

THE SPECTRUM



BUFFALO ASTRONOMICAL ASSOCIATION INC.

Rowland Rupp, Pres.
Ken Biggie, V. Pres.
Ken Kimble, Secy.
Edith Geiger, Treas.
Darwin Christy, Ed.

Board of Directors elected for two years are:-

Doris Koestler
Al Kolodziejczak
Carl Milazzo

Other Board of Directors are:-

Ed Lindberg, Fellow
Jack Mack, Representative
John Riggs, Observatory Director

Membership, Claudia Bielinski

AND- Refreshment, to date I have not been informed of anyone being appointed. ed.

A new year begins for the BAA and I sincerely hope that our programs will please our membership. Although I covered our activities for the year 1982-1983 at the June business meeting, I think it is appropriate to repeat them here in outline form for those who missed that meeting.

First, our speakers at the monthly general meetings:

September: Larry Hazel, Youngstown - Astrophotography
October: Charlie Fassel, Niagara RASC - History of the Space Program
November: Steve Kramer, BAA - Rittenhouse Orrery
December: Jack Mack, BAA - "The Moon on Five Dollars a Day"

Steve Kramer and Bob Mayer, BAA - Reconstruction of the Antikythera Artifact

Edith Geiger, BAA - Annual Slide Show

January: Shaun Hardy, BAA - Geology of Meteors

February: Al Kolodziejczak and Ed Lindberg, BAA - Stellafane

Beverly Botto, BAA - Space Art

March: Jesse Eichenlaub, University of Rochester - Amateur Space Telescope

April: Gilbert Brink, BAA - "Lasers and Lunar Ranging"

May: David Meisel, SUNY at Geneseo - Minor Planets and Meteors

June: Al Kolodziejczak, BAA - Quasars

Next, other activities during the year - some were regular events like the monthly Study Section meetings headed by Ken Kimble and the Instrument Section meetings headed by Ed Lindberg. Others were one-time events like the trip to the David Dunlop Observatory in Toronto organized by Carl Milazzo and our support of the L-5 Society's Space Fair 1983 at the Museum of Science chaired by Doris Koestler. We continue to produce our bimonthly Spectrum edited by Darwin Christy and we maintain Beaver Meadow Observatory under the directorship of John Riggs.

I thanked a number of people for their contributions to the club. They included members of the Board of Directors:

Ken Biggie, Edith Geiger, Ken Kimble, Ed Lindberg, Doris Koestler, Jack Mack, Bob Mayer, Carl Milazzo and John Riggs. Also, thanks go to Claudie Bielinski, our Membership Chairperson, and to Fred Price who arranged our meetings at Buffalo State and who, along with Miro Catipovic, served on the Nominating Committee. Thanks also go to Tom Dessert for financial contributions to the Observatory and to Walt Whyman and Darwin Christy for the lens and mirror they contributed to the club. Also, thanks to those members who hosted star parties this summer. Last, but not least, thanks to Doris Koestler and Edith Geiger for once again taking care of refreshments. Doris has been hostess for two years now and has asked for someone else to take over this essential job. So far, she has not been swamped with offers. If someone is not willing to commit him or herself for the whole year, perhaps the job can be shared.

A sad occurrence this year was the death of Bruce Cook, a long-time member of the BAA. Bruce, who edited the Spectrum in the late 1960s, seldom attended meetings recently due to illness. Nonetheless, he will be remembered by many friends made during his active years.

For the coming year, we expect to follow much the same format that we have in the past. Our special sections, publication and the Observatory are all in good order and will probably be led by the same people who served last year. I encourage other members to join in these activities. Everyone is welcome to write for the SPECTRUM, anonymously if modesty afflicts you. The Observatory is yours--once you are qualified in its operation. See John Riggs to get checked out. Also, we need you to man the Observatory on public nights.

I have commented before on the favorable response we have had with observing reports at the general meetings and in the Spectrum. I hope we will continue to tell one another about our observing activities. Not every observation has to be profound or earth-shattering to be reported---We're amateurs, you know!

Speaking for the Board as well as myself, I urge you to increase your participation in club activities and to inform us of your suggestions and complaints.

Rowland Rupp, Pres.

SEPTEMBER - OCTOBER
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FOR SALE

10" f:8 Reflector with 1/8th" aluminum tube - \$400.00
 4 5/8" f:6 Rich Field - \$50.00
 3 1/4" f:12 (approximate) Refractor with 1/4" tube - \$???
 Contact John Shaw - phone 662 1372 - All items are
 homemade.

 Dynamax 8" f:10 Schmidt-Cassegrain, large, sturdy Portable Type Pier with Detachable Tripod Legs. Small portable two leg mount also included. Clock Drive, Drive Corrector with attachment for battery use; setting circles; custom made Mahogany carrying case for telescope; custom made carrying case (wood) for eye-pieces and drive corrector.

1 1/4" eyepieces include: Criterion R. 50mm, A.R. 30mm, A.R. 18mm, A.R. 12.7mm, A.R. 7mm, Ortho 6mm.

Meade 20mm research grade, multi-coated wide angle Erfle.

University 8.4mm to 21mm Ortho Zoom.

Vernon scope 2.4x Dakin-Barlow - Star Diagonal.

Optics are superb; fine adjustment in declination is somewhat stiff, can be worked with.

\$1600 to \$1700 worth of equipment - ASKING \$550.00 with a little dickering on the side. Purchasing a computer.

Call Jim Russell at 716-826-0377 any time from 9:00 AM until 2:00 PM any day of the week.

**** Observatory Notes ****

This summer has been one of the best Public Night seasons ever held at Beaver Meadow. Only one night was cancelled out due to cloudy weather. For all of the other scheduled nights, the general public was treated to an in depth astronomy show at the Observatory. Many thanks must go to John Riggs, John Yerger and Michael Idem for their generous volunteer work during Public Night. Their observing skills and expertise are one of the big reasons why our Observatory is becoming increasingly popular. And, while all good things must come to an end, our Public Nights are not over just yet! During September and October the Observatory will be open the first and third Saturday nights of the month, weather permitting. Please check the "Gusto" section of the Friday, Buffalo News for extra details. After October 15th however, the Observatory will close to the public for the season.

Our telescope users may have noticed that the frequency controller for the motor drive has been removed. For some time, it was apparent that the drive was running a bit too slowly. The problem was finally traced down to the frequency controller. All attempts to correct for the drift at the Observatory were unsuccessful. Fortunately, Rowland Rupp has volunteered to help out and is currently working on the controller in his shop. Rowland expects to have the unit in proper order later this fall. In the meantime, the telescope drive is still operational, but the tracking rate cannot be varied. This should pose no trouble at all to visual observation or to photographiv work with short focus cameras.

John Riggs.

**** GIFT TELESCOPES ****

Mr. & Mrs. Charles T. Coons have donated two telescopes astronomy books and back numbers of Sky & Telescope to the BAA. The telescopes were made by their son, Timothy, a former BAA member and a recent graduate in Aerospace Engineering now employed by the U. S. Air Force. Mrs. Coons hopes the instruments will be used to interest other young people in astronomy and science.

One telescope has a 6-inch mirror and a cardboard tube. the other has a 4 1/4-inch mirror and a short metal tube that may indicate it is a rich-field instrument. A substantial pipe mount abd cradle will support either telescope. Some refurbishing is required before these telescopes can be 2

put to use. Perhaps the Instrument Section can recommend and implement repairs.

The BAA thanks Mr. & Mrs. Coons for their gift and wishes Tim success in his highly technical field.

-: ASTRONOMICAL HAPPENINGS :-

SOLAR: The Sun moves from Virgo into Libra in September. On the 23rd at 09:42 (AM EST) the Sun crosses the Equator marking the beginning of Autumn (Autumnal Equinox). In October the Sun leaves Libra and passes into Scorpio.

LUNAR: The Moon's phases for September and October are:-
 New Moon - September 6 & October 6

First Quarter Moon - September 13 * October 13

Full Moon - September 22 (Harvest) & October 21 (Hunter's)

Last Quarter Moon - September 29 & October 28

LUNAR OCCULTATIONS: Jupiter on September 12 at about 18:00 (6:00PM EST) and is visible in Northeastern North America, Greenland and Europe.

Uranus on October 10th visible in North Pacific.

Jupiter on October 10th visible in Southern Europe, North Africa, Arabia, Southern Asia and East Indies.

LUNAR CONJUNCTIONS:

Mars - September 5 & October 3

Venus - September 5 & October 3

Mercury - September 7 & October 5

Saturn - September 10 & October 7

Uranus - September 12

Neptune - September 14 & October 11

PLANETARY CONJUNCTIONS:

Venus & Mars - September 14

Jupiter & Uranus - September 24

Mars & Regulus - September 28

Venus & Regulus - October 7

Jupiter & Antares - October 13

Venus & Mars - October 28

VENUS reaches greatest brilliancy October 1st (-4.3) in the Eastern sky (in the morning)

METEOR SHOWERS:

Beta Lacertids - September 1 (new)

Aurigids - September 1

Epsilon Perseids - September 11

Southern Piscids - September 20

Kappa Aquarids - September 21

Alpha Aurigids - September 22

Sextantids - September 29 (daytime)

Quadrantids - October 2 (seen on January 3)

Andromedids - October 3

Draconids - October 9

Northern Piscids - October 12

Epsilon Areitids - October 17

Epsilon Geminids - October 19

Orionids - October 21

Leo Minorids - October 24

-: STELLAFANE 1983 :-

Stellafane 1983 was held on Breezy Hill just outside of Springfield, Vermont. It is a place for amateurs to show their telescopes and any other astronomical item they have made. It is held, depending on the new moon, either the first Saturday in August or the last weekend in July.

Instruments are judged on Saturday and provided the clouds stay away are judged optically on Saturday night. This year there were clouds (darn!).

On Friday night in the big tent there were many talks. They are kept short to allow as many talks as possible. This year talks varied as follows: "Last Orbit Launch from Cape Canaveral"; "An Account of Jean Texreanu"; "The Jaquarta Eclipse"; "Backyard Observatory"; "Tracing the Deep-sky Objects on Black Construction Paper with White Pastels"; "How NOT to build a Telescope Part II from the 1977 Part I

"Drive for Large Mobile Telescopes"; A Cardboard Telescope Tube"; "What Makes Time Go Faster"; "Aurorae"; and perhaps three or four more followed which I did not see or hear.

On the 'Hill' which were being judged were 20 Newtonian Reflectors, 14 Refractors, 3 Maksutov telescopes and 2 radio or electronic telescopes.

The talk on the 'Hill' Saturday included 'Wethersfield II' by Phil Donbrowski of Glastonbury, Conn.; "Professional Optical Production Technics" by Peter Caravolo of Toronto, Ont.; 'Some Considerations of Modern Optical Systems' by Mike Simmons from Tucson, Ariz. and finally 'Solar H-alpha Photography' by John Hicks of Keswick, Ont. The evening talks were "Stellafane Shadowgram" by Walter Scott Houston followed by the main speak, Prof. Paul Horowitz of Harvard University who presented "SETI: The Search for Extraterrestrial Intelligence".

Those from this area in attendance were: Carl Milazzo, Beverly Botto and Ruth & Darwin Christy. Ex-BAA members who were there were C. Gorski and W. Deasley. Others you may know from the NFAAA were Sue Regalis, George Keene (a judge), Ralph Dakin, Fred Schuelke, Carl Schultz and Mr. & Mrs. Charles Fassel

Darwin Christy

-: OBSERVATIONS :-

Comet Sugano-Saigusa-Fujikawa 1983e was seen on June 11 at 3am with 7x50 binoculars and with a 125mm f/4.2 refractor at 21x. It was then passing the Earth by 5.6 million miles which was the forth closest in all history. Comet 1983e's motion was quite noticeable as it passed through the corner of Vulpecula near the border of Pegasus. It's one degree coma was of 6.1 magnitude with a slightly brighter center region, making it appear as a perfect twin of M-33. The rich and beautiful Milky Way's edge made it somewhat difficult to determine, but there seemed to be no tail or star like nucleus.

There was a brilliant, active, colorful, aurora on June 12 that covered two thirds of the sky, with waves pulsating upwards to the zenith every second. Low in the north was a green arc that wiped out all of the Big Dipper stars and just above was yellow and gold flickering rays that at times became zero magnitude. Occasionally pale curtains would slowly shimmer and violet spikes would suddenly grow to the zenith and just south of it was a complete zenith corona. Looking at objects on the ground I could see soft aurora shadows pointing to the south. On August 7th there was an almost exact repeat performance except for an occasional Perseid Meteor that streaked by.

There was a very dark partial eclipse of the moon on the early morning of June 25th, which was seen from the roof of the Buffalo Museum of Science. About one third of the northern region of the moon became dark grey and it had a surprisingly sharp shadow edge. There were about a hundred of the public present and the following BAA members were there helping Ernst Both out; Marilou Betak, Tristan Dilapo, Debby Lagodna, Jerry & Adrienne Morris, and myself. By dawn the still partially eclipsed moon was setting over the tall buildings of down-town.

On July 9th the star Regulus was seen in the daytime with binoculars when in conjunction with Venus. It was 20 minutes before sunset and they were separated by three quarters of a degree and Venus could be seen by the naked eye.

From the light polluted skies of the city of Lockport the Pelican Nebula I.C. 5067 in Cygni was seen on July 13. This became possible because of an ultra high contrast nebula filter being used with a 13-inch telescope that has a wide field of view.

The best Perseid Meteor that I saw this year was at about 2am on August 14 as it travelled about 45 degrees in one second across Aquila. It was -5 magnitude, white and left a glowing train for 10 seconds two degrees south of

Altair.

Carl Milazzo

Sunday, August 7, 1983, Lime Lake, N. Y. Observations often lead to unexpected results. Having just observed the globular cluster M-13 in Hercules, I decided to view M-92 the other fine globular in that constellation. Because it's a little harder to find, I took some time to orient myself with its position using the naked eye. While doing so, I noticed faint flashes of light near the object. My first reaction was to attribute this vague luminescence to heat lightning or someone's switching a distant searchlight on and off. Who would do that way out here?

Then it occurred to me that auroras can pulsate. Sure enough, when I looked north a bright aurora had developed. It looked like a band of light about 120° wide, starting roughly 10° above the horizon and extended about 15° or 20° above that. Above this point, the brightness diminished, but pulsations could be seen in this region all the way to Hercules near the zenith.

The aurora rapidly changed. The band of light broke into patches of brightness and darkness. Streams of light like thin searchlight beams, shot up 50° or 60° from the northern horizon, lingering for a few minutes, then faded while new streamers appeared elsewhere. At one point, the entire northern sky was bathed in light extending nearly to the zenith. The bright stars of Ursa Major and Cassiopeia just managed to show through the aurora, but the dim stars, usually seen in only dark skies, were obliterated.

The main output of the aurora was brief. It started at roughly 10:45p.m. and was largely gone a half hour later, perhaps less. It occasionally revived, but could never match its earlier brilliance, at least not up to 12:15p.m. or so when I packed up the telescope.

By the way, I did find M-92. But somehow it was a bit of a letdown after the fireworks that had just ended.

Rowland Rupp

Over the last 10 years, observing conditions at the Lockport Astronomy Association's Remick Observatory have declined tremendously. On the fringes of a city of 25,000 and with sprawling shopping malls and plazas just a mile or two to the southwest, the usefulness of the 12-inch Cassegrain has been greatly curtailed. Once-impressive views of clusters and nebulae in the southern summer sky have been reduced to the edge of detection against the brightly glowing background.

The advent of commercial 'nebula filters' in the last few years captured the interest of some club members, but the scarcity of impartial evaluations/comparisons of the many types on the market discouraged us from making a purchase for some time. It was therefore very exciting to see the appearance of an excellent article by Larry Carlino in the May-June '83 SPECTRUM on "Observing With Nebula Filters". Larry's review of the performance of various types, based on personal experience, was a valuable guide in our club's selection.

As the LAA is interested primarily in visual observing the Lumicon UHC Filter was the best choice. (for the price of the 'Standard' UHC we ordered we were sent a 'Premium' filter - a \$20 bonus - with 92% transmission of the green 0 III lines) On July 6, 12 and 13 I had the opportunity to use the filter. Observations were made with a 32mm Plossl eyepiece. Tremendous improvement was seen in the H II regions of the southern Milky Way. The unfiltered view of the Omega Nebula (M-17) showed only a faint elongated glow - with the filter the sky darkened dramatically and the nebula became a sharply-defined bright ray with considerable 'mottling' from the intrusions of irregular dark rifts. The curved hook of nebulosity on the W end was very distinct. Similarly, the Lagoon Nebula (M-8) was transformed from a star cluster with a faint glowing patch to

an intricate complex of nebulosity. (the 'hourglass' region was brilliant) Both objects had for years been too "washed-out" to be suitable for public nights, but with the UHC they are once again showpieces. In comparison, though, the Trifid Nebula (M-20) improved only slightly, since much of its light is starlight scattered by dust: a combination reflection and emission nebula.

By holding the filter over the eyepiece of an 8x50 finder, I saw the North America Nebula for the first time. It was invisible in the 12-inch due to its great size and low surface brightness. Carl Milazzo's 13-inch f:4.5 Dobsonian gave a much better view. The lesser-known "Pelican Nebula" I.C.5067 was virtually undetectable in the 13-inch unfiltered, but the UHC made the segment between 56 and 57 Cygni very definite. My favorite by far is the Veil Nebula though. Having never seen it before, I was impressed even by the unfiltered appearance in the 13-inch. A 50x, 1-degree field showed a faint streak of nebulosity (NGC 6960) to one side of 4th magnitude 52 Cygni - but the filter revealed glorious glowing wisps on both sides of the star, extending well beyond the field. Over 2 degrees away, the brighter portion of the Veil (NGC 6992) was seen as a beautifully curved arc of light which could be traced over nearly 2 complete fields! Seeing filamentary structure in the Veil from a school parking lot surrounded by mercury vapor lamps is an extraordinary sensation. (Note that the Veil was invisible even with the filter in the Cassegrain, because of its high f: ratio and restricted field.)

Small, bright planetary nebulae like the Ring, Saturn and Dumbbell were improved by the UHC, but not as noticeably because of their already high surface brightness. (The increased contrast does darken the central hole in M-57) I am looking forward to trying the filter on large, low contrast nebulae such as the Helix and Rosette. I have yet to see the Orion Nebula with the UHC!

While the filter is only useful for a limited class of objects, they include some of the deep-sky's greatest splendors, and I must agree with Larry Carlino's comment that the nebula filters are indeed almost magic. The only criticism I have is the filter's tendency to cause reflections and 'gray outs' unless one cups one's hands around the eyepiece to exclude all extraneous light. But--this problem should be readily solved by adding a rubber eyeguard to the eyepiece.

Shaun Hardy

James D. Russell

Born in the North Buffalo section of the city, James went to Holy Spirit Elementary School and attended Cardinal Dougherty High School. He left school to join the U.S. Marines and served overseas for thirteen months.

His basic training was at Parris Island in South Carolina, after which he went to the naval school in Memphis, Tennessee, for seven months, taking an aviation jet mechanic course. He was transferred to El Toro in Santa Anna, California, for two years where he worked in a squadron that trained pilots to fly jet aircraft, who had had no previous jet training.

He has very pleasant memories of working with John Glenn for two days when Glenn was getting out of the service and needed some time in jet training during his two weeks stay at the base. Jim found him to be a very fine man.

After finishing his two years at El Toro, Jim was sent to Japan for six and a half months where he worked with the Japanese on refueling and maintenance of visiting aircraft when the planes came in from the airfields in the Pacific. Then it was on to Vietnam to become a helicopter mechanic and gunner. He saw combat at Danang and Dong-ha near the demilitarized zone. His service ended in 1967, and he was very happy to return to Buffalo.

He became employed at Bell Aeronautics and worked in the rocket lab as a rocket technician, setting up test firings for various engines, including the experimental stage of the lunar ascent engine. In 1968, he left Bell to work at the Carborundum Company in Niagara Falls, in quality assurance contact body armor in the armor systems division.

In 1970-71, Jim took a few courses at the University of Buffalo (SUNYAB), and in 1972, left the Carborundum Company to become a full-time student in the nursing course at the university from which he graduated with a B.S. degree in 1975. He went to work at Veteran's Administration Medical Center where he continues to be employed. For a few months in 1980, he represented the Proctor & Gamble Company, traveling to hospitals and nursing homes instructing personnel in the use of some of the company's new medical products.

In 1968, Jim and Mary Ann Lesniewski were married. Mary Ann is the operating room supervisor at Mercy Hospital. They have two children; Douglas, 15, and Judy, 6.

Jim is very enthusiastic about the TI computer which he has had for a year. He is being tutored by former member, Steve Noworyta, and hopes to be able to apply this knowledge to his work at the hospital. He is thinking about purchasing a TRS-80.

Jim has always been filled with awe and wonder as he watches the heavens. He didn't realize that there was an astronomical group in our area until he read about it in a newspaper interview with Ed Lindberg. He immediately called Ed and found out more about the B.A.A., and soon became involved in grinding an 8" f/5.5 mirror. He started grinding it in 1978 and continues to work on it, trying to upgrade it to make it better for observing deep-sky objects. Besides grinding techniques he learned from Ed, he also received pointers from Bob Schneider. In addition to working on the mirror, Jim purchased a Dynamax 8" which has given him many hours of enjoyment.

His special interest in astronomy is deep-sky photography, taking most of his color slide pictures at Beaver Meadow Observatory. He received some valuable help in photographic techniques from former member, Tom Dessert, and methods of finding obscure deep-sky objects from our very knowledgeable Beaver Meadow director, John Riggs. Besides deep-sky photography, Jim has taken some slides of planets and the moon.

It was in 1978 that he became a member of the B.A.A. He served the B.A.A. in a co-directorship with Al Mohn at the Beaver Meadow Observatory for one year (1980-81), when other responsibilities prevented him from continuing in that capacity.

Jim is an enthusiastic reader of scientific books and magazines, and subscribes to Scientific American, Personal Computer, Hi-Technology, Science '83, and Science News. When time permits, he reads some science fiction, and especially enjoys the works of noted sci-fi writer, Arthur C. Clarke. As a teenager, Jim wrote to Clarke and has a treasured letter which he received from Clarke in return.

Listening to classical music, especially the Bach organ works, provides Jim with much enjoyment. He also finds pleasure in giving ear to Bluegrass and traditional folk music.

He is now very busy with an enormous project of remodeling the Russell home. This will involve many hours of work before reaching completion.

Jim is very impressed by the friendliness and warmth exhibited within the B.A.A. He is astounded at the amazing backgrounds of its members, who are all bound together by one common interest; astronomy. Jim has a broad spectrum of interests and a wide range of technical ability and know-how, gained in military and job experiences. His sensitivity to, and sympathetic consciousness of other's suffering is manifest in his decision to become a nurse. He is a fine, quiet, amiable fellow, whom we are proud to have as a member.

Edith L. Geiger

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Spy and Tell

Ernst Both gave a talk to the Kenmore Lions Club on the museum's Edward G. Gibson Hall of Space which was dedicated on May 6.

Congratulations to Walt and Gertrude Whyman who celebrate their 50th wedding anniversary in September. This summer, their ten children came from various parts of the country to honor their parents on this special occasion.

Beverly Botto, Darwin Christy and Carl Milazzo attended the telescope makers convention at Stellafane in August. Former members, Bill Deazley and Allen Gorski, were also on hand.

Steve Desmond hasn't been doing much observing this summer, except for following two special stars, Hall and Oates. With Steve's ability to get whatever he goes after, he managed, by romping through the tunnels at Memorial Auditorium, to get autographs of a couple of instrumentalists in the group, and by driving to the Hilton after the concert, and walking from floor to floor, he achieved his goal of a close approach to the stars themselves. And where was Steve's camera? Hanging around his neck, where it remained as Steve stood immobilized in their presence. See Steve on how to reach the stars.

Carl Milazzo visited the Amherst Colonial Museum on August 13th where he waited in line for three hours for an ascent of 100 feet in a tethered hot air balloon. A few minutes before, a gust of wind blew the balloon sideways and the propane gas fire caused a 4 foot hole in the balloon. This, however, did not stop the scheduled ascent.

Irv Goetz flew to New York to see son, Peter, on Broadway in Neil Simon's play, Brighton Beach Memoirs.

Miro Catipovic and family enjoyed the summer in their new 32 foot luxury cabin cruiser.

Congratulations and best wishes to Debbie Lagodna and Tristan Dilapo who will be married in October.

Members who purchased telescopes during the summer:

Al Kolodziejczak - 10" Dobsonian
Tristan Dilapo - 17.5" Dobsonian
(Coulter Optical)
Larry Carlino - 5.5" Comet Catcher
(Celestron)
Rowland Rupp - 12.5" Skyliner

Ed Lindberg had a short hospital stay as a result of a detached retina. Olga also spent a few days in the hospital. Both are coming along nicely.

Orrin Christy did very well in the Empire State games held in Syracuse. In the one man kayak event he came in 4th in the 500 meter race, and 4th in the 1000 meter race; in the two man, he and his partner came in 4th, and in the four man, Orrin, Mike Lance (his partner in last year's races), and two others, came in 2nd, winning the silver medal.

Darwin Christy won a banana doll at the Erie County Fair. How? At one of the stands where the operator guesses one's age, Darwin's age was guessed as being 10 years younger than his actual age. Congratulations, Darwin. Nice going.

Beaver Meadow public nights at the observatory are highly successful with record crowds enjoying "the best show in town" under the direction of John Riggs. B.A.A. members who don't avail themselves of the opportunity to view the heavens from our observatory are missing something special. Plan to visit the observatory soon.

Edith L. Geiger

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SEPTEMBER Meetings: The September 9th meeting of the BAA will be held at 7:30 p.m. in the auditorium of the Science Building at Buffalo State College. Our speaker will be Clifford Cunningham of Kitchener, Ontario, who will speak on "Amateur Photoelectric Photometry of Asteroids". Mr. Cunningham has observed asteroids for fifteen, has published numerous papers in professional journals on this subject and is currently planning publication of a book on asteroids. He is chairman of the Asteroid Section of the International Amateur and Professional Photoelectric Photometry Group. We will look forward to hearing from Mr. Cunningham on a subject to which he has made valuable contributions.

OCTOBER Meeting: Dr. John Raymond, a BAA member for several years, will speak on "Spectroscopy and the Chemistry of Space" on October 14th. This meeting will also be held at 7:30 p.m. at Buffalo State. John received his B.A. at Cornell University and his Ph.D in Chemistry at the University of Washington. His thesis work involved vacuum ultraviolet spectroscopy of large organic molecules and is currently working in chemical laser development at Bell Aerospace. John will give us an overview of spectroscopy and its application to problems in astronomy and astrophysics. Let's welcome one of our own members and a topic at the forefront of astronomical research.

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"SPECTRUM" deadline for the November-December 1983 issue is OCTOBER 27th. PLEASE---I must have everything in by this date. It is too hard to hold for late coming articles and observations. When it becomes a job to edit anything it is time to give it to someone else; and when it is fun and NOT work then one does not mind doing it. So --- let make it fun and not work by getting your articles in by the 'deadline'. your editor.....

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From past "SPECTRUMS"

HOW MANY STARS?

Modern estimates place the mass of our galaxy near 2×10^{11} solar masses. That is to say, if all the stars have the same mass as our Sun, there would be some 200,000,000,000 stars in our galaxy. Suppose you were to draw an accurate picture of our galaxy in which each star were

represented by a dot (.), and suppose further that you were to produce five dots each second without ever stopping, then you would have to start the dotting process somewhere in the year 700 a.d. (in a rough calculation) to finish by the year 1969! ***

June 1969 -Kurt Erland

ASTRONOMY COURSES ----

Wonders of the Night Sky - Instructor, Clair L. DeBus

This is a very down-to-earth course for people who want to learn the names of the objects in the night sky. Sessions in the Museum's Starlab Planetarium will orient students to summer and autumn constellations and their associated mythologies. Classes are on Wednesday evenings, at 7:30 to 9:30 - September 14 - October 12 - limit 20 persons - members \$18 - non-members \$23

Reach for the Stars - Instructor, Arthur Gielow

The course introduces participants to astronomy through the Whitworth Ferguson Planetarium on the Campus of the State University College at Buffalo. Classes are on Wednesday evenings from 7:30 to 9:30p.m. from October 19 through November 23 - limit 25 persons - members \$24 - non-members \$30

Introduction to Astronomy - Instructor, Rowland Rupp and members of the BAA, Edith Geiger, Ken Kimble and Al Kolodziejczak

This class is a comprehensive survey of astronomy. Classes are on Tuesday evenings from 7:30 to 9:30 p.m. beginning September 13 running through November 15th. Members \$32 - non-members \$38 at the Museum.

From the EDITOR----

A little difference in the format of the "SPECTRUM" will be noted. I thought, perhaps, after years of finding the meeting notices on the front page, why not place them inside once. A change to stir up a bee's nest and I am ready to hear any comments you may have - BZZZZZZZZ!!

And - I wish to apologize for the Summer Issue errors. They were committed by myself. I am NOT perfect, as you notice, and I will no doubt make more. After all -- a person who does not make mistakes never does anything!!

Darwin Christy

"The SPECTRUM"

Darwin Christy, Editor
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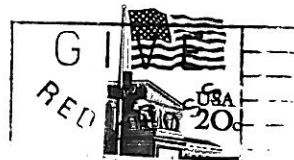
BOTANY CLUB to ORGANIZE at MUSEUM

A new nature study group, the Buffalo Botanical Society, will hold a meeting for organization and membership on Tuesday, October 18 at 7:30 PM at the Buffalo Museum of Science. All persons with an interest in botany, particularly in native and cultivated plants of the Niagara Frontier, are invited to attend. Dr. Richard Zander, Curator of Botany at the Museum, will present a program "Edible and Poisonous Plants of Western New York". For more information on the Botanical Society, contact BAA member Shaun Hardy, who is acting Vice President of the group.

Shaun Hardy

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