

The Spectrum

Observatory Events

Lunar Madness!

There will be a lunar eclipse on Thursday Jan 20 it starts at 10:01 pm, totality starts at 11:05 pm and ends at 12:22 am, eclipse ends at 1:25 am. I am planning to be at the Observatory with telescopes and cameras! If the weather will be better someplace else, the party will move! This event is best viewed with a widefield instrument, so bring your binoculars and richfield scopes. I would like to videotape totality to record any occultation's. Also it is a great time to take widefield photos of the eclipsed moon and the background stars. If enough wish to partake in an early morning breakfast afterwards let me know. Please call Dan Marcus at 773-5015 or E-mail at DMA3141551@AOL.COM.

CCD fun

I am planning to be at the Observatory February 5, 6 pm weather permitting. We can fire up the cameras and check out the equipment. This will be a learning experience for all who have not had a chance to try out the new equipment. This is a fair weather event only. If snowing it will be canceled. For more information please call Dan Marcus at 773-5015 or E-mail at DMA3141551@AOL.COM

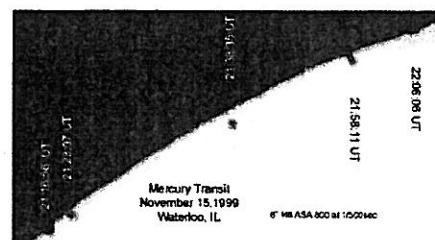
Our Travelers Hi every one!

Tom Bakowski, Joe Orzechowski and I would like to thank all that helped us with the Mercury transit expedition! Pete Proux loaned us a super wedge and extra heavy-duty tripod for the 10" Meade LX200. You can't believe how much eas-

ier it was not to have to worry about altaz star alignment. I credit this mount for the quality of the images. Bill Aquino for his organization and calibration of the system. Frank Chalupka for his help with solar filter making, and testing. When we made it to just outside of St. Louis, we crashed at a Holiday Inn express! It must have made us really smart! Cause when we turned on the weather channel they predicted a high-pressure cell centered over where we planned to photograph the transit. It was clear when we got up on Monday, and the forecast was for clear and still for the evening. After gobbling down breakfast we started our leisurely tour trying to find a good spot to view. Three minutes down the road, we found a really nice farmer's field. When nobody answered the door at the farmhouse we moved on. Several tries later we discovered a house on the edge of a hill with 2 elderly ladies who offered to let us set up and use their power! While unloading the van we observed the farmer down below liming his fields, and raising a nice cloud of dust, which also made us notice the smog over St. Louis where the Sun would set as well as the heat waves radiating from the ground. When we found out the farmer's drive came 10' from our viewing site, and he would be making 20 or so runs over the dirt road next to us during the course of the day, we made the decision to abandon that site. To find another site maybe by the bank of the Mississippi River if we could find a good horizon over water that might help the thermal problems. After

searching down by the river and not finding a good site, much less the river, we backtracked back to a previous site we had observed next to a power substation. The owner was not around and his mother would not give us permission to use the field. After starting to panic as the transit was approaching, we checked with the buildings next to the field and discovered one was the Natural Resources and Conservation Services building, run by the State Government! They let us set up next to the parking lot and use the outside outlet for power. I misjudged where Mercury was to enter the Sun, but Joe O spotted it in his 4" refractor a couple of minutes after first contact. The video covers from there to the very end and includes a UFO that crosses the field of view at the 31-minute mark! Tom found the motor drive on my camera lots of fun and burned up 3 - 36 exposure rolls of film and got a nice sequence of the transit. PS we will have to edit the transit video, as it is as much fun as watching grass grow. We need to condense it to a 1-minute sequel

By Dan Marcus





BAA HISTORY ON SALE!!!!

In the past year, many new members have inquired about what the BAA is. In 1993, Rowland Rupp compiled a history of the BAA entitled "History of the Buffalo Astronomical Association, Inc. 1947-1993." Joe and I were relatively new members when it came out and we bought a copy. Reading it gave us an appreciation of the hard work and significant achievements of many club members, past and present.

Recently members have been asking me questions that I couldn't answer because I couldn't find our copy. I asked Rowland if he had any left -- fortunately, he had one copy that I asked him to hold for me and he also generated some more copies.

In my opinion it is an excellent resource and it not only answers many questions about what the BAA was and is; but also, indicates what the BAA's past and present relationships are with The Buffalo Audubon Society, the Buffalo Museum of Science, Buffalo State College, the

NFCAAA, and other organizations.

Rowland has volunteered to go through the work of publishing the history again, if any members have an interest in purchasing a copy.

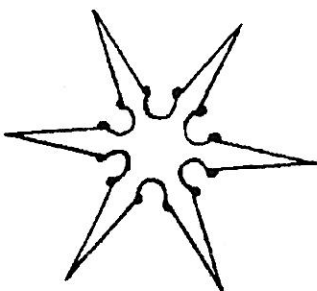
The price is \$7.50 per copy if you pick it up; \$9.00 per copy if you wish it mailed to you.

Since I think I conned Rowland into publishing the history again -- somehow I think he has conned me into handling the orders for it. If you would like to purchase a copy of the BAA history, please email me at:

nss.buffalo@worldnet.att.net

Or try to call me or leave a message at 716-632-7091.

By Bev Orzechowski



OBSERVATION REPORT

While driving along route 400, heading west toward Buffalo at about 4:40PM on October 12, I saw a sundog, at least I think that's the term for it. The sun was immersed in thin clouds, probably ice crystals, and to its left (north) was a vivid patch of sky amid the clouds that was as bright as the obscured sun itself. It displayed the colors of the rainbow with red on the side nearer the sun, and blue, becoming a very bright white, on the opposite side. I looked for its counterpart on the other side of the sun, and found a much fainter patch than the one that first drew my attention. At first I couldn't discern any color, but later it brightened a little and again a rainbow with red facing the sun appeared. I tried to measure the dimensions of the arc and their distance from the sun using my fist and finger as measurement tools (not too easy to do while driving at 55 mph). The distance of the arcs from the sun was about two fists, which I later measured to be about 18 or 20 degrees. I'm sure this was really the standard 22 degree halo that is characteristic of this kind of atmospheric phenomenon. The length of the arc was small, about the width of my thumb, which might be four or five degrees. I suppose a fuller arc might have been visible if the clouds weren't there. I wonder if there was any flying saucer reports stemming from this

By: Rowland A. Rupp

The Speakers For The Rest of The Year

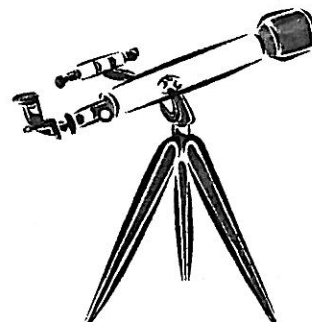
The speakers committee has had two meetings this fall and arranged the schedule below. We are now contemplating the 2000-2001 schedules, and are particularly interested in suggestions for the dinner meeting 2001. All sug-

gestions and offers are welcome. Please suggest a topic for all proposed talks. A diverse offering is what we aim for. We hope you enjoy this year's offering. Jack Mack, for the committee Buffalo Astronomical Association Speakers 1999-

2000 Season This Year's Report on

January: The Space Station by Marilou Bebak

February: Solar Observing, Solar Activity, and Auroras Panel discussion with the club. Panel: Larry Carlino, Bob



Speakers (Continued from page 2)

Hughes, Carl Milazzo, and Jack Mack

March: Dinner Meeting: Astronomical Pilgrimage Stories: The Good, The Bad, The Ludicrous And The Weather by Bob Triton, Gene Witkowski, Dan Marcus, Roland Rupp, and others.

April: Field Investigation A UFO Sighting by Bob Galski (Publish authority

on this topic)

May: Impact Craters In The Solar System by John Murtaugh (Geologist at Buffalo State)

June: Mythology Of The Constellations by Fred Gordon (In the Planetarium following the annual business meeting)

By Dr Jack Mack

My understanding of the Board meeting last night is: December 2 1999

NOAA SATELLITE PICKS UP GIANT UFO IN EARTH ORBIT

The National Oceanic and Atmospheric Administration (NOAA) has several Geosynchronous Orbiting Environmental Satellites (GOES) in orbit watching the Earth's weather and environment. On November 21, 1999, at 14:45Z hours our satellites caught an amazing photo of a UFO at an estimated hundred miles above the Earth off the coast of the state of Washington. Russel Kirchner phoned to inform me that he had obtained the satellite photos and was sending them for all to see. The University of Colorado also keeps these photos on file for reference. One of the satellites is designed to pick up water vapor or clouds from space. When Russel caught sight of the

UFO in the display he zoomed in and could see the steam coming off a UFO. It was the type we identify as a large Mother Ship. We discussed the possibility of the object image being caused by a computer error. Similar photos taken on June 8, 1995, over South America have also been widely distributed. Philip Imbrogno studied this case and NOAA explained the image was a "moon shadow UFO." This excuse will not hold in the latest photos. This UFO was present for only a few minutes and is not seen in images taken prior or afterwards. The UFO has structure, windows, and radiates heat in the infrared spectrum. **Thanks to Russel Kirchner. www.goes.noaa.gov**

1) The board agreed to accept the donations for the "BAA/Audubon Building Expansion Fund" (is that the right phrase?), sum total to date \$875, checks payable to Buffalo Astronomical Association.

2). Bev volunteered and agreed to accept the donation checks and give them to Treasurer Bud Abate as a bundle. Please mail to me at: 125 Roycroft Boulevard Snyder NY 14226-4557

3). The board unanimously agreed to donate funds from the club Treasury, amount to-be-determined dependent upon the half year fiscal projection normally performed in January.

4). Gene Witkowski will formally announce the existence of the fund at the Xmas party meeting with a description and appeal to be performed by Bev.

5). Amount to shoot for is total \$1,500 from members by March 31, 2000. Amount from club to be determined based on the projected LOSS in the Treasury this year.

6). Gene will ask Neil Dennis to write an article for the SPECTRUM regarding the project.

7). Bev will get off the chat group now that she thinks she's milked it dry (OH! that wasn't discussed at the Board meeting).

8). THANKS everybody!!! You are patient and generous - go back to your Astronomy Chat. If you want to discuss the Audubon appeal my email is nss.buffal-@worldnet.att.net

By Bev Orzechowski

COLLEGE OF FELLOWS MEETING

The annual College of Fellows Meeting is scheduled to be held at my home at 132 Burroughs Drive at 7:30 PM on Thursday, January 20, 2000. Please confirm with me, at 839-1842, that you can attend the meeting. If many College members can't make it, perhaps arrangements can be changed.

By: Rowland A. Rupp



Spy and Tell

Due to lack of space in the Sep/Oct 99 Spectrum and a hard disk crash on our editor's computer for the Nov/Dec 99 Spectrum, we are going start the millennium by wrapping up the 1999 news in this Jan/Feb 2000 issue.

Recently, the **Buffalo Society of Natural Sciences** published its 1997-1998 Biennial Report. The publication lists the Museum's curators, research fellows, associates and partners who produce scientific papers each year, many of which appear in journals, bulletins and books.

Ernst Both's name appears several times, both for his work with other notable mycologists, and his own research, providing valuable information on the subject.

Fred Price reports on some of his significant happenings in the past year:

1. Both hard and soft back printings of my "Planet Observer's Handbook" (Cambridge, 1994) continue to sell well so I have been asked by the publishers to update parts of the text in preparation for a second edition.

2. The Quekett Microscopical Club of Great Britain of which I am a committee member recently appointed me one of the Club's three vice presidents and assistant editor of the Journal, which has a worldwide circulation. Recently, I had a research paper published in the Journal and am working on two others. In March of this year I gave a talk before the Club membership at the Natural History Museum entitled "The Connection between the Microscope and the Telescope".

3. Earlier this year and during July I did volunteer work at the Buffalo Museum of Science with the Museum's antique microscope collection. I examined the optical properties of one of the oldest microscopes. The results add significantly to the documentation of this instrument and will be published in the Journal of the

Quekett Microscopical Club, which will put the Museum's microscope collection even more "on the map." For my contribution the Museum's President, Michael J. Smith, appointed me Research Associate of the Buffalo Society of Natural Sciences.

4. I have again served as organizer for the Sunday services during July at the Church of the Ascension in Buffalo.

5. Last year I gave a talk to the Harringey Astronomical Society (North London) entitled: "The Igneous Origin of Lunar Craters - a Critique of Impact Theories."

The Koehlers lead very active lives. **Ken** is a lab technologist at Buffalo General Hospital and also raises sheep and has two draft horses on their farm in Newstead. His wife, **Diane**, is busy as a working nanny.

Back on August 1st, **Darwin Christy** sang two bass solos with the choir at the Salem United Church of Christ in Tonawanda, of which he is a member.

On August 15th Darwin took his 15-year-old grandson, **Michael**, to Gettysburg where Darwin has been taking pictures of the monuments for many years. He managed to get 19 pictures of monuments that he didn't have. Michael was very impressed with Gettysburg.

Darwin has taken a total of 1100 pictures including all regional monuments.

On September 21st, Darwin, **Ann Macgill**, and her granddaughter went back to Gettys-

burg. Darwin took more pictures of monuments, but still has a few to go. He also has 50% of all the corps and battalion plaques.

Another news item about **Darwin**: He has recently been elected as Service Officer in the American Legion. Congratulations!

Bill Smith was an exhibitor at the 38th Quaker Arts Festival in Orchard Park, September 18th. He won first prize in photography and sold around 35 photos, including new prints of chairs at the Lenhart Hotel at Bemus Point, and architectural detail on houses here and there. Excellent!

Carl Klingenschmitt and his wife, **Sue Fay Allen**, have a zest for living. Carl is a consulting electronic engineer at Super Design in Williamsville, and Sue is a vocal music teacher in the Amherst Middle School. She is a graduate of the Crane School of Music in Potsdam, N.Y. and is a member of ECMEA (Erie County Music Educators Association), past president of ACDA (American Choral Directors Association for NY) and is also on the education committee for the Buffalo Philharmonic.

Belated Happy Holidays to All,
Edith L. Geiger



An important message from the BAA membership committee

HAVE YOU FORGOTTEN SOMETHING IMPORTANT?

At this writing, a large number of the club's approximately 140 members have not paid dues and renewed their membership for the 1999-2000 membership year. The BAA membership year runs from September through August. Membership dues are due September 1st although we have a traditional grace period that lasts through the December meeting. This long grace period is drawing to a close!

Presidents Message

Happy New Year to all! In these cold winter months it is well worth bundling up and stepping outdoors to see the stars as jewels against a dark sky. There are more bright stars in the evening sky at this time of the year than any other. A pair of binoculars will reveal some of the finest views in the heavens including the "V" in Taurus known as the Hyades and in the bull's shoulder the Pleiades looking like a little dipper. Orion is also rich in bright stars and has the most famous nebula known as M-42, a magnificent sight especially in a larger scope (such as the club's 20"). Sights like these are the reasons we became amateur astronomers in the first place. The views are well worth being a little cold. The November 20 Telescope Clinic at the Science Museum was a big success. It was a solid four hours of tightening screws, aligning optics and showing the public how to use their scopes. Many thanks to Larry Carlino for his presentation on "How to Buy a Telescope". Also many thanks to new member Pat Lannon for all the publicity and for having "Sky & Telescope" magazine send us 70 pounds worth of "getting started" guides (300 copies). Helpers with tools and exhibits include Lynn Sigurdson, Dan Marcus, Alan Friedman, Jack Mack, Augie Grillo, Rowland Rupp, Marilou Bebak, Steve Orsso, Frank Chalupka, Jim Lehmann, Don Kent, Pat Lannon and kids. Apologies to anyone I may have missed. May 13 (tentative) has been chosen for Astronomy Day. See any board member if you would like to help. Thanks again go out to all the

The BAA is a wealth of resources for those of us with a love for astronomy. We share experience, equipment and fellowship that are invaluable assets to our hobby and certainly the best deal around for \$20 a year. 1999 has offered its challenges to the BAA - but club members both new and old are working together to move the club forward in positive and exciting ways into the year 2000.

Please be sure to renew your membership and join us. If you have special needs or concerns that

members who have and will contribute to the Beaver Meadow Nature Center to help with the construction of their new building (see article elsewhere in Spectrum). Clear skies and good seeing to all. By: Gene Witkowski2. SEVEN FUN SELF-ASSIGNMENTS I think astronomy is learned best by doing it. Here are seven "self-assignments" that are not only fun but will teach you a few things Along the way. The key is in the doing; just reading about them is not the same. Onward! 1. Learn a couple of new constellations. What, you know them all? Then make a couple up; find some ancient ones or review a few less familiar ones. Try to figure out a way of remembering them, who their neighbors are and find within them, a couple of objects to view (naked eye, binocular, or telescope). 2. Observe at least 3 different phases of the Moon. Pick one phase you normally view and try to discover new features you may have missed on previous cursory viewing. Plan to spend at least 20 minutes per session so you can really study areas. View areas several times to catch the brief moments of good seeing. Use a lunar reference to find out what's thereto see ---don't rely on just poking around. Change eyepieces for detailed views! Include one near full Moon phase. Who looks at it 2-3 days before or after full? You should, as there are a wide variety of details near the outer perimeter when the terminator is there. 3. Follow the light cycle of Algol in Perseus. Algol is a double star system whose orbital plane is edge-on to Earth. Thus, as Algol's smaller companion star revolves around, it will cross in front and reduce the light from the duo. The eclipse lasts about 10 hours and is

have kept you from renewing your membership, let us know.

Alan Friedman/ 881-4310/

AlanFGAG@aol.com

Tristan Dilapo/ 941-5613/ jdi-lap19@idt.net

repeated every 2.87 days. The brightness drop is 70% and can be readily seen with the naked eye. . Observe something different or in a different way! Ever look for an asteroid? Many are visible in binoculars. All need to be viewed on more than one night to confirm they are asteroids by their movement against the background stars. Odd shaped ones may show light intensity variations with time. Other options are: daylight sky phenomena (consult a book like Minnart's Light and Color in the Outdoors); occultation's (often listed in Sky & Tel's Calendar notes); Jupiter's satellite transits; identification of satellite types from their orbital paths or whatever interests you peripherally. It's your choice - complete this item by reporting on it in the newsletter! 5. Get into the holiday spirit year-round. Share the joy of observing with someone yet uninitiated with the sky. Their "oohs" over the view of the quarter Moon, a nice open cluster or bright gas nebulae will reinvigorate you too in the process. See "Focal point", p10 of the August 1999 Sky & Telescope for such a transformation's. Take the time to read that astronomy book/article you've been meaning to read; get acquainted with that astronomical software you've set aside or watch an astronomy video that's been waiting for "one of these days" (we've got some to borrow at the observatory). 7. Do a naked-eye study of the Milky Way. Using the aid of a reference, try to see how different arms of the Milky Way are laid out. Perhaps using a star map or planetarium program as an aid, try to understand why the brightest stars are where they are and why certain object classes (planetary nebulae, open clusters, etc.) are found where they are. An excellent source is a 5-page section from Crossen's book Binocular Astronomy. If you can't find a good reference, I'll send or e-mail you that section from the book. Give me a call (962- 3412) or a note at encfoxfarm@juno.com. Forget about the Y2K bug and year 2000 hoopla by ringing in the new year astronomically. By: Bill Smith
By Gene Witkowski



Message from the Observatory Director



On Tuesday November 30th we had a small group of newly interested stargazers come out to Beaver Meadow Observatory. Frank, Dan and I used our 20-inch scope to show them things they never seen before.

From Mark Swiderski (Observatory Director)

Many thanks are in order for all the people who help with the temporary power loss at the observatory. All the small extension cords and electrical experience really helped out with our loss of power. Good news though, the power is back on and the heaters are working great!

In November, the new personal computers were delivered to the observatory. These machines will be used for our public night education's, CCD imaging, Photo editing, Star mapping, etc. After we can

get them in a heated cabinet they will be made available to us.

On Tuesday November 30th we had a small group of newly interested stargazers come out to Beaver Meadow Observatory. Frank, Dan and I used our 20-inch scope to show them things they never seen before. They were very impressed and we even received a new member from this night. Thanks to Bev and her exciting personal discussions with the group. The weather was perfect for stargazing and the night was a success, thank you all for coming out and helping.

At the December's board meeting we agreed that having consistent costs for group outings is important. The fees for all groups coming to the observatory on non-public nights are, \$2.00 per head and a minimum of \$35.00 per group. Example if 5 people come it's \$35.00, If 100 people come the fee is \$200.00. Please see Neil or me if you have any questions on group outings at the observatory

Mark Swiderski



By Law Changes

. BY LAWS CHANGES the membership voted to pass six changes to the BAA's bylaws at the November 12, 1999 general meeting. These changes were formally presented in the November-December 1999 SPECTRUM and are only summarized here: Article 1 - Members, Section 7 Adds provision for absentee ballots Article 2 - Board of Directors, Section 1 Defines age and resident requirements for Board members, and time of installation to their position. Article 2 - Board of Directors, Section 8 Change "appoint" to "nominate" Article 3 - Officers, Section 2 Expands re-

sponsibilities of the Treasurer Article 7, Amendments, Section 1 Language correction Article 8, Indemnification Adds article indemnifying members acting in good faith on BAA business. The Board's recommendation to change Article 2 - Board of Directors, Section 1, which would eliminate the board position for the Curator of Astronomy, a research associate in astronomy from the Museum of Science, or a second member from the College of Fellows, was defeated by a single vote. However, since a two-thirds majority was required to pass the change, and the vote was 25 to 13 in its

favor, the Board recognizes that the membership has clearly expressed its wishes in this matter. The Board will reconsider this proposal in the near future, and will accept further guidance from the membership in this regard. In the meantime, the possibility of presenting a candidate for this vacant position from the College of Fellows will be considered at the Forthcoming College meeting. By: Rowland A. Rupp



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BAA Annals

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BAA ANNALS 5 YEARS

AGO - Jayme Manning spoke at our January 1995 meeting on "What's New With NASA". Manning had developed software that was used in various space programs. In February we heard from Reon Wadsworth on the total solar eclipse he observed in Peru. Our own Bob Hughes filled us in the annular solar eclipse he saw at Beaver Meadow in May 1994. The SPECTRUM featured an article by Darwin Christy on his specialty: "Observing Meteorites Through a Microscope". His article had originally been published in Meteor News. The first class in using our new CCD camera was announced by Dan Marcus. Rowland Rupp was trying to organize a class in Extraterrestrial Intelligence at the Museum. Alas, it didn't run. **10 YEARS AGO** - We started off the 1990s with a talk by Darwin Christy on his observations and measurements of the total lunar eclipse he observed on January 20, 1981. We were also treated to a movie of auroras taken from Alaska. Cosmology was the topic of our February meeting; the speaker was our own expert on the subject, Dr. Jack Mack. Dan Marcus reported we had over 100 people visit BMO during an open house sponsored by the Audubon Society. We received a letter of thanks from resident naturalist, Dave Junkin. We also presented a preliminary proposal to the Audubon Society for an external structure to house the 20-inch telescope we hoped to obtain in the fu-

ture. What we ended up with four years later was quite different. We also received thanks from Marilou Bebak for presentations made by BAA members at the Museum of Science in support of their Big Chill exhibit. Ed Lindbergh, a long-time BAA member wrote his autobiography for the SPECTRUM. Interesting reading written by an interesting fellow. Speaking of fellows, Ed was one of the four original inductees into the College of Fellows back in 1964. Rowland Rupp submitted the lone observation report. **15 YEARS AGO** - For January 1985 Buffalo State's Dr. Carl Seyfert spoke on "Impact of Meteorite at Cretaceous-Tertiary Boundary, Bearing the Continental Drift". To my recollection this impressive title translated into a talk on evidence supporting an enormous impact on Earth some 60, or so, million years ago. We had three short talks from BAA members in February. Dr. Fred Price presented "Lunar Mysteries", Larry Carlino gave "Purchasing a Telescope" and Rowland Rupp spoke on the "Hertzprung-Russell Chart". Leslie Martin wrote an article for the SPECTRUM on the apparent brightness of the planets as viewed from different planets within the solar system. Carl Milazzo addressed a similar issue in his article in which he presented the range of apparent and absolute magnitudes for a wide variety of celestial objects. Observation reports from Michael Idem and Carl Milazzo appeared, as did a note from Edith Geiger's Spy & Tell that Dan Marcus and Bill Smith were spelunkers -- cave explorers. **25 YEARS AGO** - "The New Face of Mars" was the featured talk at

our January 1975 meeting. Ernst Both, the Museum's Curator of Astronomy, was the speaker. We met in the Museum in those days. Next month, Dr. Antoinette Mann Paterson spoke on Giordano Bruno. Dr. Paterson was Professor of Philosophy at Buffalo State. The Spectrum's feature article was extracted from a NASA release on the soon to be launched Helios spacecraft, designed to explore the environs of the sun. And here is a note at the end of the SPECTRUM. I'll just quote it without comment. "FROM AN OLD NEWSPAPER: 'in the year 2,000 February will have two extra days - a 29 and a 30. This phenomenon will recur every 1000 years, because the leap year day we slide in every four years doesn't take up quite enough slack. ---' " **35 YEARS AGO** - Our first program of 1965 was presented by Walter Semerau who spoke on an automatic solar observatory. In February the talk was given by Fred Price on "Lunar Ray Systems". Approximately 300 people attended Kellogg Observatory at the Museum on December 18, 1964 to view the total lunar eclipse. About a dozen BAA members helped out. I mentioned earlier that Ed Lindbergh was one of four initial inductees into the College of Fellows. According to the SPECTRUM, that ceremony occurred at the December 1964 meeting where Rudy Bucking, Walt Semerau and Ernst Both were honored along with Ed. By: Rowland A. Rupp. **BYLAWS CHANGES** the membership voted to pass six changes to the BAA's bylaws at the November 12, 1999 general meeting. These changes were formally presented in the No-

vember-December 1999 SPECTRUM and are only summarized here: Article 1 - Members, Section 7 Adds provision for absentee ballots Article 2 - Board of Directors, Section 1 Defines age and resident requirements for Board members, and time of installation to their position. Article 2 - Board of Directors, Section 8 Change "appoint" to "nominate" Article 3 - Officers, Section 2 Expands responsibilities of the Treasurer Article 7, Amendments, Section 1 Language correction Article 8, Indemnification Adds article indemnifying members acting in good faith on BAA business. The Board's recommendation to change Article 2 - Board of Directors, Section 1, which would eliminate the board position for the Curator of Astronomy, a research associate in astronomy from the Museum of Science, or a second member from the College of Fellows, was defeated by a single vote. However, since a two-thirds majority was required to pass the change, and the vote was 25 to 13 in its favor, the Board recognizes that the membership has clearly expressed its wishes in this matter. The Board will reconsider this proposal in the near future, and will accept further guidance from the membership in this regard. In the meantime, the possibility of presenting a candidate for this vacant position from the College of Fellows will be considered at the for the coming College meeting.
By: Rowland A. Rupp.



A Letter From Germany

William David Halbert
Auf dem Wassefturm IO
89275 Oberelchingen
Germany

Sehr geeherter

So how are things in our hometown? It was a real treat to return this summer and use the observatory, see some old fiends and make a new one or two at the summer star parties. I was especially impressed by the observatory I saw out in East Aurora (sorry - I forgot the member's name). What impressed me is how he single-handedly built it to fit his own needs in an extremely practical way. This observatory is certainly worth an article in our newsletter (OK, I will volunteer if you send me the raw facts).

As for here in Germany, I am singing more and more solo work at the opera. The week before last I jumped in at the last night to sing the part of Banco in Verdi's Macbeth with 20 minutes notice.

The observing is going well as the sides have cleared up this autumn. I expect in relatively short time to crack 400+ deep-sky objects with my 4-and-a-half inch newt. By the way, I have just noticed a beautiful pair in southern Cepheus: 6939 (cluster) and 6946 (gal). They should be accessible to small scopes easily - provided the sky provides for a good amount of contrast. Have you seen these? What do you think?

The wintertime skies bring images of bright, steady stars against a velvet black background. Armed with a Thermos of hot coffee, warm clothing for

the cold temperatures and charts of your favorite objects, something still seems as if it is missing. Could this possibly be the excitement? Perhaps we have seen the Orion Nebula just one-too-many times, or M35 (or even it's apparent neighbor cluster NGC 2158)? To help put back the excitement into wintertime observing why not try out some of the many planetary nebulae hiding about the winter sky? "Wait a n-minute - aren't planetaries just small and faint, and don't they all look alike?" Well, nothing could be further from the truth, far many of the planetary nebulae to be seen in December through February. Each of the nebulae in this article are individually different and have been observed by the author using a 4-and-a-half-inch reflecting telescope.

The first planetary of the night is easily seen even at low powers with a small telescope. NGC 1535 in the constellation Eridanus is easily found 2 1/2 degrees south from the fourth-magnitude star 39 Eridanus. In small telescopes, at low to medium powers, 1535 pops out from the background as a circular fuzz surrounding it's 11th-magnitude parent star. This is a bit of an unexpected treat as actually seeing the parent star that gave birth to it's surrounding nebula is a bit unusual (particularly in small telescopes) given the self-destructive processes that created the nebula in the first place. At higher powers the nebula appears slightly oval and it may seem to be somewhat mottled in appearance.

The next planetary of the night is also fairly easy to find.

IC 418 is approximately 5' north and 6 arc minutes east of the brightest star in the constellation Lepus known either by it's scientific designation, Alpha or by (again, a bit of a treat) were slightly out of focus appearing. Though it may not be necessary to use higher powers to do help to show this distinctly because of the relative NGC 2440 in the constellation Puppis is a bit more the combined light output of an 11th-magnitude star it can be a challenge on those nights that are not very transparent, when the sky background is gray instead of black. And yet with low power it may be detected on a good night. Taking the 'scope up to 130x, this nebula could be seen to be elongated. Unfortunately, like most planetaries, the central star is unobservable through backyard telescopes.

A speeded treat awaits the observer of our next wintertime. But beware - this planetary is possibly the most sensitive to sky conditions of any on the list. Set in the open cluster M46, NGC 2438 in Puppis may be the most beautiful planetary in this part of the wintertime sky, if only for it's environment. With a 12-inch telescope from a northern suburb of my hometown of Buffalo, New York, this was virtually undetectable. Yet with a light-pollution free view of the southern horizon from just outside of Um, Germany (a location 8' farther north in latitude) it was an easy object in my 4 1/2 inch Newtonian. This nebula is slightly elongated to the eye, and seems almost nestled in the upper arms of the cluster. This combination of deep-sky objects is in my n-find one of the highlights of

the wintertime skies. A little east of the group of stars marking Orion's head is the planetary nebula NGC 2022. This may be the most difficult of the planetaries on the list as with the 4 1/2-inch it required averted vision to see, but it is worth seeing nonetheless. To find it, there is a pair of 7th-magnitude stars aligned mostly east-west with a 9th magnitude star immediately following to point directly to this faint nebula. I could not but help being reminded of a delicate smoke ring as I viewed this slight wonder. The last two planetaries I will mention have two things in common - they are both in the constellation of Gemini, and they both have a unique character showing detail at middle to high powers. NGC 2392 is sometimes referred to as the Eskimo Nebula due to mottled features that appear when photographed or viewed with a large telescope at high power. This bright planetary is easily distinguished as such even at fairly low powers. In fact, though smaller, NGC 2392 is actually somewhat brighter than the Ring Nebula in Lyra, M57. With a small telescope one can see an irregularly mottled circular nebula surrounding a 10th magnitude central star. Under higher powers with more scrutiny detail of the inner circle of the nebula may be seen.

Almost 9' north and slightly west of the Eskimo Nebula is a planetary with two NGC numbers. This is due to it's double-lobed appearance which lead some at first to believe that they were seeing two different nebulae. At mag 12.5, 2371/2 is one of the most difficult planetaries on this list, though with dark

skies and high magnification it reveals a structure unlike any other on the list. It appears somewhere between a rectangle and a footprint with a dark lane running lengthwise down the middle. With just this snort list it is easy to see how you can add a little pep to a winter's night. Add some dark skies and some pretty wonderful sights open themselves up to even a small 'scope - just don't forget the hot chocolate! It is not often that one can observe a total solar eclipse from his own backyard. The last eclipse of this century (11 August 1999) did, in fact, travel through my back yard where I, Richard Jakiel (former BAA member and current Sky & Telescope author), my new wife and two others from the Atlanta Astronomy Club attempted to observe this spectacle. Europe certainly was expectant for the eclipse as the line of totality passed through England, France, Germany, Austria, Hungary and Bulgaria before crossing through the middle east and then on to India.

We were observing from my back terrace with two scopes - my modified Tasco II 5mm Newtonian and an 80mm refractor from university optics which was referred to by its owner as 'the thermos'. I was projecting the sun's image, he was making use of a Mylar filter and we had Mylar solar glasses to observe as well. All in all, we were well ready to handle this eclipse. Unfortunately, that is just when the clouds started to roll in. Noon was surprised at the weather as clouds and some rain had been in the forecast for days. We were able to observe the eclipse until about 75% through the intermittent clouds [see the enclosed picture (I am hoping to get this from Richard when it comes in, hope-

fully on time - sic)]. As we turned on the TV about 1/2 hour before first contact we discovered that the only people in England who would see totality were the ones lucky enough to be flying in the government station's plane, sending a picture back from above the clouds, enabling Brits everywhere to see this spectacle of nature. In Germany we were awaiting the eclipse with baited breath. The weather gave only a 30% chance of actually seeing some part of totality and, since there were a few holes in the clouds there was hope. In fact, had the eclipse been only about 5 minutes later, we would have seen totality. Stuttgart saw none of it and Munich saw all of it - we were on the edge! There were two things that we could observe despite the clouds, however. The first was the depth of the moon's shadow. I was awestruck (as later I found out that we all were) at just how dark and still everything became. It was really as if those stories of ancient cultures were right and someone had either stolen or swallowed the Sun. As the shadow swept its way across our part of this planet, you could see all manner of lights being turned on. The other observation that we could make had to do with the speed of the moon's shadow. As we were observing from the top of a smallish mountain, we had quite a horizon that looks out over the alps into Switzerland in one direction and nearly to France in the other. Whereas we had clouds, we could see the coming of the Sun's new illumination of these clouds from quite a distance. We were all taken aback at just how fast the shadow traveled, going from horizon to horizon in a few seconds' time. We did get to see the

Sun once again at a little over 95% after 3rd contact - this was interesting but not totality. We then spent most of the rest of the afternoon looking at the procession of the Moon's shadow on our TV. Two days after the eclipse was the BTM (Bavarian Telescope Makers) - one of the major star parties that is held yearly in Germany. This year it was held in Pfiinz, a little village east of Eichstätt in the Altmühlthal. There were a few differences between this star party and others I have attended in the US which became very readily apparent. The first difference was that most of the telescopes seemed to be handmade by their owners. As I walked around the field talking to the other attendants, the twofold cause of this amateur telescope making activity was made clear. The first cause is that the prices of telescopes and telescope related products here are almost prohibitive. An example are the two men who brought 20-inch Obsession Dobsonians to this meet. They both glowed with pride when they spoke about how they spent \$20,000 US to buy their scopes. \$20,000? They said that is what you get when you buy the telescope, pay for transport, pay the tariff to the government and then pay sales tax on top of it. These are just a few examples from amateurs which recount the same general story. Scanning the magazines here in Europe, one sees the same pricing from import companies - The equivalent of \$1,000 US for the 90mm ETX from Meade or \$5,500 for the 7-inch LX200 Maksutov.

The other problem - generally encountered by those with telescopic desires is one of product availability. As one example, I have been to quite a few stores

specializing in goods used to build houses in search on the European equivalent of Sonotube. No one seems to know of anything similar that exists here (None of the scopes at this meet were constructed using such a tube). An owner of a very fine 8-inch f78.6 Newtonian told me of how he had made his telescope from scratch - including his tube. Commercially built parts for telescopes are not only expensive but they are also much more limited in scope (pun intentional) than that which we enjoy in the US (Note that the ETX-EC has not yet reached Europe and when I recently asked a shop owner he replied that we might get some form of it in about 9 months.)

Getting back to the party itself, there were about 50 different participants and about 35 - 40 different telescopes set up on the observing field. The weather was intermittently good, bringing forth periods of about 45 minutes to an hour of skies that were better than 6th magnitude throughout most of the night. Most of the scopes displayed were in the 6-8 inch range though there were two 20 inch obsessions and a 40 inch self-made Dobsonian that was clearly modeled after an obsession. These scopes gave excellent, sharp views of deep-sky objects that evening and during the day, we were given wonderful views of the sun through some of the smaller telescopes, the best coming through a home built 8" f/8.6 Dob with a tuthir filter.

On Saturday there was also a flea market that featured sales not by big companies, as in some, but by private individuals where one could pickup everything for a brass worm-and-gear set to a new telescope.

As the star party drew to a close and people packed up their tents,



Meteorite likely damaged reservoir

December 10, 1999

Web posted at: 5:18 PM EST (2218 GMT)

SYDNEY, Australia (AP) -- An object that crashed into an Australian reservoir was most likely a meteorite the size of a golf ball, authorities said Friday.

After signs that something had fallen into a reservoir, officials shut off the water supply to the nearby town of 235 miles north of Sydney.

Police set up barricades and scientists carrying Geiger-counters were called in to investigate.

The mystery made national news reports Thursday and triggered calls to radio talk shows from people offering explanations ranging from a Martian landing to a hoax by mischievous townsfolk.

A worker raised the alarm late Wednesday after noticing a path 50 feet long and several feet wide had been gouged through reeds growing next to the reservoir's dam, police said.

On Friday, police divers recovered sediment from the reservoir that geologists believe was stirred up by a small meteorite. Police said the meteorite was embedded about 14 feet into soft rock and could not be quickly removed.

Officials said radiation levels were normal and the water was not contaminated. Guyra's water supply was later turned back on.

I guess that this is the subject to be covered.

I do not personally know much about the happenings with the CCD and computers. Anyhow, this is a summary of the recent happenings as concerns Beaver Meadow Observatory (BMO) and the construction activities at the Beaver Meadow Nature Center (BMNC). First, over the past several years, BMNC has found that their current lodge was not big enough to support the activities they were doing and had planned. As a result, an expansion was proposed and finally under way. About 2 months ago, October, construction was started. One of the first things that affected the BMO was the loss of AC power when the service line was cut when the contractor was digging trenches for the new foundation. We found out about this when we went to open BMO and found nothing operational, like no way to "roll-off" the roof or operate the 12" scope. With a supreme effort by some of the active members (Dan Marcus, Frank Chalupka, Gene Witkowski, Bill Aquino and others) an emergency extension cord was rigged. This gave us the ability to hold the scheduled public night without the use of the 12". Incidentally, that was about the longest extension cord I've seen but it worked. Later, the contractor rigged a heavier cord from the main lodge that we could plug in when we needed power, this gave us the ability to "roll-off" the roof with the help of a few manual pushers. The motor couldn't do it by itself. Finally, as of two weeks ago (mid November), we had full service back and are now in operation. As part of the construction, some dirt fill was placed on the east side of BMO to fill in the dangerous dip we had had in the grass along that edge. As the season is too late to seed now, next spring an early work commitment will be to rake out this fill and seed it. As part of all these activities, I found that we, the Buffalo Astronomical Assoc., had not made a contribution to the building fund at BMNC for this new addition. Part of the addition will be large classrooms and public restrooms that will be available for our public nights or special activities. For those of the club that don't know the history of the observatory at BMNC, over the past 25 years of its' existence, the nature center has paid for the electricity, telephone, and any repair costs or maintenance costs, to me this puts us in their debt. Several of us (the "active" members), started to work on some kind of donation to BMNC. Over the past 2 weeks with lots of chatter on the e-group page we have garnered a total of almost \$1000 in pledges from members or business groups. I would like to see this increase to \$3000 as that will buy us (BAA) a plaque on the wall and I'm sure a lot of good will with the executives of the Nature Center. Let's see if we have about 100 members that have not donated, an average of \$20 each will get us the \$2000 we need. Shouldn't be too hard, think of all the years they have supported us.

Neil Dennis, Observatory Director

ADVICE TO A BEGINNER AMATEUR ASTRONOMER

1. Never be afraid to ask a question, many questions, even those that seem to be dumb questions.
 2. Ask for advice from many of the club's most active members, not just one.
 3. Ask the members who are active in the cold weather months, how do they stay warm on long cold nights.
 4. Ask how to find high quality observing sites, that are fairly safe, dark, free of trees, dew fog, bugs, and traffic.
 5. Observe with some of the most experienced members, you will then make quick progress.
 6. Inquire about the many helpful observing techniques, and simple tools.
 7. Get help with learning the basics, like the scale system of the sky, like coordinates, degrees, magnitudes, charts, planetsphere, magazines, and books.
 8. You will never regret having binoculars, a lounge chair, and a note book, along with a dull red filtered flashlight.
 9. Work with many of the best members who are active with computer programs and the internet.
 10. Go to several large and small outdoor amateur astronomy conventions, amateur observatories, and local group observing sessions [Star Parties aka Star Nights].
 11. Now finally ask several long-term members, what type scope to purchase, or build. Tell them what your main interests are, and the conditions of your main observing locations.
- by Carl Milazzo

THE MANY REASONS FOR ATTENDING AN OUTDOOR ASTRONOMY CONVENTION

Until Riverside came about in 1968, the only one for 40 years was Stellafane. Today there are about 50 amateur astronomy conventions, all over the U.S. and Canada, all formed and operated by astronomy clubs. They are becoming very popular, and almost all are growing in attendance. About half dozen have attendances of over 1,000 people each year, and growing. The following are some of the reasons, why people go back just about every year.

1. To escape light pollution and trees blocking the southern horizons, and those nasty bugs.
2. To talk to hundreds of amateurs from all over the state, country, and the world, to compare views and equipment. To watch experts in action under the stars, to ask them questions, or some help. This also gives an experienced amateur a chance to help out a beginner. It's fun wondering over a field, both day and night, checking out hundreds of different types of home-made and commercial scopes, and accessories. And it is fun showing some of your equipment and some of your favorite objects up in the night sky.
3. Catching some of the formal talks, going on all morning and afternoon, given by top quality experts, from all over the world, both amateur and professional. If you have questions, they have answers, and even an autograph.
4. Have you ever looked through a giant telescope, from a dark location, maybe a 25, 30, 36, 41 inch at 700 power, come to a convention. Ever use a voice activated scope, and image intensifier eyepiece, or a portable observatory, come to a convention. Or try out an equatorial platform, dob-driver, a visual spectroscope, come to a convention.
5. To come and look over the latest that the commercial dealers have with them. Like scopes, eyepieces, books, charts filters etc.
6. Looking for some Bargains or some hard to find parts for a home-made project- try the swap table, or sell some of your astronomy belongings to upgrade to something better or different.
7. Every now and then, there are workshops on observing or making scopes and other apparatus or imaging. Or you can offer to put on a workshop.
8. Over the years, some of your astronomy friends will move out of your local area or drop out of the club. Often you may run into them at an astronomy convention.
9. Conventions are a great place to make new friends or to finally meet an amateur you know from the internet, who lives far away.
10. At a convention you can give an informal short talk, during amateur hour of a serious note or something funny like a personal experience.
11. On a cloudy night, you can sit on a lawn chair and have a long discussion as a small group. You can exchange information, brainstorm, tell stories dream up wild ideas, discuss your local area, talk about how you got started etc.
12. You can observe as a large group, so that you will out-number the wild creatures with the glowing eyes that make spooky noises. As an extra bonus you can hear the oohs and aahs, from the hundreds of amateurs as a fireball flashes overhead.

**RENEW YOUR
MEMBERSHIP NOW !**

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Two talks, which may be of interest to BAA members, will be presented at the Center For Inquiry, 1310 Sweet Home Rd. in Amherst. On January 29, 2000, University of Pittsburgh physicist David G. Willey will speak on "The Physics Behind Amazing Demonstrations." You've seen him breaking concrete blocks on Jay Leno's chest, here's your chance to see him in person. On February 26, 2000, Eugenie Scott of the National Council for Science Education will speak. Dr. Scott will discuss recent attacks on science education standards in Kansas, Illinois and elsewhere, why it's happening, and what can be done about it. Both talks begin at 8:00, admission is \$5.00.

By Bob Titran

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