

# THE FOCAL POINT

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## CLUB CALENDAR

**Next Meeting:** April 20, 8:00 p.m. at Bradley Observatory.  
**Program:** Fernbank Science Center astronomer and club member Dr. Richard Williamon will speak on "The Top Astronomical Stories Of 1989".  
**Observing Session:** Comet Austin Star Pary, April 29, 5 a.m. at Villa Rica - hosted by Sharone Franklin. The rain date will be Sunday, May 6.

**Editor:** ..... Steve Gilbreath  
**Contributing Editors:** ..... Dr. Ralph Buice, Hal Crawford

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 \$35 annually for a family membership and \$25 for a student 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.

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## OFFICER'S PHONE NUMBERS

Leonard Abbey .....	President .....	634-1222
Eugenia Abbey .....	Program Chrm .....	634-1222
Richard Jakiel .....	Observing Chrm .....	473-9873
Steve Gilbreath .....	Corresponding Sec .....	634-7466
Bud Rosser .....	Recording Sec .....	879-0304
Hal Crawford .....	Treasurer .....	320-9156

## REFLECTIONS

by Jenny White

I can remember a time earlier in my life when stars were mere pinpoints of light in the sky, and planets were out there but had no direct bearing on my life whatsoever. Then during the winter of my sophomore year in high school, the heavens were opened wide and I saw in them beauty, splendor, and possibilities that were never there before. A supposed passing interest became a serious hobby and then turned into a proposed career. My interest in astronomy has not waned at all since then, and as a 17-year-old junior in high school, I am almost completely certain that astronomy is the career for me.

Amateur stargazing is one of the things I most enjoy. Even observing from my light polluted backyard is a thrill. I just love astronomy that much. I've been asked before by people how I can see anything -- I live in a very populated area and my house is surrounded by street lights and the neighbors' floodlights. It never occurred to me to complain, though -- after all, the more I look, the more stars I see, and the more beautiful they are, even from my driveway. I may not be able to see much and my telescope is not one of the best, but just sitting looking up with my own eyes is enough. The beauty is there -- overlook everything down here, and you'll see it.

As I observed more, both naked-eye and with my telescope, I discovered more and more things. I'll never forget the first time I saw Jupiter through my telescope, I had been practicing centering and focusing for a long time and hoped to see my first planet. Jupiter was far above, majestic in the early evening sky. When I managed finally to focus on it, I was ecstatic with joy. It was no more than a small disc surrounded by four pinpoints of light -- the Galilean moons -- and if I looked very closely, I could see the Equatorial Bands, two faint lines across the planet's middle. Nothing big or spectacular, but I was euphoric nonetheless. I felt the same sensation again upon viewing Saturn -- golden yellow and so tiny and perfect with it's rings -- and Venus, a delicate dazzling crescent low in the western sky. And when I first spotted the Andromeda Galaxy -- after weeks of futile searching, my exuberation over finding a faint smudge of light was unreal.

As an aspiring astronomer, I have many future plans. I hope to attend Agnes Scott College -- the astronomy program is definitely to my liking (besides, it's close to home!) There are many aspects of astronomy that I would like to research during my career. Archaeoastronomy is a definite possibility -- I think there's a lot to be learned from the techniques of our ancestors. Astrophysics is another possibility -- especially black holes, which I have always been fascinated by. I hope to incorporate my love for writing into my career, perhaps by writing for astronomical journals or magazines. Whatever I end up doing, though, will be OK, as long as I'm studying the stars. As long as we can look to the heavens, we will be able to learn about our past as well as our future, about our purpose in the "cosmic swing" of things, and about the simple beauty of the night sky. I definitely want

to work with BIG TELESCOPES someday, but there is nothing like just looking at the perfect, unadulterated stars. Astronomy, in my opinion, is the most beautiful science of all, and it always will be. I enjoy studying it now and I look forward to studying it (as a real astronomer) in the future.

### OBSERVER'S CORNER

by Richard Jakiel

I have been interested in astronomy since elementary school days, when I used to causally observe the moon and planets with my friend's 2.4 inch refractor. I did not start to observe "deep sky" objects until much later (high school), when I found a beat up 7X35mm Zeiss binocular. Within a year I was able to ferret out over 40 Messier and NGC objects and I've been hooked on deep sky observing ever since. Now about 16 years later, I've reached the 3000 object plateau and I find observing even more pleasurable and challenging.

Spring is one of my favorite times of the year to do deep sky observing. Setting in the west are the winter favorites such as M42 and M43, or the numerous bright clusters dotting the arc of the Milky Way. Overhead are literally thousands of galaxies, many of which are easily observable by average amateur scopes. To keep things from getting too monotonous there are a fair assortment of globular clusters and planetary nebulae also to choose from. Keeping all these objects in mind, I've compiled a list of 10 favorite spring deep sky objects. These are listed in reverse order so I can save the best for last.

10. Mizar. This is a very pretty and easy double star to find and observe. First observed in 1650, the brightness of the two stars (2.4 and 4.0 magnitude) and the wide separation of 14.4" makes this system an easy target for any scope.

9. NGC 2903 is a bright galaxy in Leo somehow missed by Messier in his survey of deep sky objects. The galaxy is one of the brightest in the sky exceeding many of the "M" objects found nearby. A 12.5 inch telescope begins to reveal the spiral structure, which the club's 20 inch reveals a wealth of spiral structure including numerous knots and H II regions dotting the spiral arms.

8. NGC 4631 is a monstrous edge-on galaxy in the constellation of Canes Venatici. Spanning over 12.5 minutes of arc, or nearly half the size of the moon, and with a magnitude of 9.3 this giant offers a great deal of structural detail for any size telescope. A eight or ten inch scope reveals a large, silvery streak with many knots and dark rifts. In larger scopes, it looks like "the photos" with numerous bright and dark regions. A small 13th magnitude

satellite galaxy is visible just north of NGC 4631.

7. M104 is one of the only three Messier objects that made my list. This is one of the most famous galaxies in the sky and is an inspiring sight in any telescope. This galaxy is bisected by a prominent dust lane that is apparent in a 6 inch, and is quite spectacular in a 12 inch or larger scope. The "sombbrero" or "Saturn" appearance is also easy to see.



M104 - 175X

6. M3 is one of the brightest of the northern globular clusters, and it is well resolved by a telescope of the 8 to 10 inch range. The club's scope resolved this cluster into a blazing mass of thousands of stars. The dense brilliant core gives way to curving stringers of stars reminiscent of M13. Although this globular cluster measures some 12 minutes across and is one of the brightest in the sky, there is another spring giant far more impressive than this.

5. NGC 3242 is a large, very bright planetary nebula in Hydra. It is also known as the "Ghost of Jupiter" due to its size (40" X 35") and the pronounced elliptical shape. In a small telescope, the nebula is a bright blue-green oval with a brighter central region. A 12 inch or larger telescope at high magnification reveals a bright inner ring measuring 26" X 16" with two star-like condensations on the ansae. A 11.7 magnitude central star is also visible.

4. NGC 4449 is an object that doesn't usually make a "top ten" list, let alone a "top 20". But this irregular galaxy has a most unusual appearance and is also brighter than most of the Messier galaxies. A 8 or 10 inch scope shows a basically rectangular object of high surface brightness with several condensations visible along a central axis. In a large scope such as



the 20 inch, this object comes to "life". Numerous bright knots and dark patches are visible, along several rather faint curved projections. It looks a little bit like a weird crab or arthropod.



NGC 3242 - 315X



NGC 4449 - 175X

3. NGC 4554 is truly the most beautiful edge-on galaxy visible in the sky. Spanning over 15', it is also one of the largest galaxies visible in the eyepiece. A small scope will show a fairly bright silvery streak with a small, elliptical core. Traces of the dust lane may also be visible. In a large telescope this is definitely a "oohh and ahhh" object looking a great deal like its photographs. A long, narrow dust lane cuts across nearly the entire galaxy. It is slightly off-centered and is scalloped along its edges.

2. NGC 5139 or Omega Centauri is the most spectacular object of its class visible in the skies. Only the far southern declination

keeps this object from being better observed or gaining a number one rating. I remember viewing this object with my 13.1 inch scope at a particularly dark location. Even using my lowest power eyepiece it completely filled the field with thousands of stars. It was easily 30' across, or as large as the full moon. I then viewed M13 that same night, and it seemed quite puny in size, covering perhaps 1/5 the area of Omega. This is one object that definitely rates as a "must" see!

1. M51 or the "Whirlpool" has always been my favorite spring-time galaxy. Spiral structure is easy to see, requiring an aperture of only 8 to 10 inches. The Whirlpool is at its best when viewed with a big telescope. In the 20 inch, M51 looks like a giant frosted jelly roll with two bright arms unwinding from a dense, round core. Numerous knots dot these arms. One arm is visibly connected to NGC 5195, the distorted companion galaxy. This is one object that any increase in aperture radically improves the view.



M51 - 175X 20" f/4.5

The last object I want to discuss is much too faint to make any "normal" observing list but is one that anyone with some skill should attempt to view. It is the Corona Borealis galaxy cluster -- Abell 2065. The brightest galaxies are only 16th magnitude, and about 6-8 tiny oval smudges are visible in the 20 inch on a very dark night. What is really exciting about this group is that the members are over one billion light-years away! These are the farthest objects (except quasars) that are visible to the amateur -- so check it out and test your observing skills.

## PROGRAM PREVIEW

The April meeting will feature club member and noted Fernbank Science Center astronomer, Dr. Richard Williamon, speaking on "The Top Astronomical Stories of 1989". Rather than a single topic, Dr. Williamon will "dish up" a variety of exciting and significant discoveries of recent months.

- \* The coring experiment beneath the Savannah River has found organisms at unexpected depths; this is of immense significance for planetary exploration.
- \* The very latest findings from Neptune.
- \* The rapid pulsar that wasn't.
- \* A close approach by an asteroid, missing Earth by a hair.
- \* The Galileo story.

If this menu wets your appetite, be sure to join the feast at Bradley Observatory, Agnes Scott, at 8 p.m. on April 20!

## ANNOUNCEMENTS

Comet Austin Star Party: Sharone Franklin will be hosting a star party to view Comet Austin on Sunday April 29, 5 a.m., at Villa Rica. The rain date is the following Sunday, May 6. Be there with your telescopes and binoculars or be square.

Remember Bill Snell will be conducting his Observer's Clinic after the April meeting at Bradley Observatory. If you don't know Right Ascension from declination, latitude from longitude, or stars from street lights, Bill will explain.

Bill Porter is leading an overnight hike up Blood Mountain on Saturday April 28 and Sunday the 29th. Mr. Porter is looking for an astronomer to go along with his group to show them the heavens. If you don't own any camping gear, no problem - Mr. Porter will make arrangement for you. If you've got a telescope, like hiking and camping, and are interested in introducing people to the wonders of astronomy, contact Bill Porter at home at 233-8877 or at work at 329-0880.

## THE FOCAL POINT

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## Article submissions and address corrections to:

Steve Gilbreath, Editor  
1410-C Druid Valley Dr.  
Atlanta, Ga. 30329

## AAC membership renewals to:

Hal Crawford, Treasurer  
1690 Oak Grove Rd.  
Decatur, Ga. 30033

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