a story on this at: [http://www.space.com/science/solarsystem/mpl\\_search\\_991213.html](http://www.space.com/science/solarsystem/mpl_search_991213.html)

In better Mars news, a team of astronomers using data from Mars Global Surveyor has found evidence consistent with ancient oceans on Mars. Story: [http://www.brown.edu/Administration/News\\_Bureau/1999-00/99-060.html](http://www.brown.edu/Administration/News_Bureau/1999-00/99-060.html)

Images: [http://mars.jpl.nasa.gov/mgs/sci/mola/dec10-99rel/ocean\\_paper.html](http://mars.jpl.nasa.gov/mgs/sci/mola/dec10-99rel/ocean_paper.html)

MGS page: <http://mars.jpl.nasa.gov/mgs/>

Links to the Mars Network project, currently under study as a possible future element within our Mars Surveyor program, have been added to our Missions pages. Mars Network: <http://marsnet.jpl.nasa.gov/> Missions pages: <http://spacescience.nasa.gov/missions/index.htm>

Space Science results account for five of NASA's top ten news stories for 1999. Just so you know that Mars failures aren't the only thing that's been happening around here... bragging at: <ftp://ftp.hq.nasa.gov/pub/pao/pressrel/1999/99-149.txt>

### Jupiter:

Galileo completed the closest-ever encounter with Jupiter's volcanic moon Io, but not before giving ground controllers a Thanksgiving day white-knuckler. Once again, the Galileo team came through brilliantly.

Story at <http://galileo.jpl.nasa.gov/news/status/status991125.html>

During a recent close flyby of Jupiter's moon Io, Galileo observed a fiery lava fountain shooting more than a mile above Io's surface. Press release and images are at the Galileo page, <http://galileo.jpl.nasa.gov/>

### Solar Science:

From May 10-12, 1999, the solar wind that blows constantly from the Sun virtually disappeared — the most drastic and longest-lasting decrease ever observed. Remember to check the weather before you go out into space! Story and images at <http://www-istp.gsfc.nasa.gov/istp/news/9912/immovies.html>

The TRACE spacecraft has detected a new feature near the surface of the Sun, termed "solar moss" because its weird, sponge-like appearance resembles the plant.

Press release, with links to images:

<ftp://pao.gsfc.nasa.gov/pub/PAO/Releases/1999/99-133.htm>

TRACE: <http://vestige.lmsal.com/TRACE/>

The FAST spacecraft has established the presence of an invisible aurora by detecting upward flows of electrons interspersed with the downward flowing electrons that produce the visible aurora. The discovery provides the first detailed picture of how the aurora and its inverted companion function together to complete a huge electric circuit in the earth's magnetosphere. Shocking!

Press release, with links to images:

<ftp://pao.gsfc.nasa.gov/pub/PAO/Releases/1999/99-134.htm>

FAST: <http://sunland.gsfc.nasa.gov/smex/fast/>

Ulysses has measured the deflection of galactic dust particles by solar radiation — who's got the Lemon Pledge? Press release at:

[http://www.mpg.de/news99/news54\\_99.htm](http://www.mpg.de/news99/news54_99.htm)

Ulysses page at <http://ulysses.jpl.nasa.gov/>

### X-Ray Astronomy:

The European Space Agency's X-ray Multi-Mirror spacecraft was launched successfully on December 10, and seems to be doing well so far. We are playing a role in this mission, which in many ways complements our Chandra X-ray Observatory.

ESA XMM page: <http://sci.esa.int/missions/xmm/>

GSFC press release describing our involvement:

<ftp://pao.gsfc.nasa.gov/pub/PAO/Releases/1999/99-137.htm>

Meanwhile, a Chandra image of the Hydra A galaxy cluster has revealed a possible solution to a puzzle about the fate of such huge clusters. Press release at <ftp://ftp.hq.nasa.gov/pub/pao/pressrel/1999/99-142.txt>

Image at: <http://chandra.harvard.edu/photo/0087/>

The Chandra X-ray Observatory has also captured a rare glimpse of X-radiation from the early phases of a supernova.

[http://chandra.harvard.edu/press/press\\_121499.html](http://chandra.harvard.edu/press/press_121499.html)

A team of astronomers has used observations from the Chandra X-ray Observatory to make a discovery that sheds light on how silicon, iron, and other elements were produced in supernova explosions. It's kind of like seeing how the bomb was made by looking at the blast.

[http://chandra.harvard.edu/press/99\\_releases/press\\_122199.html](http://chandra.harvard.edu/press/99_releases/press_122199.html)

### Cosmology:

Massive clouds of gas, discovered long ago but only recently identified as being within the margins of the Milky Way, play a key role in the ability of the galaxy to churn out new stars by raining gas onto the plane of the galaxy. Story and images at:

<http://opposite.stsci.edu/pubinfo/pr/1999/46/index.html>

Within a few years, scientists may be able to "see" the shadow of the black hole believed to suck matter and even light into the center of the Milky Way. Visualize relativity at:

[http://explorezone.com/archives/99\\_12/15\\_blackhole\\_model.htm](http://explorezone.com/archives/99_12/15_blackhole_model.htm)

### Solar System Science:

A team of astronomers has found six new planets orbiting nearby stars. This brings the total number of known planets outside the solar system to 28, all of which have been found within the last five years. HQ press release at <ftp://ftp.hq.nasa.gov/pub/pao/pressrel/1999/99-140.txt>

Light from a planet circling another star has (probably) been detected for the first time. It's not exactly a picture, but it's still pretty cool, if it holds up.

[http://news.bbc.co.uk/hi/english/sci/tech/newsid\\_566000/566067.stm](http://news.bbc.co.uk/hi/english/sci/tech/newsid_566000/566067.stm)

An eight-month search has failed to detect evidence supporting a 13-year-old theory that small comets composed of snow are continually bombarding the Earth.

<http://www.uiowa.edu/~ournews/current/News/1999/dec99/eng/1216mutelcomets.html>

**NightSky.Org**

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

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

Peter

**Club Officers**

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

**Board of Directors**

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

**Standing Committees**

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

**January 8 -- Dark Sky**

Milky Way, Dahlongega

**January 13 -- General Meeting**

**January 15 -- POHO**

5:00pm, VR

**January 15 -- Universe Sampler**

5:00pm, CEWMA

**January 22 — ATM Workshop**

**January 29 — Quarterly Work Party**

VR. 9:00am

**February 5 — ATM Workshop**

**February 5 — Dark Sky**

Rockmart

**February 12 — Astro Techniques**

5:00pm, VR

**February 12 -- Universe Sampler**

5:00pm, CEWMA

**February 19 — ATM Workshop**

**March 3 — Astro-Imaging ??**

**March 4 — ATM Workshop**

**March 4 — Dark Sky**

CEWMA

**March 11 — Training**

5:00pm, VR

**March 18 -- ATM Workshop**

**April 1 — ATM Workshop**

**April 6 - 9 — Peach State Star Gaze**

Camp MacIntosh, Jackson, GA

**Atlanta Astronomy Club  
January 2000**

**Our January meeting was Thursday January 13<sup>th</sup>.**

With the Dark Sky weekend falling on the first real weekend of the month, Y2K boredom and everything else ... you should have gotten a letter giving the date, place and time for the meeting.

This months Focal Point is full. With Bradley closed for renovations, some scheduling changes are being made, so watch the list-serve and web-site for announcements.

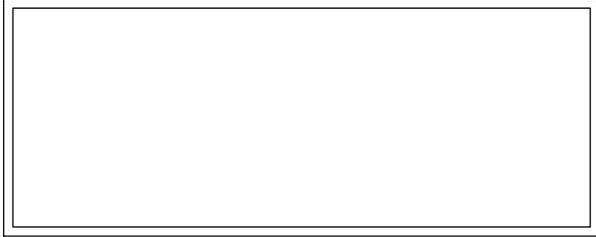
Next months Focal Point will be published during the first week of February. Please send all articles and announcements to me by **February 1<sup>st</sup>**.

I trust that everyone had a peaceful and happy New Year. As we head to the end of a millennium and get ready to start a new, I wish everyone Clear Skies and Keep Looking Up.



Newsletter of The Atlanta Astronomy Club, Inc.

**FIRST CLASS**



FROM:

Peter Macumber - *PMacumber@NightSky.Org*

1057 Trestle Drive

Austell, GA 30106

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

Atlanta Astronomy Club

PMB 305

3595 Canton Road A9

Marietta, GA 30066

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The Atlanta Astronomy Club Inc., the South's largest and oldest astronomical society, meets at 8:00 p.m. on the third Friday of each month at Emory University's White Hall or occasionally at other locations (check the hot line for details). Membership is open to all. Annual dues are \$25 (\$10 for students). Discounted subscriptions to Astronomy, and Sky & Telescope magazines are available.

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

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

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

Subscribe to the Atlanta Area Astronomers Mailing List!

Send a message to [AACList-subscribe@listbot.com](mailto:AACList-subscribe@listbot.com)

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