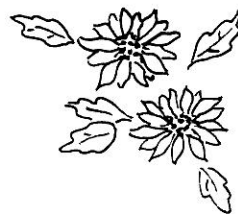
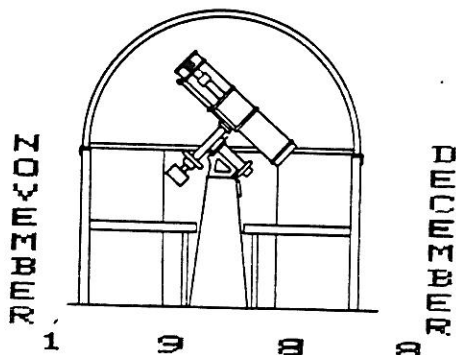




THE



SPECTRUM



BUFFALO ASTRONOMICAL ASSOCIATION, INC.

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MEETING NOTICES

FRIDAY, NOVEMBER 11, 1988 at 7:30 P.M. in the New Science Building Auditorium, State University College.

This meeting should be specially helpful to our members interested in computers. Our guest speaker will be Dr. Philip Kronberg, Physics and Astronomy Professor at the University of Toronto. His talk is entitled, "Super Computer - How They Make Astronomical Discoveries." Lets give him a warm BAA welcome! Refreshments follow.

FRIDAY, DECEMBER 9, 1988 at 7:30 P.M. in the New Science Building Auditorium, State University College.

To start the meeting, Darwin Christy, Spectrum Editor, will reveal some of the books from which he gets information for articles on Ancient Constellations, not to be found in current astronomy books. Club members are the stars of Edith Geiger's slide presentation. This is a part of the meeting everyone enjoys as she photographs the amusing antics of members being themselves. Our feature speaker, Ernst Both, Director of the Science Museum, will

present "Solar Activity", slides taken by Walter Semerau, a long time member of the B.A.A. Walter will be at the meeting to make comments and answer questions. A B.A.A. meeting with Ernst is always interesting and enjoyable. A wine and cheese party will follow.

HAPPY HOLIDAYS FROM OFFICERS, BOARD MEMBERS, EDITOR AND MEMBERSHIP DIRECTOR OF THE BUFFALO ASTRONOMICAL ASSOCIATION, INC.

Doris Koestler
President

NFCAAA MEETING

The fall meeting of the Niagara Frontier Council of Amateur Astronomical Associations will be held on Saturday November 12th, 1988 at the Queenston Heights Restaurant at Queenston, Ontario. There will be a Cash Bar at 6:30 PM followed by a Deluxe Buffet at 8:00 PM. The cost will be \$18 (US) per person.

The restaurant is near the base of Brock's Monument which majestically overlooks the Niagara River. The town is across the river from Lewiston, N.Y. Take the bridge which is just south of Lewiston.

There will be a short business meeting following the banquet. The main feature of the evening will be the talk by Bob Garrison of David Dunlop Observatory. His topic will be, "Small Telescopes and Big Discoveries."

All members of NFCAAA affiliated clubs and their guests are invited to attend. No reservations will be necessary as there is seating capacity for 120 persons.

Ed Lindberg

PRESIDENT'S CORNER

At the September meeting of the board, Dan Marcus was elected as Observatory Director for Beaver Meadow. His enthusiasm has motivated members to volunteer for Public Nights. Lets continue to give Dan our full support and many thanks to our volunteers.

Our new membership director, Diane Borowski, will be collecting dues at each meeting. Please make checks payable to the "Buffalo Astronomical Association, Inc." if you pay by mail. Dues must be paid by December 31, 1988 to remain on the membership list and receive the "SPECTRUM". If any information is incorrect on your mailing label, please contact Diane.

The director of Beaver Meadow, Dave Junkin and his wife Marty, have given a check to the BAA in memory of Bob and Verna Mayer. The board will consider how to use the money at the next board meeting. Thank you Dave and Marty

for your generous gift.

The next board meeting will be held on Tuesday, November 1, 1988 at 7:30 PM.

About two years ago, Rowland Rupp compiled an index, listing articles in past "Spectrum" issues. Articles are listed by topics and then alphabetically by author. Copies of the "Spectrum Index" are still available for \$2.00.

Joe Provato has volunteered to handle the refreshments after meetings. Ken Biggle will continue to bring the doughnuts. Volunteers are needed to help with the wine and cheese Christmas Party. Get out your favorite cookie recipe, bake a few more, and bring them to the party. Donations of party refreshments are always welcome.

HAPPY THANKSGIVING - HAPPY HANUKKAH - MERRY CHRISTMAS

Doris Koestler
President

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Correction

In regard to the "Carl Milazzo Award" presented in the September-October issue of the Spectrum:

I wish to make clear a misleading statement which Carl unintentionally made in the article concerning my lunar observations. I have made sketches of numerous craters and domes, and a number of these have appeared at various BAA exhibits. I have, however, never painted any pictures of my lunar observations as mentioned in the article. Any lunar paintings seen at our exhibits were those of Fred Price.

I feel that there can never be a number one member of the BAA. It takes many dedicated members through the years to make a successful organization, and we have many such members, not one but many, who have given of their time, energy, and support to our association in which we shall continue to take great pride.

Edith L. Geiger

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A Response to Carl Milazzo's Article on Edith Geiger

Carl Milazzo's eulogizing of Edith Geiger in the September/October "Spectrum" entitled, "What Most Club Members Don't Know", although undoubtedly well-intended, is inappropriate and misleading and spotlights what the author himself doesn't seem to know.

Bringing Edith Geiger's fine record of service to the BAA to the attention of the general membership is not going to help Edith get an Achievement Award. The College of Fellows alone deliberates upon and decides this each year. The pitch for Edith would better have been directed to the College of Fellows in the form of a letter. (I assume that the College of Fellows is the 'small group' who anonymously refers to who, he alleges, has overlooked Edith).

The award is not for an 'outstanding member of the year'. It is for achievement as the name suggests. The article catalogs Edith's many services to the BAA yet doesn't mention a single achievement such as a piece of research or publication in a refereed journal.

Edith never has exhibited paintings of lunar formations at any of the BAA or other exhibitions. They were my paintings.

In the threatened continuation of the above article, it is to be hoped that before another BAA member is publicly bared in the pages of the "Spectrum", they will be advised of this beforehand as is the customary courtesy, and their approval obtained.

Fred W. Price

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MUSEUM LIBRARY BOOK SALE

The Science Museum's Research Library is holding a Used Book Sale on November 11-12, with 1500 items available. You can pick up some real bargains in astronomy, geology,

botany, zoology, anthropology, nature literature and more. Copies of HOW TO MAKE A TELESCOPE (Texereau), THE MYSTERY OF COMETS, CELESTIAL OBJECTS FOR COMMON TELESCOPES AND THE REALM OF THE NEBULAE are among the offerings. Proceeds from the sale will help the library's fund for new book purchases. Be sure to stop by and browse. Hours are 10 AM to 4 PM, both Friday and Saturday.

Shaun J. Hardy

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MAGAZINE GROUP SUBSCRIPTION PLANS FOR CLUB MEMBERS

ASTRONOMY magazine has a group subscription plan available for clubmembers at a significant discount. The plan rate is \$14.00 per year (12 issues) compared to the regular rate of \$21 per year.

Group subscriptions will begin and end with the January and December issues for new subscribers.

Renewals for existing subscribers will extend their subscriptions through December 1989 at \$1.16 per issue from the current expiration date. The same rate applies for new member mid-year subscriptions. (The current expiration date appears on your mailing label.) Members renewing a current subscription MUST present their mailing label so the code number can be entered on the group form.

Other publications for Kalmbach Publishing also have group rates available :-

ODYSSEY (children's magazine) at \$10 per year (12 issues), or 85 cents per issue for current subscription extensions for each issue through December, 1989. The same rate applies for new member mid-year subscriptions. Regular rate is \$14.88.

DEEP SKY at \$7 per year (4 issues). Renewals will extend the subscription for 4 issues.

TELESCOPE MAKING at \$7 per year (4 issues). Renewals will extend the subscription for 4 issues.

Please contact club treasurer Jack Empson, 7021 Nash Rd., No. Tonawanda, NY 14120 (694-3814) to arrange for your new renewal subscription. Don't wait, contact Jack today!

NOTE: If we fail to have a sufficient minimum number of participants (5) for any publication your money will be returned to you. Please make checks payable to the S.A.A.

Diane Borowski

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GREAT DUST STORM ON MARS

During this year's (1971) opposition Mars came closer to the Earth than at any time since 1924. Because of its eccentric orbit, Mars comes close to Earth only at intervals of 15 to 17 years. It is well known that during such perihelic approaches, when the southern hemisphere of our neighboring planet is tilted toward Earth, it undergoes fairly extensive duststorms often lasting for weeks. These usually begin after Mars passes perihelion and sometime before the southern hemisphere's summer solstice is reached, apparently due to fairly violent winds (up to 60mph) produced by increased convection. Though violent at the beginning, these winds rapidly decrease within a day or two to about 6 miles per hour. This year (1971) Mars reached perihelion on September 8, while the southern summer solstice occurred about a month later (October 10).

The dust storm apparently started around September 23 as a bright yellowish area in the region of Noachis, covering Pandora Fretum and stretching toward the south pole. The only feature brighter than this cloud was the small, white, southern polar cap. As the "storm" progressed west and southward, it gradually covered Sinus Sabaeus, Sinus Meridiani, Mare Erythraeum and Sinus Margaritifer, all appearing greatly reduced in intensity. By September 29 the cloud, consisting of several individual patches of unequal brightness, covered more

than 200° in longitude, from east of Hellas to Iacus Solis. On the following day it covered the small southern polar cap so that it "disappeared". During the first few days of October it continued to spread both in longitude and latitude, crossing the equator as a dull "dust haze" and beginning to reduce the intensity of dark features located in the northern hemisphere. Sinus Sabaeus appeared completely covered around October 6 and the most prominent dark feature on the Martian disk, the Syrtis Major, was seen greatly reduced in intensity - a pale ghost of its normal self. For the first time since September 30 the south polar cap became vaguely visible on October 9, surrounded by a bright hood.

Since the first week in October, the "storm" has slowly subsided, although most dark areas are still quite vague and appear "washed out". Apparently the "cloud" has given way to a fairly planet-wide dust haze which obliterates most of the finer detail. Another yellow cloud may be expected to develop around the middle of December, according to G. De Vaucouleurs. Between now and then we may expect to observe much continuing cloud and haze activity, although if you missed this beautiful storm, you'll have to wait until the mid-1980's before you get another opportunity similar to this. (Ed's note; as it is, it turns out to be 1988 - dc)

Ernst Both

Douglas L. Smith

Born in Tonawanda, Doug went to Highland Elementary School for his early education. In Clinton Junior High he became interested in space with the coming of the first rockets, and he has continued to be absorbed in the space program through the years. He graduated from Tonawanda High School, and before furthering his education, he joined the National Guard.

He enrolled at the University of Buffalo, majoring in English literature, and after receiving his B.A. degree, went on to Buff. State where he earned his M.S. in elementary education. His thesis was on "Educational Technology." While at State he was a member of the first National Teachers' Corps and became a teacher of the disadvantaged in schools #17 and #8 in the Buffalo schools.

After graduation he enjoyed a remarkable experience when his wife and their two children accompanied him to Alaska where he taught children ages 5 to 17 in a one room school house in an Eskimo village in Oscarville on the Kuskokwim River. After a year, Doug and his family returned to the Buffalo area and he, in 1969, became a teacher of 4th, 5th, and 6th graders in the Sweet Home School District, a position he continues to hold today. In the Glendale Elementary School, in the district, he works with the Young Astronauts Chapter 317.

A Buffalo friend of his, Syd Chiswell, who worked in Westinghouse management, expressed his thoughts on the potential use of amateur radio for the classroom, which motivated Doug to make an effective effort in that area. He organized an amateur radio club in the grades, and has a successful radio club in the Middle School. He also teaches an adult education class in computers, video, and amateur radio. In addition, he has conducted teacher workshops in the above subjects.

In 1987, Doug was one of the 10 New York State winners of the U.S. Department of Education's Christa McAuliffe Fellowship which was "designed to give outstanding teachers an opportunity to continue their education, develop innovative programs, or to assist local agencies in finding ways to improve the knowledge and skills of teachers." He received a \$25,000 grant and was one of the 115 teachers throughout the country chosen for awards. As a result of the award he has set up a radio lab, and a rocketry lab where students build and launch their own rockets. Last year, in Project Skitrek, Russians and Canadians skied from the Soviet Union across the North Pole to Canada. Doug's class monitored the transmission to skiers used for the purpose of navigation and supplies during the mission.

In the summer of '88, Doug went to a National Science Foundation workshop where he studied chemistry for chil-

dren. He now uses chemistry in his regular classes in the Christa McAuliffe Space Center. He has participated in some educational activities with AMSAT, the American Radio Satellite Corporation, and has attended their conventions and been a speaker at their meetings.

He is a "rock hound" and has been interested in minerals for twenty years, but in the last two years he has concentrated on crystals. He has conducted his major search for minerals and crystals on the Canadian Shield. With Doug's knowledge of rocks, he presents an exciting study of the subject to attentive students.

He took a course in modern art for teachers and not only enjoys modern art but has a son who is an artist. Rock and Roll music has been a favorite since his high school days and now, with his children, he has kept up with the rhythms of today. His interest in music, however, covers many styles and forms.

As a member of the National Space Society and the L5 Society, Doug has heard many speakers associated with space. He also attends meetings at the museum. He became a BAA member as a result of his interest in space. He owns a 6" reflector, and we're happy to have him as a member.

Doug has been married to the former Sue Ann Wade for twenty-six years and they have four children: Scott 25; Geoffrey 22, who is in college; Tobias 18, and Heather 15, both in high school. The family has always enjoyed camping and the beauty of nature and the great outdoors. They have gone on camping trips across Canada from Nova Scotia to the west coast and over much of the U.S. They now rent a summer cottage at Matawaska near Bancroft, Ontario, the rock capital of the world. Some of Doug's other interests include sociology and politics of which there is endless material for his reading enjoyment.

Doug is an energetic being with a wealth of inventive ideas. As a teacher his innovations bring a new perspective to the joys of learning for many of his fortunate students, and are sure to inspire them to continue their pursuit of knowledge. Students will always remember him with appreciation for the fine influence he has had on their lives as a teacher and a gentleman. His friendliness, cheerful nature, and his consideration of others are qualities valued by all who know him.

Edith L. Geiger

ASTRONOMICAL HAPPENINGS

SOLAR:- The Sun for November and December will just head south until the 21st of December and then start back north. On November 17th the Sun will enter Scorpius and remain there until the 24th. It will then pass in to Ophiuchus which is not a zodiacal constellation but in the path of the zodiac. On December 14th the Sun will leave Ophiuchus and wind up in Sagittarius through the end of the year and into January 20th. Astrologically speaking, the Sun will pass out of Scorpio in to Sagittarius in November and from Sagittarius in to Capricornus in December.

Planets in Conjunction with the Sun are Pluto on November 4th; Uranus on December 22nd; Saturn on December 26th; & Neptune on December 31st.

LUNAR:- The lunar phases for November are Last Quarter Moon on the 1st; New Moon on the 9th; First Quarter Moon on the 16th; and Full (Beaver) Moon on the 23rd. For December, Last Quarter Moon is on the 1st & 30th; New Moon on the 9th; First Quarter Moon on the 16th; and Full (Cold) Moon on the 23rd.

LUNAR CONJUNCTIONS:- for November: Regulus on the 2nd; Venus on the 6th; Antares on the 11th; Uranus & Saturn on the 12th; Neptune on the 13th; Mars on the 19th; and Jupiter on the 23rd.

For December: Venus on the 6th; Neptune on the 11th; Mars on the 17th; Jupiter on the 20th; and Regulus on the 27th.

LUNAR OCCULTATIONS:- Regulus on the 30th of November, and should be visible throughout North America occurring about 6:00 AM EST.

PLANETARY CONJUNCTIONS:- Venus & Spica on November 15th and Mercury & Neptune on December 20th.

Other Planetary Events:- Jupiter at opposition on November 22nd.

METEOR SHOWERS:- for November, Southern Taurids on the 3rd On the 9th, the Cepheids which are not a significant

METEOR SHOWERS for November:-

3rd - Southern Taurids *****

9th - The Cepheids are not a significant shower but it does radiate from R. A. 21h 30m at declination +72°. Its trajectory and type have not yet been determined, although its duration has, which is for a period of 9 days. They are white in tint and of 5th magnitude with an average count of 5 hourly. It would be a worthwhile opportunity to try to learn more about them through observations while at Beaver Meadow to try to determine their two unknowns.

10th - Northern Taurids *****

11th - Mu Pegasus

12th - Arietids

14th - Beilids (Andromedes) *****

16th - Leonids *****

20th - Andromedes

METEOR SHOWERS for December:-

5th - Phoenicids

10th - The Monocerotids are another not so significant shower which could use observational data. Its radiant is from R. A. 06h 40m at declination +14°. Again we have two unknowns as to their trajectory and type but it is known their duration is about 20 days. They are whitish, 4th magnitude meteors with an average count of 5 hourly.

10th - Chi Orionids (Northern)

11th - Rho Hydrids

11th - Chi Orionids (Southern)

11th - Delta Arietids

13th - Geminids *****

22nd - Ursids *****

Here is the time for a big challenge, try observing three meteor showers on the same night, that of December 11th!!

Darwin Christy

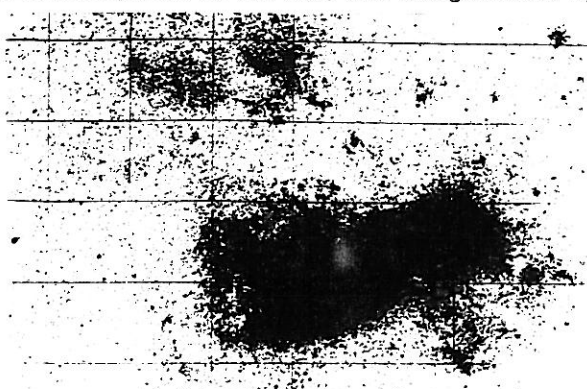
NUBECULAE MAGELLANI

Nubeculae Magellani, the Magellanic Clouds (pronounced Ma-jel'-an-ick). were the cape clouds of the earliest navigators. They were prominent with the navigators when approaching and leaving the Cape of Good Hope. It was not until after Ferdinand Magellan, a Portuguese navigator, had begun his voyage for the Spanish Government in 1519, looking for a westerly route to the Orient, that he would have seen and described them. His record of their description was placed in the hands of his remaining crew under the direction of Sebastian del Cano (a little known navigator), following his death at the hands of a Philippine native in 1521. When his crew finally returned to Spain in 1522, having circumnavigated the globe, the records were turned over to the King of Spain, who, in one account proclaimed the clouds, "The Magellanic Clouds" in Magellan's honor.

Different names were given to the clouds by different astronomers. One was the "Magellan Patches", another was the "Sacks of Coal", and still another, the "Clouds of Mist." Both are irregular galaxies and are our nearest galactic neighbors. They could, perhaps, be satellites of our galaxy, the Milky Way.

The clouds were finally separated and became known as "Nubecula Major", the greater cloud and "Nubecula Minor" the lesser cloud. The Large Magellanic Cloud lies within the constellations of Dorado & Mensa. It is some 20 degrees from the south polar region, covering about 42 degrees of sky area. The distance given this cloud is 112,000 light years from us and is about 14,000 light years across. Because of its dimness, it is obliterated by the full moon. According to Flammarion, in about the year 1866, reported that there are 291 distinct nebulae, 46

clusters and at least 580 discernible stars. Today there are reported to be only a few globular clusters and it is sparsely spattered with open clusters. There are some associations which are large whereas are found a vast clumping of H+ regions, called the 30 Doradus Complex which spans 3 x 1 kpc in the sky. There are, perhaps, a dozen or more supernova remnants which have been observed. The latest being that of February 24, 1987, when a bright Supernova appeared in the LMC, and designated SN-1987-A.



Large Magellanic Cloud

Because every star and nebula are at nearly the same distance from the Sun, comparison of the objects is made easy. And because of their closeness, makes both the Magellanic Clouds very important to observers with modest telescopes of small aperture: example, a 50cm telescope can do as much on them as a 5-meter scope can do on the Andromeda Galaxy, M-31.



Small Magellanic Cloud

The Small Magellanic Cloud is a brighter cloud which lies within the constellations of Hydrus & Tucana. Its distance from our galaxy is placed at 104,000 light years and measures about 6,500 light years across. It only covers about 10 square degrees of sky. According to Flammarion there are 37 nebulae, 7 clusters and well over 200 observable stars. We find that the two clouds are a bit different even though they are irregular galaxies. One of the main differences is the gas content in the SMC is about 1/3 its mass, as compared to that of the LMC which shows about 1/4 of its mass. This is about 6 times as that of our galaxy or the Andromeda Galaxy, M-31.

From 2400 to 2000 B. C., the south pole was located near to the cloud between Eta Hydri & Kappa Tucanae.

For those who have had the opportunity to observe them from down under, saw a most spectacular grouping of stars of two distant galaxies. And-- for those who plan any trips to the south lands might take time out to look up and observe this most beautiful celestial scene.

Darwin Christy

JANUARY-FEBRUARY ISSUE DEADLINE - FEBRUARY 10, 1989

Spy and Tell

Fred Price's book, The Moon Observer's Handbook, is in publication and will be released at the end of the year.

Congratulations to the Rupps! In August, Patty Rupp swam Lake Erie from Crystal Beach to Buffalo Harbor.

On Labor Day, Rowland placed first in Class O in the New York State Horseshoe Pitching Competition held in Camden, New York

The following nine members attended the Stellafane Convention in August: Carl Milazzo, Larry Hazel, Rick Thomas, Brian Fallon, Ed Czaplá, Diane Borowski, Dave Yutzler, Chris Milmerstadt, and Greg Bohemier. Clyde W. Tombaugh was the keynote speaker, talking about amateur charge coupling devices.

On September 3rd, Dave Sepulveda and his wife, Cathy, participated in the Vintage Rally, organized by South Towns Motor Club and sponsored by Sports Car Club of America. They drove 50 miles in a 1983 Plymouth Horizon in Erie and Wyoming counties, traveling to different parks: Chestnut Ridge, Elma Meadows, Emery Park, and finishing at Como Park. Dave and Cathy won first place. Congratulations!

Shaun Hardy went to Harvard Observatory to visit the library, and to see the 15" refractor. Shaun also went to a library conference at Smithsonian Institution.

For those of you who remember Dr. Fred West, you will be interested in knowing that he now works at the Smithsonian Institution.

Jerry and Adrienne Morris are very enthused over their Voyager software which works on their Macintosh computer. The astronomical information available is amazing.

Chris Krstanovic is making a CCD for his telescope. He owns a 6" and 13" reflector.

On the 23rd of August, Marilou Bebak spoke at a dinner meeting held in West Seneca for Christian Business and Professional Women.

On the weekend of September 10-11, Gary Kielich went on a business trip to New Mexico. He took his 4" Schmidt-Cassegrain with him and enjoyed some deep-sky and planetary viewing from the area.

Father and son travelers: Orrin Christy spent eight days in Albuquerque, New Mexico, on a business trip starting October 13th. On October 13-16, in Moody, Georgia, Darwin attended the reunion of the 70th Fighter Squadron of the 18th and 347th Fighter Group of the 13th Air Force, located in the southwest Pacific during World War II. A great time was had by all. On the 16th Darwin headed home and Orrin started out on another business trip to Amsterdam, Holland, Paris, and Switzerland.

The late Alfred Riccuiti, and former BAA member who was a bus driver, philosopher, poet, and stonemason, had an unfinished hand-built stone wall "dream house" on Kensington Avenue. He called it "a research laboratory in building structures." These walls, being built over a period of many years were considered to be an eyesore by many people, and the city building inspectors through the years had threatened to have it demolished. There were, however, many folks who looked upon these walls as art and helped prevent City Hall from tearing down the structure. Al died on January 17th, and six of his friends have purchased the property and will save the stone walls, around which they will build a small neighborhood park in Al's memory. The city has given them until September 1, 1989 to complete the project. How pleased Al would have been, after all the years he had to battle authorities in order to preserve his "dream house."

The area Mar's representative, Marilou Bebak, was busy on September 21st on Channels 2, 4, and 7, giving out information on Mars's closest approach to Earth in 17 years. She set to rest stories of canals and little "green men." She spent a good share of the afternoon on WEBR discussing Mars, but while there she also spread the good word about Beaver Meadow, the museum, and the BAA. As a result we may have some Martians desiring membership in the BAA.

In the early morning hours of August 27th, Dan Marcus and Jack Empson were photographing the partial eclipse of the moon from Tristan DiLapo's driveway at his home in the Boston Hills, unbeknownst to Tristan. At the height of the eclipse, between 5:53 and 6:12 a.m., Tristan was getting ready to go to work and came barreling down toward Dan at high rate of speed (estimated at 40 mph or more). Our her Jack, jumped in front of the car and waved Tristan to a quick halt, saving both Dan's life and the pictures of the eclipse which appeared in the Buffalo News on August 28th.

Edith L. Geiger

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BAA ANNALS

5 YEARS AGO - Five years ago our November speaker was Dr. William Harris of McMaster University, Hamilton, Ontario who spoke on "Globular Cluster Systems in Galaxies". For December, Beverly Botto, Darwin Christy and Carl Milazzo reported on the 1983 Stellafane meeting they attended. Edith Geiger recounted our virtues in her annual candid slide presentation. Articles in the SPECTRUM included a biography of Steve Kramer written by Edith, advice on improving deep-sky observing from the suburbs by Michael Idem and a reflection on "Looking Back" in time through telescopes by an old friend - Anonymous.

10 YEARS AGO - Ernst Both, now Director of the Buffalo Museum of Science, spoke on Mars at the November 1978 meeting. Our Christmas party was the feature for December. That was before the wine, cheese and cookie tradition. We settled for a big cake and coffee in those days. The SPECTRUM, then edited by Larry Carlino, was beginning to expand its contents back then. This issue contained a biography, written by Edith Geiger, on Tom Dessert, a very active and successful astrophotographer.

15 YEARS AGO - At the November 1973 meeting the topic was the June total eclipse. Larry Hazel traveled to Kenya, East Africa and Vern Siegel observed the eclipse from aboard the S.S. Canberra. They both spoke at the meeting. Comet Kahoutek was the big news at the December Christmas party. Ernst Both had an article in the SPECTRUM which included an observing schedule for Kahoutek. Orrin Christy spotted the comet way back in October.

25 YEARS AGO - The November and December meetings in 1963 were both unusual. The November meeting was addressed by Norman Weiss who spoke on UFOs. The December meeting was about a new electronic observational device developed by Dr. E.P. Tschermok, a Czech physicist. There was a two part article in the SPECTRUM on eyepieces. Prices for eyepieces ranged from \$3.50 to \$6.00, twenty-five years ago!

* * * * * INSTRUMENT NOTES

We tested three mirrors this past month. There were two of 6 inches in diameter and one 17½ inch. The latter was a Coulter, one of their early ones. It had a very good figure, except for a low center. Since this will be obstructed by the rather large diagonal secondary, it does not have to be corrected. To bring up the center, the whole remaining surface would have to be lowered.

The beginning amateur telescope maker, especially if he is a perfectionist, would be inclined to keep improving the figure over the whole surface and perhaps end up with a figure poorer overall than he had with the low center. The commercial worker, knowing that the mirror will be used in a Newtonian system, will concentrate on getting a good figure in the regions of greater area and not be concerned with the small area at the center.

An unfinished 6 inch mirror was brought in by Warren

Steinberg, a former active member of both the BAA and the instrument section. The figure was a pretty good spheroid ready for parabolization. Warren is beginning to find a little time to devote to observing again. We hope he will soon return to full activity in both branches or our hobby.

The other 6 inch mirror was a commercial product. It had a good usable figure and is ready to be put to good use in active observing. We hope to bring out more finished or partly finished mirrors from their mothball storage (or wherever else they are stored) and get them into operational telescopes.

Ed Lindberg

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KELLOGG OBSERVATORY REPORT

by ML. Bebak

On September 23rd, the Kellogg Observatory welcomed over 600 visitors to see Mars, and had to turn over 200 away because of the crowd. The following BAA members deserve special thanks for helping entertain the public with smaller scopes on the Museum's roof and with information on astronomy: Roland Rupp, Jack Empson, Bob Hughes, and Nancy Adams. Museum of Science volunteers Bob Semrau Tom Dixon came to observe Mars, but ended up assisting on the roof as well. Thanks guys! The southern polar ice cap of Mars was easily seen along with dark surface markings. Saturn and the moon were also observed.

The last day the Kellogg Observatory will be open for public nights in 1988 will be Friday December 16th. The Observatory will remain CLOSED throughout the months of January and February 1989 for repairs, renovation, and staff retraining. The Observatory should REOPEN for public nights sometime in March 1989, a specific date has not yet been set.

Volunteers are still needed for the remaining public nights in 1988. If you are interested call Marilou at 896-5200 ext. 214.

The sunspot number for August is 111.2, for September 120.8

CALL-OUT TIME

It has come to the attention that we should have a CALL-OUT list for those who are interested in astronomical phenomena. If you are interested, please contact William Halbert at 683-6425. Your interest and cooperation will greatly be accepted. It has been used in the past to some degree but always seems to dematerialize. Lets give it a go once more, what?

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OBSERVATORY REPORT

By now most of you know Bob Hughes stepped down from the Observatory Director's position this spring. Since then Public Nights have not been properly coordinated, and thus Rowland Rupp's letter in the previous "Spectrum". I have volunteered to be the new Observatory Director, and Don French has offered to be my assistant. Being a new director, I would like to let everyone know my feelings about the Observatory.

GOALS:- Increase the use of our scope! I will continue to run and astrophoto session once a month in conjunction with Ed Lindberg's Instrument Section. With the help of the instrument section we will get our Observatory back into full use. Hugh Pettit has already made great headway on the sliding roof repairs. He has spent many days and his own money repairing the pulley system for the roof. Hugh has gone above the call of duty, and it is time the rest

of us pitch in. The roof rollers are still in need of shimming to get the roof tracking properly. The slipping clutch problem with the right ascension drive was rectified this summer by Ed Czapla and myself. NOTE: If the polar shaft seems too stiff please lubricate the slip clutch with WD-40! Extra lubrication is necessary for the clutch to function properly. If you have any troubles with our observatory, please note it in the log, and notify me by phone at 773-5015. I have purchased a Telrad finder for the scope. This style of finder uses a beam splitting device to project a bullseye on the sky, while allowing you to see the whole sky. No more wondering if you are looking at the star you think you are.

Why don't more members use the scope? This is a hotly debated item. One of the reasons people bring up is that all the really avid observers have scopes the same size or larger. According to Carl Milazzo's records, 25 members have 1 or more scopes 11" or larger. This is roughly 20% of the membership, and 50% of the active observers. Many of these observers have their own favorite sites they claim are better than Beaver Meadow! These sites can range from not as dark but closer to home, to really dark, no fog, no dew, no mosquitos and much larger optics. Before putting down our site, remember it is the only one we have right now. The mount and the optics are excellent, and the setup could not be better for astrophotography if you wanted it to. All this at a cost of a whopping \$2.00 per year per member! If the problem is with the site let's move it. If it is the scope, let's build a different one. If it is how it is run, we can change it. If it is all or part of the above, sitting around grumbling about it will not help. Remember if you are not part of the solution, YOU are part of the PROBLEM! Anything is possible if enough people are REALLY interested. Remember 30 people donate \$100 and presto! we have parts to build a 29". That is the power of banding together for a common cause. Let's see you buy an 8" scope for \$100, think about it!

Others say there is no interest in Beaver Meadow because the club is run by a bunch of armchair astronomers, who love to talk, but not so. If that's true, which I doubt, lets party at our scope! Because part of the problem may be that beginners are intimidated by such a large scope! In the "old" days they could go out to the scope and always find an experienced observer there to help. After a while they become more experienced, and start helping others. Besides just when you think you have seen everything someone like Larry Carlino comes up with a crowd pleaser like a Blinking Nebula!

Is bigger always better? There is a club in PA. that has a 16" and a 12" both in separate domes. Guess which is the favorite? That's right, the 12" is because it is easier to use!! Remember a 36" f/4.5 has its eyepiece 14 feet! off the ground. This can be quite disconcerting to

TWO RECENT VIEWS OF MARS.

(The slight phase effect at the east limb is not shown in these drawings)

Solis Lacus



1988 Sept 14

03.50 - 04.15 UT

CM = 36.49 D = 23.50

P = .986

6

F.W.Price.

8-in. refl. X224 with apodising screen and Vernonscope orange filter 23A

Syrtis Major, Hellas and Ausonia



1988 Sept 26

02.10 - 02.25 UT

CM = 288.2 D = 23.77

P = .998

someone not used to ladders.

COMMITMENT with the BUFFALO AUDUBON SOCIETY:- Remember they helped us get some of the money for the building, and provided the land for the site. For this we only pay \$241 per year for insurance. They cover any taxes, electricity, any other expenses and lets not forget the restroom. In return we are obligated to have some sort of public night in exchange for use of the site. If they get enough complaints they can give us 90 days notice to remove our equipment from the site!!!

Public Nights will be the first and third Saturdays of the months, May thru October. If an astronomical event sparks the public's interest like Mars has, I will consider having extra public nights. In the past there was a \$7.00 payment to the person who did public night. THIS PRACTICE WILL CEASE. I am asking those who use the observatory to help out with public nights. There are only 12 public nights a year. This means that if every one pitches in we will only have to do one public night. I will match up one experienced person with anyone who is willing to help. I am asking the volunteers to show up regardless of the weather, as there are people who seem to come to look at the clouds? If you don't know what to do for public night, come see me, and we can plan an observing session on public viewing. OH- you don't think you know enough? Well, the public loves the moon, the planets and you can show them a couple of your favorite nebulae. What's this, you can't find anything, well come on out on public night and USE the scope! it is more fun with someone to help you. If I can't get enough volunteers to cover public nights you can be certain I will be calling you. I am one of the ones with 2 scopes of equivalent size, and have access to a dark site. So if there are not enough volunteers, I am willing to fill in occasionally. Otherwise I will cut back on public nights, and if Beaver Meadow complains, we may lose our site. If plenty of people sign up, I will assign three or more to a public night.

ASTROPHOTOGRAPHY SESSIONS will be Saturday nights November 19, January 21, February 18, March 18, April 22, Mat 20 at 7:00 PM at the Beaver Meadow Observatory. All are invited to attend. We will be discussing photography, astronomy and how to improve our observatory.

Daniel R. Marcus
Observatory Director

NOTICE:- A Beaver Meadow repair and cleanup day is scheduled for Sunday, November 6th. I need help mending a leak in the roof, shimming the roof rollers and just a general cleanup.

DRM

**** BOOK REPORT ****

The Universe from Your Backyard
by David Eicher

At last, the complete collection of articles from Astronomy magazine's monthly series "The Backyard Astronomer", has been published. This series, which premiered in the January 1984 issue, featured the most interesting deep-sky objects in a new constellation each month. A total of 46 constellations, with 690 objects in all, are represented in this new book. All the constellations visible from the northern latitudes, with the exceptions of Corona Borealis, Puppis and Ursa Minor, are included along with an interesting sample of southern constellations.

The excellent format lends itself to both astronomical studies and field use at the telescope. Each constellation is arranged alphabetically with a statement indicating the season of best visibility. On the first page of each article, the reader is presented with photographs of some of the deep-sky objects visible in each constellation. There are over 140 photographs in total throughout the book, taken by amateur and professional astronomers, with 90 in colour. This collection of photographs represents

some of the finest work done by amateur astro-photographers to date. The publisher has done an outstanding job in reproducing these prints. A direct comparison with the magazine prints shows a definite increase in clarity and resolution. The photographs alone would justify the \$24.95 retail price for this book.

Next, the reader is treated to a detailed description of the deep-sky objects visible in a moderate size amateur telescope. This would include the object's magnitude, size and location. Also discussed is the object's "visibility" in large and small telescopes. All the Messier are included with the exception of M-46, M-47 and M-93 in the constellation of Puppis and M-91 in Coma Berencies. The remaining deep-sky objects are the finest NGC and IC galaxies, nebulae and clusters visible to the amateur astronomer. Interesting multiple and variable stars are also included in the constellation description.

At the end of each article there is a detailed summary chart. It lists the deep-sky objects and stars discussed in each constellation, as well as its coordinates (epoch 2000), magnitude, size/separation, type of object and classification, if any.

One of the outstanding features of this book is the 116 telescopic sketches of deep-sky objects done by amateur astronomers. The majority of these drawings were produced by the book's author, David Eicher. The sketches give the reader an accurate impression of what an object will look like through a telescope eyepiece. The type and size of telescope, along with the magnification used, are supplied next to each sketch. Every drawing is fully accredited with the name of the artist.

Finally, a full page, three-colour star chart is supplied to assist the reader in locating all the listed objects in each constellation. These charts are printed with white stars on a dark blue background which is ideal for use at the telescope. Reaching down to approximately 6.5 magnitude with a generous image scale, and plenty of interesting deep-sky objects to keep even the advanced observer happy, these charts rival Will Tirion's Sky Atlas 2000 charts.

The book binding is sewn, not glued, so it will take a lot of abuse without falling apart. The book will open and remain flat on any chart which is certainly convenient during a long observing session at the telescope.

It would have been nice if the publishers included a general star chart to assist in locating the lesser known constellations in the night sky. After all, how many people know the location of the constellation of Serpens Caput, for example. A perfect location would be the front or rear inside cover (endpaper), except we would lose the excellent photograph of the Rosette Nebula, taken by a former guest speaker, Tom Dey of Rochester, NY. The exclusion of a general star chart is a small criticism easily rectified by placing a chart of your own inside the cover.

This book is geared toward the novice or intermediate amateur, but it has plenty to interest the advanced observer. If you're looking for one book to use at the telescope as a star atlas or as a reference guide on a cloudy night, then this is it, IT DOES IT ALL !!

Tristan DiLapo

BOARD of DIRECTORS MEETING

On September 6, 1988 herewith is a summary of their meeting:-

- 1- The main order of business was selecting speakers and topics for upcoming meetings.
- 2- Also discussed was ways to improve on the attendance at our annual May Dinner meeting.
- 3- It was also decided to continue to BAA's subscription to the Abrams Planetarium Sky Calendar with copies available at the membership desk.
- 4- The board also decided to conduct an audit of the

bookers for the past year.

5- The board discussed the naming of certain individuals from time to time as honorary members who would enjoy continued special membership without dues and receive the "Spectrum" for free for their special contribution and support to the BAA. Lillian Von Gerichten and Gertrude Cook were designated honorary members.

6- The board also decided to take advantage of a group membership offer from Astronomy magazine and make it available to any member to participate.

7- Dan Marcus was appointed as the new Beaver Meadow Observatory Director. He will maintain the Saturday Public Night schedule and will need assistance from other club members.

Ken Biggie

***** OBSERVATIONS *****

A bright aurora was seen on August 16, fairly low on the north horizon, from Boston, NY. It was at its brightest in the early evening, but gradually dimmed later in the night. It was pale green with a diffuse wavy lower edge of a shallow arch. The upper half was sharper and contained many tall rays, sometimes extending as high as the North Star. At times some wavy curtain action would appear but it was of only low contrast.

A Soviet upper stage rocket was seen to break up at 1:10 AM on August 21 from Boston, NY. At that location it was seen by Tristan and Debbie DiLapo, Dave Bull, Diane Borowski and myself. It broke up into about 20 pieces of minus 4 magnitude and green. When first spotted, it was 4 degrees above the horizon in the NNW and in 10 seconds moved 25 degrees towards the east, then rapidly dimmed out due north 2 degrees up. 95% of the rocket burned up in the atmosphere and its path ended 50 miles north of Toronto and was seen by many Canadians. That rocket was used to launch a Gorizont communication satellite 3 days earlier.

Later that night, Comet Machholz 1988j was seen as a

7.1 magnitude object of low surface brightness. Its coma was a $\frac{1}{4}$ degree in size and slightly brighter in the middle. It was on Monoceros and was a Sun grazer. 99% of its mass vanished because of the Sun's gravity and the comet is now only magnitude 16.

Also that night, Mars was seen with my jointly owned 2 inch Dobsonian at a magnification of 360. Five dark markings and a small polar cap, which is a lot smaller than I saw back in May was observed. Also a small yellow dust storm was seen against Mars' orange disk. Near the white polar cap was some bluish haze.

And finally that night, a galaxy cluster was seen which is $1\frac{1}{2}$ billion light years distant in Corona Borealis, known as Abell 2065. The brightest is 15.5 in magnitude and I could see 6 of them. The faintest was 16th magnitude. They are 10 arc minutes NE of an 8th magnitude yellow star and among three stars of 9th magnitude in almost a straight row.

Periodic Comet Tempel 2 (1987g) was seen August 31 in Ophiuchus as a 9.4 magnitude object of medium surface brightness. Its coma was a $\frac{1}{4}$ degree in size and its center was of high surface brightness and is my 27th comet.

On September 7, the central star of M-57, the Ring Nebula in Lyra, was seen at 360 power with the 26-inch Dobsonian. About every 10 seconds it could be glimpsed, skies were so clear that night, that M-33 was visible to the naked eye.

The double star Pi Andromedae, also known as 29 Andromedae, was seen on October 12. They are both blue, 4.4 and 8.9 magnitude and are 36 arc seconds apart, and are 350 light years from Earth.

Carl Milazzo

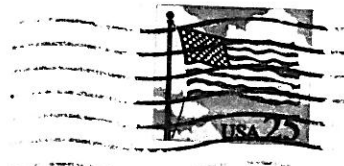
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■ THE SPECTRUM ■

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