

THE SPECTRUM

Volume 2 Issue 4

Holiday Edition

November/ December 2000



President's Column

Daniel Marcus

The next Board Meetings will be on Thursday December 6, and January 3. If you wish to get an item on the on the Board's itinerary, please submit it to me 2 weeks before the Board Meeting. Speakers committee will meet at Jack Macks on November 9, at 7:30pm.

T's and Sweats - I am looking for someone to take over the Sale of T's (\$15) and Sweatshirts (\$30) and. Yes we still have some in stock just in case you need something for Christmas, you can always leave a hint for Santa.

BAA December meeting, Melissa Marcus has offered to chair the Christmas Party.

Events to come:

Sunday November 19, Noon to 4 pm, We are holding a Telescope Clinic at the Buffalo Museum of Science. We will need People. It is a free day for GM employees, and I am sure we will get good press. This was a very successful event last year. Members are still needed to bring scopes, answer questions, help with computers, and in general see if

we can help people avoid telescope disasters for Christmas. Larry Carlino will talk on how to by a telescope, at 1 pm, and Tom Bemus will talk on using binoculars and small scopes for astronomy.

Wanted: Someone to organize a astronomy trip to chase an event! Do you want to see a grazing occultation? asteroid occult a star? Solar Eclipse? Transits of Jupiter's Moons?, life is much more fun when you have something to look forward to. The plotting and planning is half the fun! If you have a computer post a note on the E-group, or contact me at 773-5015. Speaking of late breaking news, as of October 10, November's Rare Occultation of Mu Geminorum path has shifted back to the "old" path as reported in S&T November, page 108! The Path is now again reachable by a 12-18 hour drive!!!! Do I have any takers? We can rustle up some astrovids? and VCRs and go for the chase to clear skies! Contact me by phone 773-5015 or on the E-group and we will see if we can capture this unusual event.

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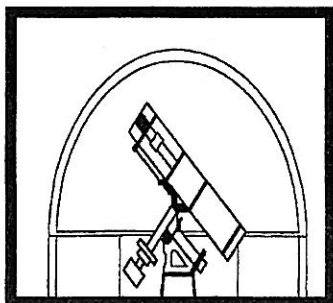
For those of you who haven't sent in your magazine subscription renewals yet – time is getting short. This year's club rates for subscription renewals are:

Sky & Telescope, 1 Year- \$29.95

Astronomy Magazine, 1 Year - \$29.00

The 2001 RASC Handbooks are \$14.00 each and the BAA Astronomical Calendars are \$15.00 each. SNAIL MAIL your check to:

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**SPECTRUM
SUBMISSIONS**Submissions wanted for publica-
tion in the Spectrum!!!!

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astrotim_2000@yahoo.com

MS Word or Wordperfect ok

scanning available

DEADLINE FOR Jan/Feb**ISSUE IS Dec 15****INTER – CLUB COMMUNICATION**

An email group for communications within the BAA membership and friends. This was developed by Dennis Hohman and is restriction by invitation only (ie. BAA members). Available services include e-mail to the whole group or any member; review the history of messages (900+ in 5 months); view/post items to the calendar of events; and view/post items to our own storage area of files. You can be alerted for spur of the moment viewing, auroras or just take part in lively discussions of any astronomical nature.

Group email addresses:

To post a Message: buffalo_astro_assoc@eGroups.comSubscribe to the group: buffalo_astro_assoc-subscribe@eGroups.comUnsubscribe: buffalo_astro_assoc-unsubscribe@eGroups.com List owner: buffalo_astro_assoc-owner@eGroups.com

To subscribe, send a message to

buffalo_astro_assoc-subscribe@egroups.com

or go to the e-groups's home page at

http://www.egroups.com/group/buffalo_astro_assoc/

Currently in the forefront:

Observatory events and facility expansion (ideas and pier work coordination)

Add your thoughts on Bylaws revision

Gamma ray burster news

Follow progress and submit photos and sky events for the 2001 BAA picture calendar project

Learn about astrophotography (and spur of the moment sessions at the observatory)

or

Start your own topic and be a part of BAA live!

You can even query the 39 group members (at once!) to see if anyone is going to the observatory or to get a question answered. There are options when you sign up whether you get every e-mail message in its entirety; just a summary once a day or you can review the messages right from the e-group site by book marking: buffalo_astro_assoc@egroups.com which I prefer to do.

Bill Smith

BAA WEB SIGHT

Tom Bemus and Bill Smith put together a new club web sight at : <http://members.aol.com/BufAstro/>

Contact Tom or Bill with any ideas or suggestions

MEETINGS

Baa Meetings are held on the 2nd Friday of the month from September to June in the New Science Building on the Buffalo State College Campus . Meetings start at 7:30 pm and all members and guests are encouraged to attend.

MEETINGS CANCELLATION POLICY

If, for any reason, (most likely snow or ice storms), there might be cause for cancellation of the meetings of the B.A.A., tune your radio to either WBEN (930) or WGR (550). Also if Buffalo State College has been closed due to inclement weather, so will the meeting of the B.A.A. be cancelled.

BEAVER MEADOW TELEPHONE

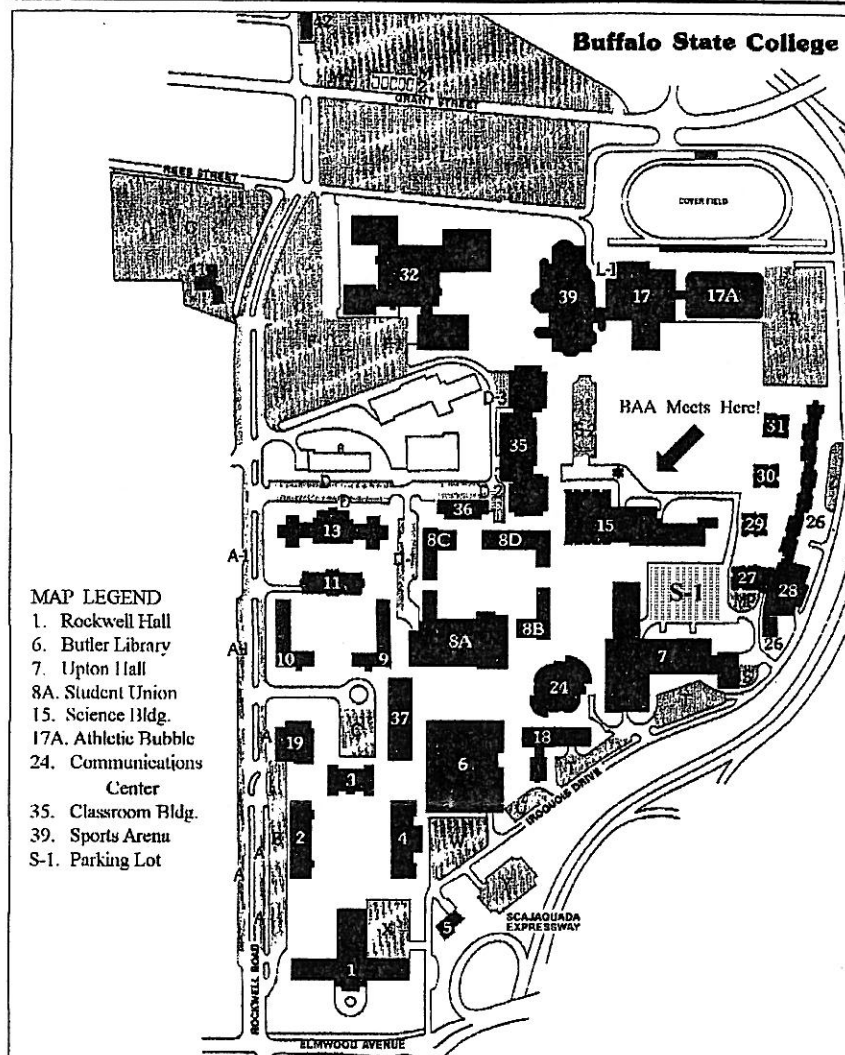
The telephone at Beaver Meadow, 716-457-3104, is for emergency use only at no cost. Local calls may be placed for a small charge - see the

collection box by the phone. This phone cannot make long distance calls.

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BAA Coming Attractions and Past Performances



The title of the talk at the November 10th meeting will be "What? Winter AGAIN!". A panel of BAA members will describe to us and even show us their favorite winter ensembles. If you have ever wondered how to survive an observing session on one of those cold January nights, stop by and give a listen.

In December, Edith Geiger will once again favor us with her unique blend of photographic skills and story telling. Join us on December 8th to see which members have starring roles in Edith's tongue-in-cheek review of this year's BAA activities. The BAA Christmas Party, hosted by Melissa Marcus, will follow the meeting.

And just in case you missed it, September's meeting featured presentations by Frank Chalupka, Bill Aquino, Dennis Hohman and Tom Bakowski. Frank discussed the physics of Gamma Ray Bursters, Bill described the techniques utilized to image GRBs, in particular the efforts involved in acquiring the image of GRB 000301C, and Dennis showed slides of the High Energy Physics conference that was held in Huntsville, AL and which was attended by the four presenters. Finally, Tom provided us with a sample of the various types of publicity generated by the GRB image captured by these four members.

October's meeting also featured several BAA members, each giving us a brief run-down on what they did this past summer. Anthony Davoli showed us slides of the time he spent at an Astronomy Camp held near Tucson AZ. Anthony described his insiders' tour of Kitt Peak and his experiences using a 60" scope. Alan Friedman demonstrated what great images you can get with a CCD camera and a 4" refractor. John Dean's wonderful aurora pictures and Carl Milazzo's slides of Stellafane and Starfest were certainly proof that plain old film is still being used for astrophotography. Finally, Tom Bemus gave us the scoop on Cherry Springs in north central Pennsylvania, probably the darkest observing site in our part of the country.

— Joe Orzechowski —

Telescope design PC programs

I loaded a file called TELESCOPE DESIGN.ZIP into the FILES area of the club's e-group site under the BMO OBSERVATORY directory.

This .ZIP file includes 3 programs: TDESIGN, LENSDES and RAYTRACE and a host of example files (50 in all) for you to try. The programs are somewhat self-explanatory (but read the README.TXT). You will need to do some playing around to see what the various options do. Really oddball designs may abort the programs.

The reference book for this program is: Telescope Optics, Evaluation and Design by Rutten and van Venrooij put out by Willmann-Bell in 1989. Enjoy.

Bill Smith

HAPPY HOLIDAYS TO ALL!

OBSERVING REPORT: Mercury Viewing

by Bill Smith

With all the photography, CCDing and GRBing going on, let's not forget about the simple things like Mercury spotting. Mercury was visible during last 3 weeks of September. This was a long stretch that offered several clear days for spotting Mercury in the early evening twilight. I hope you took the time to view it. This was a poor appearance of Mercury as it never got very high off the horizon. But its position near Venus made locating Mercury much easier. What follows are some Mercury experiences. Mercury viewing can be a challenge but it is not hopeless. Dial up your planetarium program and follow along.

In the Martz club newsletter is a monthly sky article by Ron Kohl in which he states that "Mercury may be glimpsed very low in the west-southwestern sky soon after sunset during September." As far as tonight (Sep 7th) is concerned, my reply to that is: "glimpsed" is THE WORD. Eyow was Mercury low.

LOCATING TIP

I had to locate it in a planetarium program first to determine how far below Venus (about 4 deg) and how far along the horizon from Venus it would be (9 deg to the right). Scanning back and forth with 16x80 binos and rechecking the position until Mercury was spotted at about 7:57pm (2 degrees off the horizon). It disappeared over very low horizon trees about 3 minutes later. Low, thin clouds and/or atmospheric haze really compounded the viewing. At least over the 3 minutes I saw it, it did move in the proper angular direction of the right ascension grid! This probably confirmed it as Mercury and not some distant plane. From home, planes in the west at sunset all seem to come up from the horizon.

REST OF SEPTEMBER

The ecliptic is at a slight angle to the western horizon at sunset so even though Mercury's angular distance from the sun is increasing, its angle ABOVE the sun is increasing very slowly. Mercury should be easier to see every day in the rest of September. On the following dates I list the distance from the Sun; altitude above the Sun; and magnitude (all negative values) of Mercury as obtained from a planetarium program.

Date	Sep 8th	11	15	19	24	Oct 1
Dist from sun	14.5	17	19	21	23	25
Altitude	6.2		7.3			7.5
Magnitude	-.52	-.34	-.22	-.13	-.05	-.01

Angular distance in degrees from the sun increases (bigger is better) and angular distance in degrees above the sun increases (bigger is better but not a lot of change here) but Mercury is getting fainter (not good).

- I recommend using a planetarium program to gauge where Mercury is relative to Venus and the horizon. Put your planetarium program in "horizon" mode (zenith up or equivalent) and make sure you plot it for the time you think you'll see it so that the orientation to the horizon is correct.
- Know the field of your binoculars and measure the offset from Venus in "fields of view".
- Note that Mercury is getting fainter due to phase and distance (not a good thing).
- It WILL BE LOW (less than 5 deg) above the horizon when you see it with binoculars. It does not take much on the horizon to block 5 degrees. (My western horizon is less than 1.5 deg blocked at the lowest point).
- Don't give up if you don't see it. Haze is a killer. Double check your offsets from Venus.

Sep 27th was another "somewhat easy" binocular capture of it. It wasn't "easy" as I doubt just poking around with binos in the WSW would pick it up unless the sky was extremely clear. I think you really need to pinpoint it to even pick it up in binos. I first saw it with 16x80 binos at 7:26pm (Sep 27th) which is 23 minutes past sunset. It was only about 3 degrees off the horizon. I lost it behind the distant trees at 7:34 (and 1.5 deg altitude) but had enough time to get the 10" Dobson on it for confirmation at 110x – it was still a dot so not a distant plane. I never saw it by eye alone although Venus was a beacon.

Thursday, 9/28, was good & clear right down to the horizon so Mercury was readily picked up in binos around 7:25pm and held in view until it set over distant trees a few minutes later. I used a straight shop-vac black tube as a "glare hider" but still could not definitely pick up Mercury naked-eye. Great sparkling colors in shades of reds, blues and whites in the binos as it set. You can really see the Earth's rotation!

CATCH MERCURY IN NOVEMBER

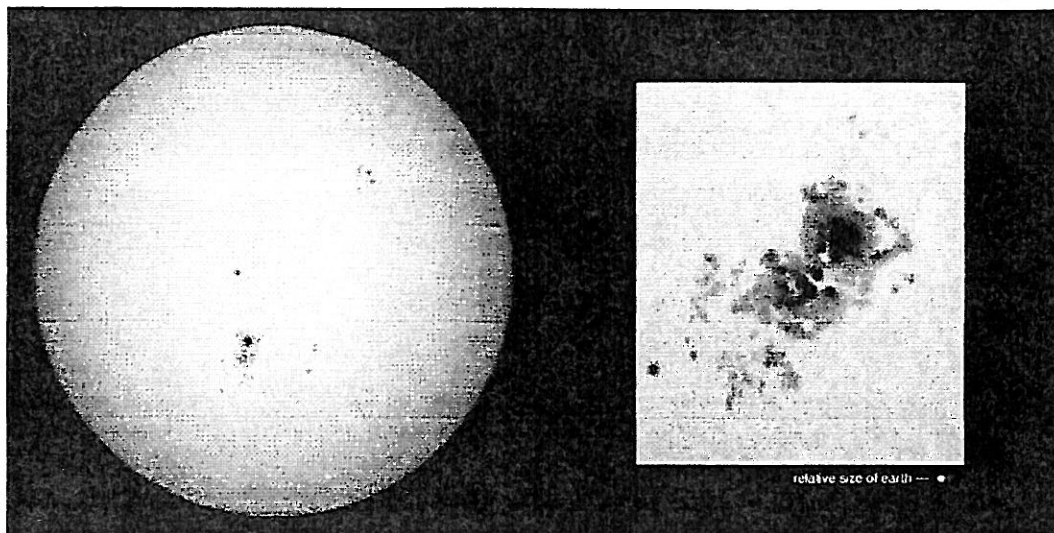
The best MORNING appearance of Mercury this year is upcoming in November - it enters morning twilight on November 9th and is favorably placed for viewing through the 22nd. This provides a great exercise in using your planetarium program, binos and triangularizing techniques for object finding. Fun too and it only takes a few minutes. No bright guide this time. Mercury starts out dim (30% phase and mag +0.4) but gets brighter all the way to the 22nd (80% phase and mag [-.64]). I'm not going to give out any more – pull up that planetarium program! Try to see these phase changes in a telescope.

Have fun and report back via the e-groups or the newsletter to inspire others!

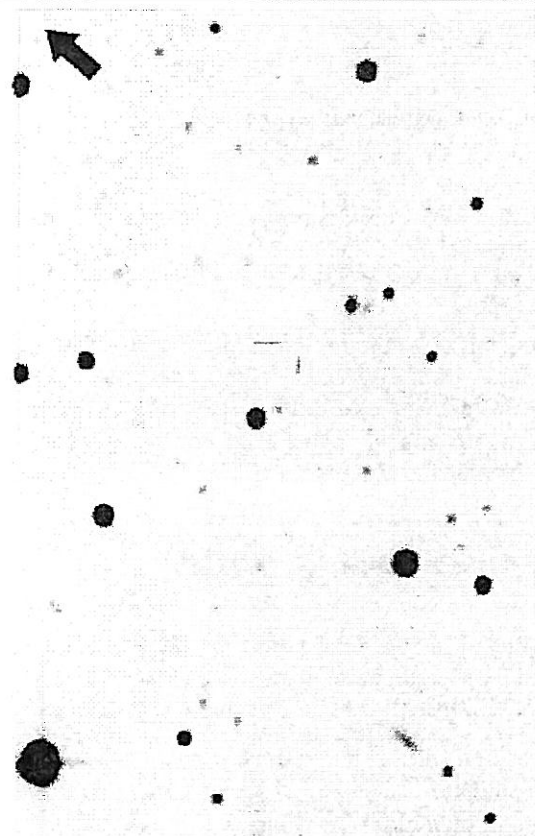
HUGE SUNSPOTS !!!!

By Alan Freidman

This is a composite image of the huge sunspots as they looked Friday morning Sept 23. The full solar disk image is a Photoshop mosaic of 6 astrovid frames shot through my 4.1" refractor with homemade Baader film solar filter using a 2x barlow. The detail image is through the same set-up using a 4x barlow -stacking a few frames together to reduce the noise. The white dot below the detail image shows the approximate size of the earth in relation to the spots in the detail image. These babies are big!



ANOTHER GAMMA RAY BURST FOR OUR TEAM?



A group of us teamed up on Thursday night September 28 to image this GRB (Gamma-Ray Burst) optical transient discovered two days earlier. It was located between the head of Draco and Hercules. RA; 17h 04m 09.70s, DEC +51o 47' 10.2" I have attached two images of the field we took, one is just the negative of the other and the arrow in the upper right -hand corner points toward North. This image is the composite of 13, 5 minute images stacked and processed in a program called AstroArt A preliminary check against the USNO SA2.O catalog indicates that we have a number of stars below

19th magnitude and The photometry tool in AstroArt indicated a number of faint stars between 20 and 21st mag.

The lines near the center point to the location of the transient. Did we capture it?? You decide. There is a very weak spot at this location according to the AstroArt program which has a Star locating tool. There is something at this location that exhibits a signal to noise ratio of 4 which is right at the edge of visibility. Because the image was taken over 48 hours after the burst, it lies at somewhere between magnitude 21 and 22.

I would like to express my thanks to Bill Aquino, Tom Bakowski, Mark Reville, Bob and Jim for hanging in there and helping get this image. Bill's fine collimation work that evening helped make for good resolution in spite of mediocre seeing and we would have collapsed without Tom's efforts at hand guiding the twelve.

_____ Dennis Hohman _____

BEAVER MEADOW OBSERVATORY

The observatory is open to "checked out" members any time. Call Neil Dennis (322-7596) or Mark Swiderski (535-0006) to get checked out. Public nights are held on the 1st and 3rd Saturday nights April through October. There is "members only" viewing after every public night. Help is always needed and appreciated for our public events. You don't need a lot of experience to help out. Stop by and be an "observer" and see just how easy it is. The "vets" will show you how.

5 YEARS AGO - "The Light Pollution Problem and What Can be Done About It" was Tom Bemus' topic at our November 1995 meeting. For December, Terry Farrell gave a planetarium talk on the winter skies, followed by Edith Geiger's annual candid camera spectacular, prior to our settling down to the Christmas party. Bill Smith wrote an article for THE SPECTRUM on observing the moon with the naked-eye. He ended with the recommendation that after trying his program of observations without optical aid, one might repeat them using binoculars. There's a nice map of the Buffalo State campus showing our meeting place, a handy thing to reproduce for those times when someone wants to know "where we meet". Joe Provato's obituary appeared in this issue.

10 YEARS AGO - For November 1990, Larry Carlino spoke on "Observing mars", which included the history of those observations. Bob Hughes was our December speaker. His topic, "Observing Geomagnetic Systems", was followed in a somewhat lighter vein by Edith's "Candid Camera". Joe Provato was our host at the Christmas party, an appreciated service he provided for many years. A reprint of former member Ray Manners' "Visual Meteor Observation for Amateurs" appeared in THE SPECTRUM. Ray had originally written this paper for presentation at the Northeast Region of the Astronomical League, hosted by the BAA in May 1967. Ed Lindberg's Instrument Notes dealt with the history of reflecting telescopes. Two things surprised me in his article. One was that James Gregory wrote a paper on the reflector as early as 1663, and the second was that Newton built a six-inch reflector in 1675. I had the impression (probably mistaken) that Newton had first claim on the reflector, and that the only reflector he ever built was a one-inch model to demonstrate the principle. Any comments?

15 YEARS AGO - Rochester's Tom Dey was our speaker for November 1985. His talk was on gas-hypersensitized astrophotography, as well as on his construction project of an observatory to house his 29-inch telescope. Carl Milazzo and Clair and Bill Owens combined to present slides and commentary of their trip to Stellafane for the 50th anniversary of that famous star party. Edith showed us at our worst, as always. Doris Koestler was hostess at the Christmas party that followed. Comet Halley was big news in late 1985. Editor Darwin Christy wrote an article on Edmund Halley, one of many under his heading Astronomer from the Past. There was a book report by Jack Mack on Halley's Comet by Francis Reddy, and a copy of an article by Hamilton Centre's Clive Gibbons on "Selling the Comet Halley", in which he noted past and present schemes to profit from the coming of the most famous of all comets. Darwin Christy included an ephemeris for the comet, and Michael Idem and Carl Milazzo had observation reports of it. one exception, Rowland Rupp's observation report was on something else, a meteor.

25 YEARS AGO - Ken Brown was our speaker in November 1975. He spoke on "Why Not an Armchair Astronomer". At our Christmas meeting Ed and Olga Lindberg gave an illustrated talk on "Astronomical Clocks and Timepieces". Edith finished the meeting with "Lunacy Unlimited". Wouldn't it be interesting for us old-timers to see whom she tormented back then? The BAA had a fund raiser at the Pops Concert to support the initial Beaver Meadow observatory building project. Ernst Both wrote and article for THE SPECTRUM, "The Largest Telescope on This Side of the Atlantic", a 12-inch reflector built by two students at Yale in 1838. Ed Lindberg was conducting telescope building classes at the Museum of Science, a program he ran for many years. Many of our members were first introduced to the BAA through Ed's efforts.

35 YEARS AGO - There were four speakers at the November 1965 meeting, all of whom presented their work as members of the Observing Section. They were: Ernst Both - "Visual Observations of Mars", Dick Zygmunt - "Measurement of Lunar Features", Fred Price - "Some Aspects of Well Known and Lesser Known Lunar Formations" and Edith Geiger who discussed her observations and sketches. Olga Lindberg spoke in December on "Women in Astronomy". Other than notices of section meetings, little else appeared in those SPECTRUMS. Oh, just one thing--Sky & Telescope's subscription rate was \$6.00 in those days!

BAA Board of Directors Meeting October 5, 2000

Treasurer's Report - Normal expenses for BMO telephone and Jul/Aug & Sep/Oct Spectrum publication and mailing costs were incurred. Bev Orzechowski reports that member Steve Latko is printing the Spectrum at \$48.00 per issue instead of OfficeMax's \$110.00 per issue, which will generate a savings in Spectrum publication expenses of about \$360 this year.

Grant Committee - Two items (new focuser (\$366) + lighted reticle eyepiece (\$196.90)) were ordered by Bill Aquino as part of the \$1,500.00 grant matching requirement. The committee is investigating scientific grants that may be available at the state/federal level. An extension of three

months was granted for the final report for the Foundation Grant until additional equipment is purchased and installed.

Nominations Committee - Alan Friedman was resoundingly elected at the membership meeting 9/8/00 to fill the at-large board position vacated by President-elect Dan Marcus.

Speakers Committee - The Board reviewed the Speaker's Committee report of 9/20/00. Next meeting is scheduled for November 9, 2000 at Dr. Jack Mack's home.

Education Committee - Education Program chair Rowland Rupp is soliciting volunteers to continue the program at its current level. Carl Klingenschmitt provided Bev Orzechowski with a web site of school data. Bev is working on a con-

BOD Meeting cont from page 6

tact database. The committee is holding off the next meeting until the BAA calendar project nears completion.

Membership Committee - Membership co-chair Alan Friedman reports membership receipts are slightly higher than normal. Treasurer Bev Orzechowski reports a temporary transfer of membership funds to the BAA's savings account in order to maximize interest accrual until the monies are required for insurance, telephone and Spectrum expenses, etc.

Old Business - The Museum Representative and College of Fellows positions on the BAA Board were discussed. Potential bylaw changes were discussed. Further discussions were tabled until the Board convenes in December.

President Dan Marcus updated the Board on the detailed plan for the Telescope Clinic to be held at the Buffalo Museum of Science Sunday November 19, 2000 from noon to 4:00 pm. Speakers will be Tom Bemus and Larry Carlino. Joe Orzechowski will bring a computer setup & color printer for Skyglobe and other astro software. Bev Orzechowski will be the greeter. Lynn & Wade Sigurdson will bring their 6" homemade scope and Dr. Jack Mack will bring Buf State's ETX-90 scope.

Pat Lannon and Bob Titran have volunteered to organize/publicize Astronomy Day 2001 (5/5/00).

New Business - Alan Friedman presented the Board with proof pages of the BAA's 2001 Astronomical Calendar. Each page will

feature at least one astrophoto taken by a BAA member. To offset first year publication costs, the treasurer recommended that the selling price be set at \$15.00 per calendar. About 35 calendars have been ordered to date. Dr. Jack Mack offered to assist Alan in creating captions for the calendar photographs.

A motion was made/unanimously passed to allocate \$120 from the Membership Fund for the 12/ 8/00 Holiday Party. Melissa Marcus has volunteered once again to organize this year's festivities.

A motion was made/unanimously approved to allocate \$250.00 from the Observatory Fund for construction of a warming box for the new computers at the Observatory. Observatory co-director Neil Dennis has volunteered to construct the box.

A discussion of Observatory co-director Mark Swiderski's requirements for approval of observatory access yielded the recommendation that the requirement to attend two public nights be relaxed since that requirement would be difficult for new members to meet during the winter season (no public nights).

The Board recommended that the observatory co-directors officially publish the list of requirements, perhaps in the next issue of the Spectrum.

Respectfully submitted, Joe Orzechowski, Secretary

SPY and TELL

by Edith Geiger

The Museum's newsletter, Collection's & Events for September/October 2000, paid tribute to **Ernst Both** with photos, as he again retired after serving as interim president while a national search for a new president took place after the resignation of Michael Smith. Ernst has been responsible for a very important part of the Museum's development over many years, starting as Curator of Astronomy in 1959, and eventually becoming President (Director of the Museum), a position from which he retired in 1995. Ernst will still be associated with the Museum as Curator Emeritus of Astronomy and Mycology.

In the Buffalo News of Sunday, August 13th, **John Dean** described the northern lights he had seen at 3 A.M. on August 12th.

Starfest 2000 was held August 24-27 at Mount Forest, Ontario, with eleven BAA members in attendance: **Bud Abate, Bill Aquino, Tom Bakowski, Anthony Davoli, John Dean, Jeff and Janice Gardner, Dan Marcus, Carl Milazzo, Peter Proulx, and Ken Schlum**. Thursday night was partly clear, but Saturday night was clear with a steady sky. Bill Aquino gave a talk on the Gamma-Ray Burst.

Bill Smith, along with more than 400 other craftsmen and artists, entered the 39th Annual Quaker Arts Festival on September 16-17, held on the grounds of the Orchard Park

Middle School. He sold 45 prints and was awarded 3rd place in the photography exhibit.

Last November ('99), **Fred Price** underwent a successful operation for partial replacement of his left knee which had a worn out cartilage. The privately performed operation took place at the Nuffield Orthopaedic Centre, Oxford, England. Fred is doing very well, and is greatly relieved after the two previous years of agony. He is planning to spend the winter at his home in England, hoping to avoid slips and falls if at all possible. From early June '00, Fred was interim organist at the Church of the Ascension in Buffalo and continued until late September when a permanent organist/choirmaster was hired.

Fred has had a 10-inch Dobsonian reflector for a few years and uses it to continue his lunar observations. The second edition of his 'Planet Observer's Handbook' (Cambridge University Press) will be in print by the end of the year. It has two new chapters, updates of planetary probe research and several new illustrations.

Ed Czapla is trying to teach himself Greek. He took a year of classic Greek in college, and now is reading New Testament Greek, which is different from classic Greek. If any BAA member is knowledgeable about Greek, you may be able to answer the question Ed has about the language.

Continued page 8 "spy"

"spy" continued from page 7

See Ed. **Brian Daly** is a junior at Buff State, majoring in elementary education. He is training for, and is a coach in gymnastics at the Niagara Frontier Gymnastic Assn.

For our many new members, I'm including the following background for the news item:

A number of years ago, **Steve Kramer** received his Master's in English on a fellowship at Indiana University, after which he went to Bowman Technical School in Lancaster, Pa. for a one year program in clock making, followed by 1/2 year at the Hamilton Clock Co., and a year of running his own clock repair business. It was there that he came in contact with the Rittenhouse work of a couple centuries ago. David Rittenhouse was a Philadelphian clockmaker and astronomer, and Steve designed missing gears and parts for one of his famous clocks, and continued repairing measuring gauges for 5 years.

Steve and Stacy Weed, a former Navy officer and clockmaker, worked for the historical society on a project on the clocks of Lancaster County. They co-authored a 224 page book, Clockmakers of Lancaster County and Their Clocks (1750-1850). Published by Van Nostrand.

Steve was given a faculty appointment as a Senior Fellow at the University of Pennsylvania where he worked on the "Rittenhouse Orrery" for 4 months. (an orrery is a mechanical apparatus which illustrates with balls of various sizes, the relative motions and positions of the bodies of the solar sys-

tem). He disassembled, cleaned and rebuilt this mechanical clockwork planetarium, which had been built in 1771 by Rittenhouse. The project was supported by funds from the American Philosophical Society, the University of Pennsylvania, and the Barra Foundation of Philadelphia.

In a new book, "Clockmakers of Montgomery County, Pennsylvania," by Bruce Forman, there are two photos taken by Steve of the "Rittenhouse Orrery" gears. One of the photos is a technical arrangement of 171 gears. It took Steve two days to compose the layout for the photo. We wish him continued success in his research on the "Rittenhouse Orrery". He hopes for more funding to continue his work.

The Twin City Camera Club in Tonawanda had an exhibit at Campos on Niagara Falls Blvd, from Oct.3- Nov.3. **Carl Milazzo** had 2 of his photos on display, and **Bill Townsend** was also an exhibitor.

Tom Bakowski is enjoying his photography course at Orchard Park High School, where they started with developing, using black and white film, and doing some printing. He is a very good photographer. Besides astronomy, Tom likes to go snow-boarding at Kissing Bridge. He is a senior, and after graduation he is planning to go to college and perhaps major in astronomy. Tom and his parents are looking at possible colleges.

MEMBERSHIP CORNER

A warm welcome to new members who have joined the BAA this summer and fall - **Jack Keoush, Mike O'Connor, Jamie and Anna Seibert, Robert Dinse, Percy Barbour, Paul Curtin and Leslie Isroe, Tobias Boehm, James Russell, Theodore and Undine Bistany, Steve Keiser, Donald Jusiak, Gary Kielich, Mark Morgis** (hope I haven't missed anyone). Although the observatory public night program is finished until next April - Beaver Meadow is open to checked out members year-round. It's a great dark site and a great place to get acquainted with other club members. If you haven't made it out to the observatory yet, don't be shy. Log onto the egroup or contact Observatory Director Mark Swiderski (535-0006) to connect with other folks heading out for a fall observing or astrophotography night.

And for those long time members who have been too busy under the stars to remember to pay those earthly BAA dues that were due September 1st... please find a cloudy night to write that much needed check (dues remain 20.00/individual, 25.00/family and 15.00/senior and student) and send it off to:

BAA Membership
c/o Alan Friedman
200 Lancaster Ave.
Buffalo, NY 14222

The year is drawing to a close and with it our very generous grace period. Thanks! and clear skies.

Alan Friedman and Tristan Dilapo/ membership co-chairs.

OBITUARY

It is with sadness that we announce the passing of Olga Lindberg on September 17th, at age 93-

She lived in the Buffalo area all her life; was a graduate of the University of Buffalo, and for 40 years was an administrative assistant at Williams-Gold Refinery in Buffalo.

Olga was a freelance writer, and was a member of the National League of American Pen Women, and the American Association of University Women.

For a period of time, the Buffalo News published her historical bits, "Through the Years" and articles such as "Taming the River" (Niagara River), which appeared in the Sunday Buffalo News Magazine section on April 15, 1984.

Olga was a longtime active member of the BAA. She and her husband, Ed Lindberg, were world travelers, visiting countless countries. They gave numerous talks on their travels, together and separately. Their home was filled with interesting and unusual mementos from their memorable journeys. Olga will always be remembered.

Astronomy Day 2001 Needs Your Help !

The BAA's Astronomy Day 2001 Celebration will be held on May 5, 2001, and this time we'll be back at the Beaver Meadow Observatory – the focal point of the club's involvement with the community. I'll be coordinating Astronomy Day 2001, and I'm looking for folks who'd like to help make this our best Astronomy Day ever! I'm especially interested in hearing from members who'd like to be involved in the very early stages of Astronomy Day – those who'd like to help with organizing the event, planning the activities, making the arrangements, and getting the word out. We'll also need to know who can help with Astronomy Day activities themselves, whether you'd like to lead a discussion or activity, give a talk, teach a class or pitch in "behind the scenes" with stuffing envelopes, setting up chairs, or posting flyers. I'd like to hold our initial planning meeting some time in November, so please let me know ASAP if you'd like to get involved. I can be reached at 774-2742 or by e-mail at rmt66@juno.com.

Thanks!

Bob Titran

GRB Null Report

After months of hard work, members of the Buffalo Astronomical Association's GRB Team have recently posted their first GCN Circular, a "null" report of GRB001019. This is an important milestone for the group and represents a valid contribution to the SCIENCE of Astronomy. GCN Circulars are real-time messages regarding GRB activity which are distributed to the top professional observatories around the World. It allows professional astronomers involved in GRB research to keep abreast of the latest developments and observations. This is a "vetted" system, which means that messages can only be posted by "approved" or authorized individuals, as such, there are currently NO amateur astronomers on the approved list. The GCN circular contributed too by the BAA group was submitted by a professional astronomer and member of the AAVSO GRB Network (of which the BAA team is also a part) after the data was scrutinized for accuracy to insure it met professional standards. A copy of the message is listed below, after which I will try to describe what it means and why it is important.

TITLE: GCN GRB OBSERVATION REPORT

NUMBER: 858

SUBJECT: GRB001019, Optical Observations

DATE: 00/10/23 14:31:06 GMT

FROM: Arne A. Henden at USNO/USRA

A. Henden (USRA/USNO)

D. Kaiser (Crescent Moon Observatory)

D. Hohman, R. Pason, B. Aquino (Buffalo Astronomical Association)

report:

We have observed the error box of GRB001019 as part of the monitoring effort by the AAVSO GRB network. R-band images of the entire error box taken 001021 at 0100 UT with a limiting magnitude of $R=18.0$, based on USNO-A2.0 reference stars, do not show any new objects in comparison with the DSS scans of the POSS-II red plate. Unfiltered images with a similar limiting magnitude and covering about 95 percent of the error box, taken 001021 between 0200 and 0300 UT, do not show any new object.

What this message says is that a GRB localization or "error-box" has been searched by two individual groups of amateur astronomers and no optical transient has been found within it. At first thought this may seem rather unimportant or even trivial, but that is far from the case, this message represents an important observation for several reasons.

Null or negative reports help to create an upper limit on the behavior of optical transients, when enough of them are added together and compared to positive reports they help to define the behavior of optical transients. In other words, you can often learn a lot about a phenomenon simply by being able to determine what it does NOT do.

The search was carried out SOLELY by amateur astronomers, which means the work of professional astronomers was not interrupted. GRB's are considered to be TOO's or "targets of opportunity" at professional observatories, which means no one sits around waiting for them to happen. Instead the normal scheduled work at professional observatories is carried out and when a GRB occurs whomever is working on the telescope is politely interrupted and the scope is pointed at the error-box and a lengthy search is begun. When amateurs perform the search professional research can continue unabated. Telescope time at large professional observatories is precious and hard to get, even for the top professional astronomers, so I am sure amateur efforts searching error boxes is appreciated. If you only get three or four nights a year to use a telescope for your research you do not want to lose a night because of a TOO observation.

An amateur astronomer can not hope to discover an optical transient without first learning how to search for them. Most error-boxes will be empty, we all understand and accept this as part of the research effort. However, it is also reasonable to assume that one day the box WILL NOT be empty.

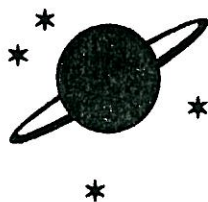
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After a GCN Circular is written, submitted, and then distributed to professional observatories, it is archived by NASA in a database at the "Goddard" facility. This archive is open to public inspection and is often used by astronomers and astrophysicists when they are doing research for their papers. Perhaps the data from the BAA observatory will be used in this research. You can view this archive at:

http://gcn.gsfc.nasa.gov/gcn/gcn3_archive.html

Finally, as I mentioned earlier it took a lot of hard work and PRACTICE to get this circular posted, hopefully there will be many more and even more interesting ones too come. A large group of club members have contributed a great deal of effort to build and equip the observatory, as well as develop the astronomical skills which are required to produce data that meets professional standards. This is something we should all be proud of. Our efforts are beginning to pay dividends. Way to go BAA!

_____ Bill Aquino _____



FOR SALE!

"For Sale or Trade for used ETX-90 RA or similar scope:

OMCON 80mm f/7 refractor with 6mm and 20mm plossl eyepieces, diagonal, 5x24 finder-scope, complete with EQ1 (equatorial mount). Purchased new several months ago and in excellent condition. Gives excellent views of the moon, planets and brighter objects from a suburban site in Amherst, New York. Am asking \$300 firm and will include a 40mm plossl (Sirius) eyepiece. If interested contact: Don French at 691-5023 or e-mail at dsfench1@yahoo.com"

Thanks: Don French

ARTICLES , FOR SALE ADDS, ETC. WANTED FOR PRINT IN THE SPECTRUM ! MY STOCK PILE OF ARTICLES IS NOW DOWN TO NOTHING ! IF YOU HAVE AN OBSERVATION REPORT OR ARTICLE CONTACT OR SUBMIT IT TO THE SPECTRUM PLEASE .

NEWSLETTER OF THE BUFFALO ASTRONOMICAL ASSOCIATION INC.

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