# THE FOCAL POINT

Vol. I, No.IX *The Newsletter of the Atlanta Astronomy Club* May 1989

### TABLE OF CONTENTS



### CLUB CALENDAR

**Next Meeting:** May 20 (Saturday), 7:00 p.m. at Cox Hall, on the Emory Campus for our annual AAC Banquet.
**Program:** Our banquet speaker, John Burgess of Fernbank Science Center, will discuss his extensive and original work with ancient calendars.

*Editor:* ..... Steve Gilbreath
*Contributing Editors:* ..... Dr. Ralph Buice, Hal Crawford, Richard Jakiel, Mark Lancaster

**The Focal Point** is published monthly during the academic year by the Atlanta Astronomy Club, Inc. The AAC is a non-profit organization dedicated to the advancement of amateur astronomy. Meetings are held the third Friday of each month (except the second Friday in December) at the Bradley Observatory on the Agnes Scott campus. Dues are $25 annually for a single membership and $30 for a family membership and include a subscription to **Sky & Telescope** magazine and use of the club observatory in Villa Rica.

*Submissions:* Article submissions are welcome, and may be delivered to the editor for consideration. Articles on computer floppy disk are encouraged.



### OFFICER'S PHONE NUMBERS

| | | |
|---|---|---|
| Leonard Abbey | *President* | 634-1222 |
| Bill Bagnuolo | *Program Chrm* | 498-5451 |
| Richard Jakiel | *Observing Chrm* | 473-9873 |
| Eugenia Abbey | *Recording Sec* | 634-1222 |
| Steve Gilbreath | *Corresponding Sec* | 634-7466 |
| Bud Rosser | *Treasurer* | 879-0304 |

### TELESCOPIC NOTATIONS

by Sharone Franklin

There are no windows in the room where I work. My only view is one of modern medical technology: microscopes, centrifuges, computers and other digitized equipment. One day my thoughts seemed to be cemented to a microscopic view of a human white blood cell when a picture of the Magellanic Clouds I had nearby caught my attention. Within my mind I could feel a fusion of inner space with outer space. The cell before my eyes had within it compartments that were equipped with substances that maintain life. A life that thrives in a galaxy of its own. I looked intensely at the cell and then at the picture of the two galaxies. The cell was symmetrical, the galaxies amorphous. The cell had been produced within the confines of the human body. The galaxies, which are some 150,000 light years away from our sun, were produced in what we conceive as openness. My eyes were but a few inches from the tiny cell, but to get inside of it, I would have to become very very small. Suddenly the meaning of far and near seemed one in the same - two distances that occupy a different space and time yet are mirror images of one another. Somewhere between these two distances lies my identity - way out there and reaches way in here - to the bone marrow that is, and both tell stories of having seen very far away of what has also been seen very near.

One cold February evening, I had my telescope focused on the open cluster NGC 2437 (M46) located in the Puppis Milky Way. This jewel box displays a planetary nebula (NGC 2438) that embellishes an already spangled ornament. It appeared unchanged from the descriptions given over 200 years ago by Charles Messier and John Herschel. Yet planet Earth, locked within a different space and time has gone through many changes, mostly as a result of the actions of its peoples. The light from this galactic snowflake has taken about 5400 years to reach Earth. What will Earth be like 5400 years from now? What will be here for the cluster's light to fall upon? What eyes will look up at the starry night and experience the ambivalent feeling of separation and unity with the universe?

One can view the Orion nebula (M42) and become lost in its diffuseness. This is where the hunter hangs his hydrogen shirt which is fastened with sun buttons. This cloud of glowing gas is estimated to be at least 20,000 times the diameter of our entire solar system. No eagle has ever flown here and no flowers have ever bloomed. It is a place filled with secrets and hideouts. But out of this tenement stars are being born - gas tissue that may have the capabilities to become the tissue of other things, such as flora and fauna. Did not the marrow of our bones evolve from simple elements vibrating within a boiling fire?

High above Orion, lies the Twins, Gemini. About halfway between the stars Kappa and Lambda Geminorum is a planetary nebula known as the "Clown Face" (NGC 2392). It has an inner gaseous shell with a somewhat lumpy pattern resembling a human face, while an outer gaseous shell appears like a parker-hood. Its central star is a 10th magnitude O8 type dwarf. The

dwarf hangs in space as a compact nuclear furnace that is divorcing itself from these outer layers of gas. Like two friends who have had a difference of opinion, one leaves and one stays behind.

With the emergence of springtime in the Northern hemisphere, the constellation Leo marches pompously across the night sky to announce the arrival of warmer weather. Followed by Virgo and Ophiuchus, the South will soon begin to feel hot humid days and nights. It will be a time of picnics and vacation planning as the days lengthen and flowers bloom to restore beauty to a lackluster landscape. With the approach of July, the summer milky way will dazzle those who care to take notice. Somewhere away from interfering city lights, a few astronomy loving people will spend a quiet evening looking through their telescopes. The telescopic view will be unlike anything that is seen on Earth and most of all it will reveal the two distances of far and near. Somewhere between these two distances lies our identity - way out there and reaches way in here - inside the heart that is, and both tell stories of having seen very far away of what has also been seen very near.

---

## THE OBSERVER'S ETIQUETTE

by Steve Gilbreath

While flipping through the newsletters I exchange with other clubs I recently had a chance to read the observing rules of the Saguaro Astronomy Club in Phoenix, Arizona. I was so impressed with their suggestions that I drew up the following Observer's Etiquette for our club. With summer approaching and increased use of the Villa Rica observatory site, this is a prime time to refresh ourselves with some basic rules of observing etiquette. If you haven't been observing with a group of people before, or it has been a while since you have, please take a few minutes to review these general guidelines.

**1. Avoid white lights.** It takes the human eye over thirty minutes to get fully adapted to the dark. Any white light can ruin an observer's night vision and start the adjustment cycle over from scratch. White light can also ruin an astrophotographer's efforts. If you absolutely have to use a white light for a short period of time, be sure to yell a warning to others and wait 10 or 15 seconds.

**2. Use dim red lights.** Dim red lights will not affect night vision. Bright red lights are almost as bad as white light, especially for astrophotographers.

**3. Think before you park.** Park based on your observing plans. If you are going to be leaving early or do not have a telescope, park away from the main observing group to prevent disruption when you leave. Also park so you do not have to back up when you leave (backup lights are white). If you have brought a telescope or other equipment, park near where you plan to set up; it's easier on you and others.

**4. Bring observers only.** Small children, pets, and many adults are bored by astronomy. If they don't enjoy hours of standing in the cold night looking through telescopes at faint, fuzzy objects, they probably won't have a good time (and neither will you).

**5. Bring proper equipment.** Be sure to bring things you will need during your stay such as a hair dryer for defogging telescopes, flashlights, toilet paper, etc. Also bring warm clothes in case the weather changes. Something to eat and drink isn't such a bad idea either.

**6. No littering.** If you brought it, either deposit it in the nearest trash can or take it back with you.

**7. Plan your departure.** When you have to leave, yell a warning to others several minutes in advance. This will give astrophotographers time to save their work and people can shield their eyes from the white lights of your car. Please try to only use your parking lights until you get away from the observing site.

By following these simple guidelines your observing sessions will be nothing but pure enjoyment for you, and for others.

---

## THE CASUAL ASTRONOMER: MAY 1989

by Hal Crawford

### The Future of Astronomy Funding

I have to admit. Right now, I have writer's block. A storm is raging outside my window, it's 1 am in the morning, and the deadline for this article is but hours away. Naturally, something like this would happen.

Actually, I don't really have writer's block. It's just my chosen topic for this month is a difficult one. It's a sensitive issue, and has strong connotations in today's politically charged environment. Keeping my own political feelings out of this article is going to be difficult, as most of my closest associates will attest!

I remember about a year ago, when someone wrote in these very pages about the "Funding Crisis in Astronomy." The point of it was that in the crowd of thousands of special interest groups, the astronomy "special interest group" was simply drowned out. The end of the article implored us to write to our senators.

I disagree with certain aspects of that article. Certainly there are thousands of programs competing for limited funds.

But astronomy has never been the darling of the federal government, either. Don't wave NASA and the Apollo program. It's pretty much established that putting a man on the moon -- President Kennedy's vow in 1960 -- was a political issue, and never a scientific one. As Americans, we didn't really care about the scientific significance of putting a man on the moon, we just wanted to beat the Russians to it!

Even today putting people and projects like Magellan into space is simply to show the world how great and powerful America is. It is any surprise that America literally flew into an emotional depression after the Challenger shuttle disaster?

And now, planetary scientists are baffled because there isn't more public support for a space station, or a mission to Mars. I submit that the reason is twofold: 1) since Russia already has a space station (Mir) in orbit, there's no point in competing in a lost cause (although it's not really "lost", since Skylab was there first), and 2) international relations with the Soviet Union are much different today than during the "Cold War" relationship of the 1950's. Most Americans simply have no problem co-existing with the Russians. The sense of competition is diminishing.

Americans, as you might guess by now, are a very capricious lot. We leap on and off bandwagons like fleas on a dog. The American press aggravates the situation, first pushing front page stories trumpeting the return of Halley's Comet, followed soon after with editorials attempting to explain why people simply don't care about a light in the sky. Last year's Mars approach didn't even get the attention of the press, although observing detail couldn't have been better.

Getting back to astronomy funding in particular, there could be another reason why the public doesn't strongly support astronomy: a growing amount of disillusionment, or even distrust, of scientists. Scientists used to be the darlings of the sixties and the height of the space program, but not anymore. People now associate scientists with every bad aspect of nuclear energy and "Star Wars" (the sarcastic and demeaning term for SDI, the Strategic Defense Initiative). In addition, the press tends to focus on images rather than facts. People support ideas that LOOK good, not necessarily those that ARE good.

Ask people on the street to name a famous American astronomer. If they can name anyone at all, it would probably be Carl Sagan. Sagan is a telegenic character who has no trouble explaining the concepts of space. But contrast one man to back during the Apollo missions, where something was wrong with you if you couldn't identify at least five astronauts. If more astronomers, or even scientists in general, had Sagan's ability to appeal to the masses, more attention would be focused on the financial needs of astronomy. When I say attention, I don't just mean federal money, either. In the early days of observing, most efforts were funded privately. Only when Russia threatened to overtake us in pursuit of the most advanced technology did government money start flowing in.

The reasons why astronomy has had a funding crisis are all very subtle, of course. After all, no one really "distrusts" astronomers, per se, as most Americans support the goals of the American space program. But supporting it is one thing -- demanding that it be adequately funded is another. With the federal government in a serious deficit crisis, after defense and domestic entitlement programs slug it out, there isn't much left for 'non-essential' programs. "We can solve the riddles of the universe!" shouted the astronomers. "No thank you," replied the taxpayers via the congressmen, "if it cost us money, we'd rather not know."

That's why most federal money is going to get thrown at the big, obvious, highly visible space programs. Naturally, a physicist trying to get $10,000 to study quarks near black holes is going to get offended when billions upon billions are poured into the space shuttle. Aside from NASA, most money for astronomical study is going to come from the National Science Foundation, which in recent years has been facing more and more cutbacks.

I don't have any obvious solutions on getting more federal support for astronomy. While I believe that writing letters to congressmen and senators certainly won't hurt, I know that they will likely be all but ignored in this age of cutbacks and deficit reductions. The solution to me is somewhat more obvious -- promote the private funding of astronomy. This is a serious challenge. But if millions of dollars are poured annually to fight cancer, to feed and shelter the homeless, and to promote the arts, why can't we get some money for science, namely astronomy? After all, funding the small projects isn't really that expensive, compared with the space station or a mission to Mars, but would certainly provide at least as much valuable data about the universe.

The answers aren't easy. But now's the time more than ever to start coming up with them.

No constellation review this month -- I will resume that in the next column.

## THANKS FOR THE MUNCHIES

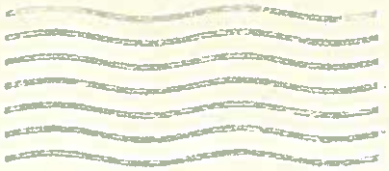
As the Atlanta Astronomy Club celebrates its fortieth year with this month's banquet it is particularly fitting that we give special thanks to the people who made each and every meeting over the last year a little easier to swallow. The members that selflessly volunteered to bring refreshments to our monthly meetings have made an important contribution and we appreciate their willingness to help out with a generally thankless task. Many thanks to Eugenia Abbey, Mark Stevens, Joe Gibson, Lee Wilson, B.J. Ferguson, and Dewey Corbett for their efforts. We also owe special thanks to Kara Rogers for donating her time and efforts to coordinate our volunteers and oversee the monthly refreshment effort. The spirit of volunteerism is one of the things that makes an organization like ours thrive...and we thank you for your support.

## CLASSIFIED ADS

For Sale: Cave Astrola 8 inch reflector; rotating ring system, clockdrive, setting circles; $850 or will consider trade for 6 inch plus cash.
Contact: Wayne Hutcherson
427-0766

For Sale: Tasco telescope; 10 months old.
Contact: Steve Seawell
299-1936

For Sale: Meade 6 inch Newtonian reflector; clock drive, tripod; 9mm and 25mm eyepieces; filters $300
Contact: Tom Fallon
458-2589

**THE FOCAL POINT**

**First Class Delivery**


Article submissions and address corrections to:
Steve Gilbreath, Editor
1410-C Druid Valley Dr.
Atlanta, Ga. 30329

AAC membership renewals to:
Bud Rosser, Treasurer
5198 Avanti Court
Stone Mountain, Ga. 30088

W. Tom Buchanan
105 Carriage Station Circle
Roswell, GA. 30075