

AD ASTRA

Vol. II, No. I

The Newsletter of the Atlanta Astronomy Club

September, 1987

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CLUB CALENDAR

Next Meeting: September 18
Program: To be announced.

AD ASTRA is published monthly during the academic year by the Atlanta Astronomy Club, Inc. The Atlanta Astronomy Club, a non-profit organization dedicated to the advancement of amateur astronomy, meets on the third Friday of each month (second Friday of December) at the Bradley Observatory on the Agnes Scott College campus at 8:00 PM. Membership dues are \$25 annually and include a subscription to *Sky & Telescope* magazine and use of club observatory facilities.

Editor: John Marsh
Managing Editor: Don Barry
Technical Editors: Sharone Franklin, David Roberts, Rick Clark

Submissions: Article submissions are most welcome, and may be delivered to the editor for consideration.

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CLUB MINUTES

The May 15, 1987 meeting of the Atlanta Astronomy Club was held at Bradley Observatory with Dr. Joe Gibson presiding.

- I. Lee Wilson, chairman of the SERAL '87 convention, reported that everything is progressing as expected for the June 19-21 convention.
- II. The names of the nominated officers and Board of Directors for the 1987-88 club year were presented to club members for election by Eugenia Abbey. Those nominated and elected were:

President: Lee Wilson
1st Vice President & Program Chairman: Eugene Powell
2nd Vice President & Observing Chairman: David Roberts
Treasurer: Bud Rosser
Corresponding Secretary & Newsletter Editor: John Marsh
Recording Secretary: Sharone Franklin
Board of Directors: Leonard Abbey, Tom Buchanan, Joe Gibson, Don Hall, and George Reight.

- III. Tom Buchanan, chairman of the Light Pollution committee, gave a status report of his efforts at curbing light pollution in the Atlanta area:

(continued on page 4)

EDITOR'S EDIFICATION

by John Marsh

As I write this, a soft breeze is blowing from the North-Northwest. The late summer foliage twists and turns, seemingly refreshed by the wind's presence. A weak cold front has passed within the last 12 hours; somewhat cooler and drier air has begun to filter into North Georgia. The morning light has an unusual clarity, a sense of transparency--and promise.

Although summer is only two-thirds gone (at the time of this writing) changes in the weather patterns of North America as subtle as this morning's northerly breeze are beginning to occur. Influxes of cooler Canadian air have begun to arrive at irregular intervals, dissipating summer's ever present haze. Several times within the past couple of weeks, the Milky Way has been visible from Villa Rica in spectacular fashion (i.e., it was visible!). For the long trek to Villa Rica to even be worthwhile in late August is itself highly odd!

Autumn is coming, and with it, another observing season. Hopefully, the current spell of fine late summer weather presages a fine fall season as well. May the Weather Gods be beneficent and grant us freedom from the cloudiness which plagued us last year. Death to the El Nino!

HAPPY BIRTHDAY!

Ranting aside, this year marks a watershed for the Atlanta Astronomy Club. It is our Fortieth Anniversary, an achievement for which we can be very proud. The organization founded in 1947 by Bill and Anna Belle Close, Dr. Calder and others is today one of the largest and oldest amateur astronomy groups in the United States. That this milestone should be reached by an astronomy club in Atlanta, a place not known for its exemplary observing climate, is a further credit to our tenacity and commitment as a group.

Our Club has come to exercise a leadership role among astronomy clubs in the Southeast. Twice in the past five years, The Atlanta Astronomy Club has hosted the convention of the South-eastern Region of the Astronomical League; in 1975, the Club hosted the ALCON, the Astronomical League's annual national convention. Appearing in this month's AD ASTRA is an overview of this year's SERAL convention. It is contributed by Lee Wilson, whose idea it was for the Club to hold the convention and who serves as Club President for 1987-88.

Arguably, the most impressive accomplishment of the Club in recent years has been the renovation of our observatory site and installation of the 20" reflector. The 20" is the fourth ranking instrument in terms of aperture in Georgia and the largest under a sky that even approaches being "dark". Observing with this instrument under good conditions (they do occur, every now and again...) is a sheer revelation. While I remain a firm believer in the value and worth of small instruments (owning one myself), I urge everyone to experience the 20" reflector. One good look at M-51 under a dark sky will convince anyone that some things can be done well only with large apertures. The 20" reflector is a grand accomplishment; the Atlanta Astronomy Club can be justly proud!

May the Club's next forty years be as fruitful as the first forty have been.

SEPTEMBER ASTRONOMICAL ANNIVERSARIES

by Frank Dibbell

- Sep 1, 1859: First solar flare observed by R. Carrington and R. Hodgson in England.
- Sep 1, 1908: Comet 1908c (Morehouse) discovered. Known for its night- to-night changes in its tail.
- Sep 1, 1963: Harlan J. Smith becomes director of McDonald Observatory.
- Sep 1, 1979: Pioneer II returned first close-up images of Saturn.
- Sep 2, 1804: K. L. Harding discovered Asteroid 3, Juno.
- Sep 3, 1908: British solar expert A. L. Cortie, S.J., of Stonyhurst Observatory suggests the possible existence of steam in sunspots.
- Sep 5, 1877: Close opposition of Mars. G. V. Schiaparelli at Milan made his pioneer study of Mars, noting the existence of many "canali" on its surface.
- Sep 6, 1858: Donati's Comet visible as a 4th magnitude "star".
- Sep 9, 1892: E. E. Barnard discovered the fifth satellite of Jupiter with the 36-inch refractor at Lick Observatory.
- Sep 10, 1956: R. J. Trumpler, American specialist in stellar statistics, died. He provided the first generally accepted proof that the light of distant stars is partly absorbed by an inter- stellar medium.
- Sep 11, 1985: ICE made first fly-by of a comet (Giacobini-Zinner).
- Sep 12, 1959: Soviet spacecraft Lunik 2 struck the moon.
- Sep 17, 1789: Saturn's innermost satellite, Mimas, discovered by Sir William Herschel.
- Sep 17, 1882: The Great Comet of 1882 transits the sun's disk.
- Sep 18, 1819: Jean Foucault was born.
- Sep 18, 1977: Voyager I takes the very first photo of the Earth and the Moon together in space.
- Sep 19, 1848: W. C. Bond of the United States and William Lassell of England independently discover Saturn's moon Hyperion.
- Sep 20, 1956: U.S. Army launches a Redstone rocket, with the next-to-last stage reaching a speed of 13,000 mph. No one authorized the Army to launch it, so the final stage was an empty dummy.
- Sep 21, 1960: Frank E. Ross, American astronomer who advanced the art of celestial photography, died. He invented the photographic zenith tube (PZT), used for the precise determination of latitude and time.
- Sep 23, 1846: The existence of Neptune, predicted by U. J. J. LeVerrier and J. C. Adams, was verified optically by J. G. Galle of Berlin Observatory.
- Sep 25, 1752: Tobias Mayer of Gottingen made a pre-discovery observation of the planet Uranus, 29 years before Herschel detected it. Mayer mistook it for a fixed star and included it in his catalog.
- Sep 28, 1953: Edwin P. Hubble, American expert on galaxies and cosmology, died.
- Sep 30, 1880: American amateur Henry Draper takes the first photograph of the Orion Nebula.

WHAT WE DID ON OUR SUMMER VACATION

by David Roberts

As usual, this summer did not offer many observing opportunities. Fortunately, the skies cleared on August 14 for a public observing program at the Ftowah Indian Mounds just south of Cartersville, Georgia. The park had asked Don Barry to give a lecture on the Perseid meteor shower and supervise an observing session. As usual, the entire Ad Astra staff tagged along to help Don in any way we could.

Approximately 30 visitors showed up for the climb up 63 foot high mound A where Sharone Franklin's 6" f/6 newtonian was set up. Before the lecture started the visitors were treated to a view of Saturn and two of its moons. Mound A was an excellent and dramatic observing site, even if it was a long hike from the parking lot. Unfortunately, only a few dim meteors were seen. We made up for it by showing a few bright objects to the visitors. As a bonus we found five artificial satellites, two of them apparently related because they were following the same path withing 30 seconds of each other.

From experience with several past shows and this one, I think I have figured out a few general rules for conducting these activities. Schedule the show (if possible) when one of the Five Objects in the Universe is visible. These are the only objects the vast majority of the public knows are in the sky. They are the Sun, the Moon, Mars, the Rings of Saturn, and Halley's Comet. The latter object is no longer accessible, so we have to deal with only four of the Five.

The sun can be used for early arrivals if the program starts early enough. The moon should be at First Quarter or younger so it will set at a reasonable hour but still be visible. Craters are more interesting than you deep sky observers think. Mars should be used with caution and only during opposition when it subtends an appreciable angle. Saturn is the safest and best bet for impressing visitors.

Having started off with one or more of the Five Objects in the Universe, you can begin to show your audience a few more of the brightest and easily seen objects. Jupiter and its moons work almost as well as Saturn. Bright, compact open clusters work well. Globular clusters are appreciated only by a few people. Nebulae and galaxies should be shown only after the crowd has been pared down somewhat by the late hour and those that are most interested remain.

Shows during meteor showers should be approached with caution. You could very well pull a Halley (lots of hype, no show). Be prepared to do a lot of telescope work and let your audience know that, at first, meteor watching can be like watching the grass grow. Tell them to be patient and keep watching.

Take along three or four people who are adept at finding artificial satellites. John Q. Public has forgotten that you can see satellites, quite a contrast to the heady first days of our space program. Station your satellite hunters to one side of the group. They should be constantly on the lookout for bright satellites, especially ones that flash because they tumble. When one is spotted, don't give the satellite's position relative to a constellation. As far as Mr. Public is concerned every star in the sky is part of the Big Dipper. Give its position relative to bright star, the compass direction, and the zenith (make sure you point out the compass directions and define "zenith" at the beginning of the program). Only a few will see the first satellite. After three or four the entire group will be able to see them and will be finding them on their own. Satellites can be the most exciting part of your program.

On a final note, I hope all of you are enjoying the New Age we are in since the Harmonic Convergence (or Moronic Disfunction or whatever it was) on August 16. Occasions like that are why public astronomy programs are so important.

SERAL RETROSPECTIVE

by Lee Wilson

It has already been a great year and we still have four months to go. As everyone knows our club hosted the '87 SERAL Convention June 19-21. Many people commented favorably on the wide range of our programs -- from serious to just pure fun. As much as any visitor enjoyed the convention, their joy was exceeded by the Planning Committee, and no one could have had more fun than I. There was a good mix of people from the region: North Carolina, 6; Tennessee, 9; Alabama, 7; Florida, 8; and club member Jimmie Carlisle, sole representative of S.C. The AAC was represented by 35 members and in addition we pulled in 15 other people from around the state. About 15 astronomy clubs were represented.

This was a "first" experience for me - chairman of a project that would bring many people (about 75, from 6 states). Planning got under way in early December and by May the committee was moving forward - as one unit - and it stayed that way on thru the convention. Unexpected problems and glitches would get solved without skipping a beat.

Jim Brown and George Reight had minor "advisor" duties on the committee. A few volunteers helped on the Registration table. On Saturday at about 1:30, Terry Morris had the happy experience of signing up two people from Hepzibah, Georgia (near Augusta) and I decided that qualified him to be a honorary member. The basic operational group consisted of 7 people. Dave Roberts and Rick Clark along with Chairman Don Barry were the Program Committee. Sharone Franklin was my right-hand-man on the Registration Committee. With her able assistance and that of the volunteers, the convention zipped right along. Leonard & Eugenia Abbey had multiple roles - Leonard was part consultant, part advisor, and custodian of numerous astronomical anecdotes and history. Their key contribution was serving as host for the 5 planning meetings - December to early June. However big or small, an army functions best when the essentials are taken care of. Eugenia & Leonard, it was nice - thanks.

As the planning process moved along, each of the core people took on some form of responsibility. On Saturday afternoon, when the Program Sessions had developed a life of their own and had to be shut down, I was changing the time of the Banquet and vacillating about which Conference room to use. The motel workers took charge and set up the tables in the exhibit area - and that was the best choice! Then someone noticed that the rain had stopped, so we ran out to the courtyard and in the waning moments of a late afternoon sunbeam Rick Clark took the group photograph. So you see, it gets easier. All you have to do is build momentum and try to stay out front.

In the early days of planning for the convention, I thought about how to make this learning experience interesting and exciting. A milestone always takes place whenever a club hosts a convention. This one had a 40+40 flavor. Dr. William A. Calder had about 40 years of interest and experience in astronomy when he came to Agnes Scott College in 1947. At the Banquet when I was introducing the people at the Head Table and Dr. Calder said that he was "in on the creation", he was referring to things that happened soon after his arrival: the AAC was born. A very enthusiastic telescope making workshop sprang up in the basement of the science building. In short order the club members started their first publication, *The Astronomers Report*. In addition, development of Bradley Observatory and the 30-inch Beck Telescope began. Also at the Head Table were Bill & Annabelle Close. They also were in on the auspicious beginning. They became conspicuous characters at the Telescope Making Workshop and when the *Report* started up they became even more active. The *Report* and the

Workshop remained active for over 10 years. It became well known in the community and made an impact on amateurs and at least one commercial publication - *Sky & Telescope*. The 58 lucky people at the Banquet had the opportunity to witness a very good example of a progressive member from a nearby group, Karel Hujer from Chattanooga. There is an old saying that a storehouse of good memories is the best form of wealth. One wonders if our society is still capable of producing people with this level of personal integrity. I hope so.

NOTES TO MEMBERS
AND OTHER READERS

OR

IF YOU DON'T READ ANYTHING ELSE
READ THIS COLUMN!

We have too many telescopes. Our present collection includes a 20" inch fork mounted newtonian, a 13.1 inch alt-azimuth by Coulter, a 10" newtonian by Cave, and a 8.25" Maksutov by John Gregory. The 13" is used only rarely which can be seen by the amount of dust on the tube. It serves more time as a chart table for observers using the 10" and 20" than as an astronomical instrument. The other two Newtonians are used constantly, and the Maksutov is a treasure in need of a decent mount (hint, hint!). Unless otherwise indicated by the membership, the 13" will be sold to the highest bidder. We need the money more than we need this telescope gathering dust. The bidding on the 13" starts at \$300. Contact Dave Roberts (996-0345) if you wish to voice an opinion or place a bid. Bidding ends on September 31. If there are more people against the sale than there are that place a bid, then the telescope will not be sold.

The newsletter needs articles and postage stamps. The articles should be about subjects of interest to the amateur astronomer. This includes articles on telescopes and accessories, meteorology, physics, satellites, light pollution, etc. The postage stamps should be of the 22 cent variety and in copious quantities. If each member would contribute nine stamps for nine issues of AD ASTRA when it came time for membership renewal, we could save \$40 per month in stamps. The savings could be used to upgrade our observatory further.

ADDRESSES YOU SHOULD BE AWARE OF

If you are a newsletter editor exchanging newsletters with AD ASTRA, continue sending them to our mail drop:

Rick Clark
584 South Mt. Carmel Rd.
McDonough, GA 30253

Send Ad Astra submissions to the editor:
John Marsh
409 Independence Drive
Jonesboro, GA 30236

Send membership renewals to the treasurer:
Bud Rosser
5198 Avanti Court
Stone Mountain, GA 30088

A new membership list is planned for October. Please let us know if your address or phone number has changed or was not included in last year's list.

Finally, the 10" at Villa Rica is undergoing refurbishment (as of September 1). It's receiving a new fiberglass tube, a stainless steel declination shaft that won't rust, and a rewired drive corrector. It will be reinstalled in the observatory when completed.

OBSERVER'S ALMANAC
Moon Rise, Set, and Phase
 (All times are EDT)

Date	Rise	Set	Phase	Date	Rise	Set	Phase
09/10	21:35	10:25	92%	10/05	18:35	05:48	94%
09/11	22:08	11:31	85%	10/06	19:03	06:56	98%
09/12	22:44	12:37	76%	10/07	19:32	08:04	99%
09/13	23:26	13:41	67%	10/08	20:04	09:11	98%
09/14	---	14:42	57%	10/09	20:38	10:18	95%
09/15	00:13	15:37	48%	10/10	21:18	11:24	89%
09/16	01:05	16:25	38%	10/11	22:04	12:28	82%
09/17	02:02	17:07	29%	10/12	22:55	13:26	73%
09/18	03:00	17:43	21%	10/13	23:51	14:18	64%
09/19	03:59	18:14	14%	10/14	---	15:03	55%
09/20	04:58	18:41	8%	10/15	00:49	15:41	45%
09/21	05:56	19:06	3%	10/16	01:48	16:14	36%
09/22	06:54	19:31	0%	10/17	02:47	16:42	27%
09/23	07:53	19:55	0%	10/18	03:45	17:08	19%
09/24	08:52	20:22	1%	10/19	04:43	17:33	12%
09/25	09:54	20:51	4%	10/20	05:41	17:58	6%
09/26	10:59	21:24	9%	10/21	06:40	18:23	2%
09/27	12:06	22:05	16%	10/22	07:42	18:52	0%
09/28	13:15	22:54	25%	10/23	08:47	19:24	0%
09/29	14:21	23:53	35%	10/24	09:55	20:03	2%
09/30	15:21	---	46%	10/25	11:05	20:51	7%
10/01	16:13	01:01	58%	10/26	12:13	21:47	13%
10/02	16:56	02:13	69%	10/27	13:16	22:53	22%
10/03	17:33	03:27	79%	10/28	14:10	---	32%
10/04	18:05	04:39	88%	10/29	14:56	00:04	43%

(---) indicates phenomena will occur the next day

COMET BRADFIELD

by Don Barry

William A. Bradfield, the active astronomical Aussie, has made cometary collecting history. His discovery of Comet Bradfield 1987s, on August 11, brings his total find to thirteen comets, a record during the present century.

Several of Bradfield's menagerie have become nice visual objects; indications are this trend may continue. After a parade of recent promising comets, all of which shone for the amusement of the penguins and lichens of Antarctica, 1987s promises to be a tropical comet, avoiding the chilly celestial poles. In early September, it will glow in Libra, and continuing its evening apparition, will ascend through Ophiuchus and Aquila as it reaches maximum brightness in early November, near magnitude 5. A preliminary search ephemeris follows:

Comet Bradfield (1987s) from IAU Circular 4442

1987ET	RA(1950)	Dec(1950)	Mag.
Sept 2	14h 43.65m	-18d 19.2m	8.5
12	15 03.61	-16 04.4	
22	15 26.39	-13 42.7	7.6
Oct 2	15 52.05	-11 05.7	
12	16 20.69	- 8 04.4	6.6
22	16 52.53	- 4 30.7	
Nov 1	17 28.06	- 0 19.6	5.7
11	18 08.32	+ 4 29.5	
21	18 55.27	+ 9 50.1	5.4
Dec 1	19 51.34	+15 24.7	
11	20 57.41	+20 32.1	5.9
21	22 09.86	+24 13.9	
31	23 20.46	+25 58.8	7.0

Whither comet Wilson? Due perhaps to the expected June monsoons, no reports of southeastern sightings of this comet have been received. If you did, we'd like to hear about it.

Club Minutes (from page 1)

A. He and Alberto Sadun have made speeches to the Ga. Chapters of the American Society of Civil Engineers and the Illuminating Engineers Society. They feel it is important to bring to the attention of civil engineers the benefits of efficient lighting.

B. The Light Pollution committee had written a letter to Marta with suggestions about light shielding. Don Barry stated that the committee had received a response and Marta said that they would not be able to carry out specific suggestions, but they are willing to discuss the issue further.

IV. The program was the annual "show and tell" given by club members:

- A. Don Hall displayed his various astronomy pictures.
- B. Tom Buchanan showed some of his Halley's comet pictures.
- C. Bill Washburn described his trip this year with Alberto Sadun to Capilla Peak in New Mexico. They observed the Quasar 3C273 with a 26" f/15 cassegrain telescope equipped with two CCD's.

AD ASTRA

Please direct all address changes or corrections to:

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TOM BUCHANAN
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If marked with "*" above, your subscription has expired. Please contact the Treasurer promptly to ensure continuous membership.