



The Spectrum

Buffalo Astronomical
Association, Inc.

Darwin Christy, Editor

SEPTEMBER - OCTOBER 1979

September meeting:-----The September 14th meeting of the BAA will begin at 8:00 P.M. in the New Science Building Auditorium at Buffalo State, Elmwood Ave. Our guest speaker will be Ed & Olga Lindberg from our own club. Their topic will be, "The Story of Time." We certainly extend our welcome to them.

?????????QUIZ?????????

- Number one- At this time, which planet is farthest from the sun?
Number two- What word describes the lining up of three astronomical bodies?
Number three- Where and what is Charles' Wain?

October meeting:-----The October 12th meeting will also be held at Buffalo State on Elmwood Ave. Mr. Emil Pallos from the Broome County Astronomical Society will be the guest speaker. His topic will be announced upon confirmation of his presentation.

FROM YOUR NEW EDITOR

This is the first publication of the Spectrum I am involved with. I surely hope that I can match the performances of the past editors. My limited knowledge in journalism will probably show, but with the help from those people involved with the Spectrum, it will make it easier for me. I have been the editor of the Ecliptic, the newsletter of the Lockport Astronomy Association, over a year and have had no complaints from that club.

For this Spectrum to operate, I must have material from any or all of the members of this club. To date, I have not received all of the material which I could publish. I do have enough for this first Spectrum, but I need much more for the up and coming newsletters. It does not have to be a feature length article, only a paragraph or two, or even a proverb in astronomy will do. The small inserts do a lot for a paper; not only does it fill in the pages, but----it also passes on information to those who may not know what the person who submits an article may know. The Spectrum could be classified as a pool for astronomical subjects, one to another.

Darwin Christy

DEADLINE FOR THE NEXT SPECTRUM IS OCTOBER 20th.

FROM THE PRESIDENT

The June business meeting brought to a close another good year for the BAA. This meeting was better attended than last year's with well over the minimum number of members present for a quorum. The good attendance was probably partly due to the inclusion of three short presentations, this being done as a result of a suggestion made by Board members last year. No doubt this policy will be continued in future annual business meetings.

New Board members were elected at the June meeting; the successful candidates were Bob Mayer, Darwin Christy, and Al Kolodziejczak, and I extend my congratulations to these gentlemen as I welcome them 'a-board' (no pun intended). Walt Whyman, Ken Ranchil and Robert Reilly were the other nominees and I thank them for being willing to serve on the Board although they were not elected.

The year 1979 is notable astronomically. Most exciting have been the astounding close-up photographs of the planet Jupiter and its satellite system, sent back by the 'Voyager' space craft, that we have seen splashed over the pages of publications as diverse as the daily newspapers and top-flight scientific journals. To me, the most intriguing is the picture of what appears to be a fountain-like volcanic eruption on one of the satellites. I am irresistably reminded of the volcanic fountain hypothesis of lunar crater formation put forward by Nasmyth and Carpenter in their book 'The Moon' (1874). Modern lunar theorists scoff at this idea but here on the Jovian satellite we see the volcanic fountain actually occurring. In rather the same way, Newton's corpuscular theory of the nature of light was thrown out when the wave theory took over. Then it was discovered that light had a dual discontinuous nature. The waves were associated with discrete 'packages' of energy. Today, though, we do not call these packages corpuscles, we call them 'photons'. Newton, Nasmyth and Carpenter, and many other scientific pioneers had ideas that were subsequently discarded but later found to be not so wide of the mark after all. Why are we so ready to regard our predecessors as fools?

1979 is also the tenth anniversary of the first manned lunar landing. At the time, I was on holiday in the Isle of Wight in my native England. The live television coverage of the event occurred so late in the evening that I had retired to bed after a hard day of relaxing on the beach, so that I missed seeing it. I have finally forced myself to make this rather shame-faced confession after all these years.

My telescopic observations of Jupiter this year have not been so numerous as last year's, partly due to poor observing weather. However, I have had some good views of the great red spot. Although our speaker's list for the coming year does not include the joint presentation on Jupiter that Larry Carlino and I have given previously, I expect to be able to slip in a few slides and a five-minute presentation some time during the coming year.

General membership meetings will be held at Buffalo State from September 1979 to January 1980 inclusive and at the Museum of Science from February to June, 1980.

I hope that all BAA members had a happy and relaxing summer and

that the star nights have been a success. I look forward to another good year of BAA activities.

F.W.P.

Niagara Frontier Council of Amateur Astronomical Associations

The next meeting of the NFCAAA will be hosted by the Lockport Astronomy Association on November 3, 1979 beginning at 2:00 P.M. It will be held in the auditorium of the Niagara County Community College in Sanborn, N. Y. off Route 31 and 425. A brochure will be sent to the representatives of the member clubs asking for short talks which can be added to the speaker's list. We could use more lectures on other subjects which may not be on the list; and this is an opportunity for some one to be added to the list. If you want to know who is on the list or what subjects are available, a list is in the hands of the representative, Ed Lindberg or myself.

Darwin Christy

N F C A A A

The Niagara Frontier Council of Amateur Astronomical Associations met at McMaster University in Hamilton, Ontario, as guests of the Royal Astronomical Society of Canada (RASC at Hamilton) on May 5, 1979. Seven members of the Buffalo Astronomical Association attended the day long session. Richard Karlson of the Rochester Academy of Science, Astronomy Section, is Chairman of the NFCAAA and conducted the business portion of the meeting. He reminded the group that the main purpose of the organization is to provide a speakers list so clubs within the Council can select a wide range of topics for their meetings. Each club, about seven of them, reported on their activities over the past six months and presented their list of speakers.

The following brief papers were given during the afternoon session:

- 1) Project Zubenelgenubi 1978 - Gerald Schieven; London, Ont.
- 2) Micrometeorites and the Japanese Astronomers - Darwin Christy; Lockport, N. Y.
- 3) Spectroscopy - Clive Gibbons; Hamilton, Ont.
- 4) A Maintenance-free Observatory - Orrin Christy; Buffalo, N.Y.
- 5) Mythology - Al Kindy; Niagara Falls, Ont.
- 6) Star Charts and Maps - Bill Delavan; Syracuse, N. Y.

Following the banquet, Dr. Barry Madore, from the Department of Astronomy of the University of Toronto, spoke on Peculiar Galaxies. He showed slides taken from the southern sky survey conducted by observatories in Chile and Australia that showed galaxies having irregular shapes, bridges of material to other galaxies or ejects. He felt too many theories have been put forward that satisfy only special cases, but fail for the general case. A broader statistical base, such as is being compiled by the survey, plus additional study of peculiar galaxies is needed before these phenomena can be explained satisfactorily.

Rowland A. Rupp

SPY AND TELL

During the terrible heat of the summer, Carl Milazzo liked to recall the night of Feb. 17-18 when at Beaver Meadow the temperature dropped to -24 at 1 A.M. With two feet of snow in the area, the Dessert family, Randolph Garney, Carl and 20 of the general public were rewarded with a crystal clear sky for observing. The group left as the moon came up near last quarter. By sunrise the temperature was -35. Such thoughts are bound to help one keep cool.

Fred Price has long been interested in our human ancestry. On his trip to England this summer he visited Sussex where the famous Piltdown man became England's fraud in its claim to an ancient hominid, and was removed from fossil records in 1953 after chemical testing. In Fred's research, he'll probably find a few bones to pick.

Paul Schenk was granted a two month internship at the Jet Propulsion Lab this summer.

Phil Cizdziel and Carl Milazzo spent a week at the University of Rochester's Miess Observatory using the 24" reflector.

Gil Brink, Phil Cizdziel, Ken Kimble, Al Kolodziejczak and Carl Milazzo along with families and friends, made a party of 25 for a grand tour of the David Dunlap Observatory at Richmond Hill, Ontario, on July 14th.

On July 27-28 Ken Kimble and Carl Milazzo attended the annual Stellafane event. Beautiful weekend with clear weather.

Marty Dessert, Karen Geiger and two other Audubon members journeyed to Trail Lake Audubon Field Camp in Wyoming for the 12 day ecology session August 12-24.

We're happy to see Lillian Von Gerichten at the Star Parties after a winter of confinement helping her family recover from numerous illnesses.

Edith L. Geiger

BAA ANNALS

Five Years Ago - Five years ago, Ken Chilton of Hamilton, Ontario, was to be our speaker at the September meeting. His topic was "Unusual Astronomical Theories." Our own Orrin Christy was scheduled to talk on "Astro-Logical Tides of Solar Activity" for October. The September-October Spectrum carried an article by Dr. Frederick West on his studies of a double star system that he demonstrated had a third component. Fred obtained spectrograms of the star (ADS 14893) with the 84 inch telescope at Kitt Peak and the 74 inch at David Dunlap Observatory near Toronto.

Dues were raised to their present rate in 1974. Can you think of anything else that hasn't seen a price increase since then?

Ten Years Ago - Richard Karlson spoke on "Stonehenge" at the September 1969 meeting and Orrin Christy spoke on "Amateur Radio

Astronomy" in October. It looks like Orrin does his share for the club--maybe more.

In other notes, the Lindbergs had just returned from their trip to Scandinavia where they visited several observatories; Eugene and Larry Hazel were congratulated for winning First Place in the special telescope division at Stellafane. Lillian VonGerichten was our refreshment hostess ten years ago.

Fifteen Years Ago - The September speaker was Paul Redding, a very active BAA member at that time. He spoke on "Seeing", defining the term astronomers use to describe the quality of the sky for observations. Ron Clippinger spoke on a survey of stars in the solar neighborhood in October.

Officers were elected at the September 1964 meeting. They were:

President: Ronald Clippinger

Vice-President: Edith Geiger

Secretary: Richard Zygmunt

Treasurer: Paul Redding

In 1964, BAA members received both Sky and Telescope and Popular Astronomy magazines apparently as part of membership. Also, the Instrument Section met for the first time on September 25, 1964. Ray Sulwichowski, Ron Clippinger and Ed Stoklosa presented ideas for a club telescope. Ed Lindberg was leader of the group--he still is!

Rowland A. Rupp

:METEOR SHOWERS:

September: 11th - Epsilon Perseids

22nd - Alpha Aurigids

From radiant- RA 04h 04m - Dec. N. 36 degrees- we find a lesser known shower, the Epsilon Perseids. They number about 7 hourly, fast leaving a reddish hew about 4.5 mag. Their period is 9 days with the maximum occurring on the morning of the 11th.

The Alpha Aurigids are even lesser known and not much has been done with this shower. One reason is probably because they do occur only one night. The radiant is RA 04h 56m - Dec. N. 42 degrees.

October: 2nd - Quadrantids

9th - Draconids

17th - Epsilon Aretids

21st - ORIONIDS

24th - Leo Minorids

A second time around are the Quadrantids which are also seen in the first days of January. They are far from as spectacular as in January and only last as many hours, about six. From RA 15h 20m - Dec. N. 52 degrees we can see these 3rd magnitude meteors. This year one might start watching from sundown to midnight when they will disappear. A much faster shower is the Draconids (Giacobinids) which occur for only about one to two hours. Their radiant is RA 17h 40m - Dec. N. 55 degrees. As many as 20,000 have been counted but they do show themselves only every 13 or 14 years to their fullest. These are NOT related to the Draconids which occur on June 28th.

The Epsilon Areitids are very little known. More observing on most of the lesser known should be done as this one. The radiant is RA 02h 48m - dec. N. 21 degrees.

One of the major showers is the Orionids. They last about six days and are an annual shower. Their short swift tails of magnitude 4 can be missed so a quick eye should be ready for them. Average count is 20 to 30 hourly. They have been said to have been related to Comet Halley, 1910 II.

11h 55m RA and dec. N. 37 degrees related to comet 1739 is this fast fading shower, Leo Minorids. There is not much written on them but some times it is worth while to try to observe these lesser known showers.

Darwin Christy

BAA PROFILE - Joseph S. Provato

Joe Provato, our treasurer, and his two sisters were born in New York City in the borough of Queens. He received his early education at New Town High School in Helmhurst, where he took a cooperative course when he was 16 years old, in which he went to school one week and worked outside of school the following week. This arrangement continued throughout the year. He became president of the senior class, and one of the editors of General Organization, the high school newspaper. His drama class produced "Romeo and Juliet", in which he had a part. With this encounter with the stage, he was to find that he would always be a patron of the theater.

After graduation from high school, he attended City College of New York for two years, majoring in accounting. He bowled with the Manhattan Bowlers, the college bowling team, during which time they won two trophies.

Joe's father, who is a chef for TWA Airlines, is interested in the outdoors, sports, and youth groups. He headed a scout troop, and Joe often helped out and finally took charge of a scout group of 12 to 15 year olds for three years. Joe is fascinated by the wonders of Nature and is self-taught in the areas of botany, marine plant life, plant identification, small plant life and forestry. All of this acquired knowledge he found very useful as a scout leader.

In August of 1968, Joe came to Buffalo where he went to work as a biller for the GNV Shipping firm, after which he became employed by Merchants Mutual. For four years he was office manager and accountant for Dr. Edwin Tomaka, a surgeon and former BAA member. Joe then became director of the business office at Brylin Hospital for psychiatric care and alcoholism, located on Delaware Avenue. He has finally found a position which he thoroughly enjoys as bookkeeper for Vangler Electric at Main and Fillmore where he has been employed for three years.

In 1972-73, Joe took a year's course at the John Robert Powers School of Interior Decorating and Design. He found the course very stimulating, and has used much of what he learned to decorate his home.

Joe is very involved in church work and teaches Sunday School at St. John's Grace Episcopal Church on Colonial Circle. He was superintendent of the Sunday School for three years, and organized, and is in charge of the youth group for 12 to 15 year olds. They enjoy dances, Bible study and picnics. Joe has also worked with the

acolytes at the church.

He is an avid cyclist, having spent many hours in his youth, riding his bike on Long Island. He and Fred Price spend many pleasurable hours riding in Canada, especially along Garrison Road around Fort Erie, for a day's outing and a time to commune with Nature.

As Joe has been interested in the theater since his high school days, he has been in frequent attendance at Artpark, and Toronto's Royal Alexander and O'Keefe theaters. He is also engrossed in collecting U.S. postage stamps, and has some dating back 50 years.

Joe finds great joy in gardening. He is very successful with geranium and rose cuttings, and raises sunflowers for a seed supply for the birds. A bird sanctuary is part of the garden as is a squirrel house for adopted Pinky, Perky and Junior who relish the nuts and goodies provided for them. Two cats, Smokey and Mitsey, complete the animal life in residence.

Culinary artistry is an accomplishment of our treasurer who specializes in very tasty creative dishes. He owes much to his parents who taught him the fine art of Italian cookery. With his father being a chef and his mother being an excellent cook, Joe is naturally talented in this area. Creative casseroles, lasagne, special turkey stuffing, Italian sauces, savory gravies, delectable biscuits and zesty leftovers are all a part of his cuisine. He has prepared dinner parties for as many as 18 delighted guests.

An Olympus camera with telephoto and close-up lens provide a most satisfactory hobby for Joe. His particular area of concentration is flowers, having taken beautiful photographs of roses, carnations, violas and many other blossoms.

His camera has been with him on his trips to Canada, California, England and Wales, and he has many fine pictures in his collection. Joe is very fond of the architecture in England, especially of the cathedrals of St. Paul's, Westminster, Coventry, Bristol and St. Mary's on the Hill. He is also deeply interested in the architecture of Christopher Wren. During this summer's trip to England, he and Fred Price visited Greenwich Observatory, Windsor, Cambridge, and South Hampton, and took a boat ride on the river Thames. The beauty of the countryside in England and Wales holds a special appeal for Joe. He enjoys talking to the older people he meets along the way. He is delighted with the English pubs and their brown ale and pork pie.

About 12 years ago, while still a resident of New York City, Joe visited the Hayden Planetarium and was so impressed that he soon bought several of Patrick Moore's books on astronomy, and purchased a 2.5" refractor. After coming to Buffalo, he met Fred Price who brought him to a BAA meeting. He eventually joined our association and brought his expertise as an accountant to the position as treasurer.

He is interested in the planets, especially Jupiter. He now owns a 3" refractor, but also uses Fred's 8" reflector. He hopes, with Fred's help, to eventually acquire the technique for sketching what he sees on the Jovian planet.

Of late, he has had a desire to paint with acrylics, and has also done some work in a ceramics class at church. These are new avenues for him to explore in his quest for a rewarding life.

Joe has a very pleasant, warm personality, and a willingness to serve others whenever possible. He has been very helpful to the BAA in both his capacity as treasurer and member of the Board of Directors.

Edith L. Geiger

STUDY SECTION

The Study Section will meet the third Friday of each month in Dr. Price's Biology Lab. The September meeting will be an open session and the October meeting will include Elementary Astrophotography for Beginners.

Tom Giasomo

FALL FUN(D) FAIR

A Fall Fun(d) Fair will be held at the Beaver Meadow Environmental Education Center, Java Center on September 8 & 9 from 10:00 A.M. to 5:00 P.M. to benefit the Center and to aid all concerned. They will have on sale such items as arts & crafts, books, prints, house and garden plants, produce, baked goods, boutique gift items, photo equipment, etc. They will also have demonstrations on log splitting, bird houses and food, wild edibles, maple sugaring and more. We, BAA, plan to have the observatory open to show the public our activities.

Ken Biggie

SEPTEMBER CONSTELLATION

LACERTA is a small constellation among the Great Square, Cygnus, and the King & Queen. This Lizard does not show well with the brightest star being only 4th magnitude. It does have a couple of interesting objects; (irregular) in a beautiful field. The Variable Star 'S' Lacertae at RA 22h 27m, dec. N. 40° is an 'M' type variable ranging in magnitude from 7.6 through 13.9 over a period of 240 days. Double star sigma2894 Lacertae is located at RA 22h 16m, dec. N. 37° consisting of 6.1 & 8.9 companions, is a relatively fixed, slow binary, separated by 15.9". Double star 8 Lacertae, RA 22h 34m, dec. N. 36° has companions 5.8 & 6.5 magnitudes separated by 22'

OCTOBER CONSTELLATION

TRIANGULUM is a small constellation with a big interest, M-33, is bounded by the Ram, the Fish, the Chained Lady and the Hero. The Triangle has one main object which can be seen with a pair of binoculars, M-33 or NGC 598. It is an irregular galaxy, type Sc spiral at a distance of 2.35 million light-years. It has a visual magnitude of 7, which is just fainter than the eye can detect. There is a double star, Iota Trianguli, at RA 02h 9m, dec. N. 30° which are separated by 3.6" and are of magnitudes 5.4 & 7.0. A variable star in this constellation which is at RA 02h 34m, dec. N. 34°, is an 'M' type variable. It ranges from 5.4 through 12th magnitude and has a period of 266.4 days. The three main stars which make up this constellation are Alpha (3.45), Beta (3), and Gamma (4.1). Gamma is joined by another 5th magnitude star, Delta.

STELLAFANE 1979

This year from our club, only Ken Kimble and myself were at Stellafane, and for each of us it was our very first visit.

It was the 44th annual gathering of amateur astronomers near Springfield, Vermont, which had a crowd of only slightly less than usual. It was assumed that some people were uncertain of the

availability of gasoline, but as it turned out, getting gas was no problem at all. About 700 people had registered and over a thousand attended. Scattered all around were about 200 telescopes, some as large as 16 inches.

Most of the amateurs who came were from neighboring states and Canadian Provinces, but not all. Some were from far away places such as California, Vancouver, Mexico City, the United Kingdom, and even Kenya. One person came from Maine by bicycle even with all the hills on the way.

The first night there were illustrated talks from 8:30 P.M. to 1:30 A.M. each lasting about 20 minutes. These talks continued again for seven hours the next day. A special talk was given by Zui Gezari, the amateur who built a telescope for Einstein, with a 10 minute color movie showing them both in Einstein's back yard. The movie was taken by Mr. Gezari's 11 year old son, who later became a professional astronomer. During the talks, there was an announcement that some groups have had good success in stopping light pollution.

The weather was good for a change with clear skies most of the time. A unique design telescope contest was held with about 20 entrants. While judging was going on, a bright partial 22° solar halo and a rare 44° halo were noticed by everyone and many pictures were taken. There was also an airplane releasing a glider which soared all around.

One unusual telescope was a multiple mirror with 6 six inch mirrors, but it was still under construction. There were many outstanding amateurs and professionals attending whom one could talk with. For example, comet experts, John Bortle and Joseph Marcus, asteroid person, Jay Gunter, deep sky observer, Walter Scott Houston, astro-photographers, Jack Newton and Robert Little, were there. There were also people from Sky & Telescope, Astronomy, Star and Sky, National Deep Sky and other magazines.

In case you are interested in exactly where Stellafane is located, it is at the summit of Breezy Hill, elevation 1,290 feet, Lat. 43° 16' 41" and Long. 72° 31' 10".

Carl T. Milazzo

THE DUNLAP OBSERVATORY

On July 14, about 12 BAA members visited the Dunlap Observatory just north of Toronto. The evening was well spent.

We began our tour with a very pleasant up-to-date slide presentation, during which a member of the audience asked if there was oil on Mars. Then we were led to the 74". It was awesome! Weighing 25 tons, the scopes pier extended 120 feet down to bedrock. Despite such a massive anchor, the scope vibrates when trains pass by. Because of the light pollution of Toronto, (only 15 miles to the south) only spectroscopic work is done today. Yet, the work is indeed serious research.

After viewing the scope and its 80 ton dome, BAA members were given a private tour of the observatory's library and computer room. The library was described as the largest in Canada and one of the largest in the world dealing exclusively with astronomy. Every major astronomical publication in the world was available as well as a huge basement room with back issues extending to 1940 or so. They also had not only the photographic prints of the Palomar Sky Survey, but also the glass plates!

The computer room was quite impressive with a special machine for automatic reading of spectrum, a printout and a large computer. I am

not familiar with the model, but its size (10'x6'x3') was impressive enough. At present, the observatory has about 50 active astronomers associated with Dunlap. Our guide, a PhD candidate, is a frequent user of the Green Bank radio telescope. She was also planning a trip to the Arecibo telescope to complete a particular research project this summer.

All in all, the general impression I was left with, was of an active, serious, major observatory. Tours are conducted every Saturday- April to October- at sunset. I'd be happy to share information.

P.S. Because of a brick factory 3 miles upwind from the observatory, the two ton mirror must be refinished every 6 months in the basement workshop! The job takes only one day to complete. Also, their blank (which was a practice blank for the Palomar 200") has a fly imbedded in it.

Alphonse Kolodziejczak

Answers to the quiz:

#1- NEPTUNE - Pluto, in its orbit around the Sun, has become nearer to the Sun until the year 1999.

#2- SYZYG

#3- Charles's Wain is a name for the group of seven bright stars in the constellation of URSAMAJOR. The name 'Charles's Wain' originated in England more than 300 years ago, and the Charles referred to was Charles I of England. The name arose from the resemblance of this group of stars to a cart without wheels, but with a shaft to which horses could be hitched. The Japanese call the Big Dipper, "The Emperor's Carriage."

DUES ARE DUE

This is the start of a new fiscal year, which means dues are due. Our Membership Chairperson, Edith Geiger, will gladly accept them at the next meeting.

Welcome from your officers:

President- Dr. Fred Price

Vice President- Ken Biggie

Secretary- Rowland Rupp

Treasurer- Joe Provato

Museum Representative- Dr. Jack Mack

Fellow Board Member-Ed Lindberg

Board Members at Large-

Bob Mayer

Al Kolodziejczak

Darwin Christy

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FIRST CLASS

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