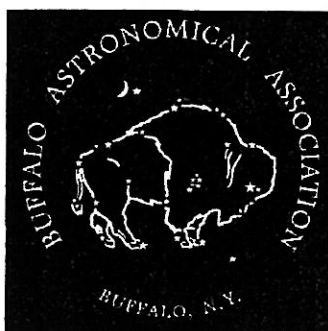


THE SPECTRUM

Volume 3 Issue 5

Early Fall Edition

Sept/ Oct 2001



A Robotic Telescope at BMO ?

Modern "goto" telescopes coupled with the right commercially available hardware and software will now allow a fully robotic observatory to be constructed nearly entirely from off-the-shelf items. This has created a surge in the amount of robotic observatories being built and operated by amateur astronomers around the world and brings to the forefront the question "does our club need a robotic observatory at Beaver Meadow"? Like everything else in life, these type of observatories, with their expensive "goto" telescopes sitting at the heart of the system, have their pluses and minuses, and there is often no clear answer. It ultimately depends on what we are trying to accomplish with the observatory at Beaver Meadow.

The advantages of "goto" technology are numerous and their popularity as the "scope-of-choice" among amateurs is growing steadily. The primary reason is that once you have a decent "goto" scope setup PROPERLY it can point it-self at even the most challenging targets all night long. We all learn quickly that one of the most difficult challenges in amateur astronomy can be pointing telescopes. Pointing a large classical telescope like the 12" "German Equatorial" which is currently at BMO becomes progressively more difficult as the targets become dimmer. In addition, the classical designs take TIME to point even for experienced observers who have learned how to do it well. So over the course of an observing session a considerable amount of the sessions time can be wasted moving the scope around depending upon how difficult (dim) the targets are to locate. The "goto" telescope solves these two problems once and for all. Goto telescopes point extremely fast by comparison too classical designs and are oblivious to how "faint the object is" or "how crowded" the field might be. The new technology when installed correctly allows for evenings of almost effortless multiple target observing.

When you couple a "goto" telescope with a state-of-the-art CCD camera then things get even more interesting. You now have at your disposal a tool capable of imaging extremely faint objects (magnitude 18th to 19th routinely, and even a little deeper if you push the system to its limits). By comparison the 20" dobsonian at BMO can reach stars down to about magnitude 14th to 15th on a typical night. By using a goto/ccd system the magnitude range, between 14th and 19th magnitude, becomes easily accessible for exploration without the use of film technology and all of films inherent difficulties. Amateur astronomers are forever trying to push their boundaries by probing ever deeper into the cosmos. The cutting edge of amateur astronomy today, where some of the most interesting amateur accom-

plishments are taking place is right in this range of 14th to 19th magnitudes. Unfortunately the clubs existing manual/ccd system is VERY difficult to operate at these magnitude levels because as the targets get this dim pointing accurately becomes difficult and slow. Clearly "goto" technology is the tool to use when exploring these deep-sky realms.

A goto/ccd system has an additional benefit in that it will allow you to do a considerable amount of imaging on full moon nights because of the CCD cameras ability to electronically subtract the moon glow. This now extends the amount of nights per year when you can observe simply because you can negate the effects of the moon. Imaging deep-sky objects on a full moon night is an amazing process and very impressive the first time you see it done (especially for experienced observers who have been avoiding the moon for years). A good example of what's possible from BMO can be seen in one of the clubs recent supernova images (checkout <http://www.ggw.org/asras/sn2001/n3987s15.jpg>). This image clearly shows a 15th magnitude supernova in a 14th magnitude host galaxy and the image was taken on April 8th (Palm Sunday) which was one day past the Full Moon. This was done as part of my "Full Moon Experiments" (another article on another day perhaps) where I am trying to determine what can really be done during the period of each month when we have to suffer through the full moon. Keep in mind that there are limitations on the type of objects you can observe and where in the sky you can point (for instance this object was 45 degrees away from the nearly full moon, not right on top of it). But this was just an experiment, because once again pointing a manual/ccd system on a night like this is not easy and takes considerable time and effort. However, a good goto/ccd system would make this a routine observation.

Software exists which allows the actions of the goto/ccd system to be scripted. What this means is that the observations you want to make for a particular night can be loaded into the system in advance and the system will make the observations for you automatically one after another until the script is completed. This is a powerful tool because it allows you to setup the system and then walk away so your time can be spent more constructively, perhaps doing visual observing, sleeping, or what ever. In addition, scripting will allow the club to participate in some exciting research work such as the search for new supernova. This work involves imaging as many galaxies as possible in a given night and then checking them for possible supernova candi-

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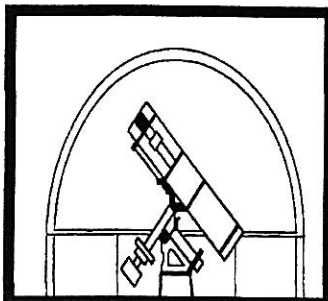
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BAA OFFICERS

President — Daniel Marcus

phone 773-5015

Vice President — Dr Jack Mack

phone 632-6210

Secretary — Joe Orzechowski

phone 632-7091

Treasurer — Bev Orzechowski

phone 632-7091

BOARD MEMBERS

Gene Belstraz, phone 773-5348

Alan Freidman phone 881-4310

Bill Smith, phone 664-0841

Rowland Rupp phone 839-1842

OBSERVATORY**DIRECTORS**

Neil Dennis — phone 322-7596

Mark Swiderski, phone 535-0006

MEMBERSHIP**DIRECTORS**

Tristan Dilapo — phone 941-5613

Alan Friedman — phone 881-4310

SPECTRUM STAFF

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Ella Abate Circulation 773-2398

SPECTRUM**SUBMISSIONS**

Submissions wanted for publication in the Spectrum!!!!

MS Word or Wordperfect ok
scanning availableDEADLINE FOR Nov./Dec
ISSUE IS Oct 15**Robotic Scope continued from page 1**

dates. This is grueling work and certainly not suitable for our existing manual/ccd system. However, a goto/ccd system is perfect for this job and is in fact exactly how other amateurs as well as the pros are currently doing it. The days of supernova/minor planet/comet discovery by visual or even photographic methods are just about gone due to the growing amount of efficient goto/ccd systems in the world and the ease with which they can perform this kind of sky-survey work.

After you have mastered the goto telescope, the support software, and functions like scripting multiple observations, then comes the final step in the process, constructing the robotic observatory. A robotic observatory is one that can be completely controlled from a remote location such as your own home. Not a bad idea when it's crystal clear outside in January but the temperature is hovering just above zero degrees. These observatories are smart enough to open themselves up, follow a script for the entire night and then close themselves down when the sun rises. This can all be done while you get yourself a good night's sleep. In addition they can make simple decisions as needed during the night, such as shut the system down and close the dome because it has started raining or snowing. This is usually accomplished using sensors of various types connected to the main control computer. What does this mean for the observer? More total observing hours per year. Western New York does not get many "clear-night" hours per year and to be of value these need to be evening hours because most of us have daytime commitments. Robotic observatories allow you to extend your observing from dusk till dawn on every clear night of the year.

A fully robotic observatory provides amateur astronomers with an awesome capability and I am sure one is at the top of the "wish" list for most of us. However, these systems do have some con-

siderable disadvantages that have to be considered. The main problem is that these systems are EXPENSIVE. To assemble a fully functioning robotic system of reasonable aperture (say 10") will cost you in the neighborhood of about \$15,000 dollars. These systems are also VERY complicated and require considerable skills to operate and maintain. If you do not have a background in computers, electronics, and mechanics you may find it nearly impossible to get the system functioning and maintain its operation in the long haul. Not to mention the construction skills required to build an enclosure for a robotic telescope in the first place. And finally, there are several software packages which need to be mastered in order to operate the system efficiently, not to mention the software skills and time required to process all of the images produced by the system. Clearly this is big project and most likely would succeed if tackled by a group of individuals such as our club as opposed to each of us trying to do it alone.

The main job of the observatory is to serve the astronomical needs of the membership and provide a platform for public education. A robotic observatory will help the club do both by providing us with a tremendous amount of observing flexibility. So to answer my original question, does BMO need a robotic observatory, the answer is an emphatic, "yes" of course we do and we CAN do it together. In fact, half of the system is already in place out at BMO including the pier and the existing 10" LX200 "goto" telescope the club already owns. We still need a good CCD camera with accessories and a suitable enclosure for the telescope. A committee of volunteers was put together this past summer to pursue this project and I am happy to say they are off to a good start. However, there is still a long way to go and support from everyone in the club will be needed to make the project a success.

— Bill Aquino —

OBITUARY

Kenneth Jay Brown of Rochester was the husband of Trudie B. Brown for 55 years. He was an avid astronomer who dealt with "The Arm Chair Astronomer" as one of his talks. His personal library consisted of more tomes than can be imagined. He belonged to the Buffalo Astronomical Association as well as the Astronomy Section of the Rochester Academy of Science and had been named a Fellow of the Academy. A former employee of Kodak for 42 years.

Ken was known by many of our elderly club members as he had not visited our meetings in many years due to illness, so the younger members would not remember him. He, like Ed Lindberg, Rudy Becking and Bob Mayer were to old class astronomers doing much for that field. Ken will be greatly missed by all who knew him.

— Darwin Christy —

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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The Nebraska Star Party – Extreme Astronomy

This article could also be titled many other ways, "What I did on my summer vacation" or "Ed and Pete's Excellent adventure"! Ed Kahn and I headed out for dark skies and some fun with astronomy, we ended up with both and a whole lot more.

A little background might be necessary, each summer I try to attend a few Star Parties out of our local area. This is a great way to meet others that enjoy our hobby and see other parts of the country. If there are lectures, presentations and swap tables that's usually an added bonus! As I was looking for what parties I would like to attend I came across the Nebraska Star Party (NSP). www.nebraskastarparty.org What caught my attention was the fact that this party is a full week event, this year it was held from July 15-20th. Here is what I read:

You can expect exceptionally dark skies at the Nebraska Star Party. This is a remote and very sparsely populated area having no more than handful of lights within miles of the viewing area. The nearest town (Valentine) is 25 miles to the northeast. Mullen, population 200, is 50 miles to the south. The 3,100 foot altitude, and the fact that the Sandhills are a dry upland plateau, help keep the haze low and the transparency high.

I full week of Astronomy under "exceptionally dark skies" just what the doctor ordered.

The site also states "...weather is typical of the North Central Great Plains. General conditions are hot and dry with a potential for sudden changes. Thunderstorms are possible, and can be severe."

Potential for sudden changes? Hmm... Maybe a little understated! Well after traveling for 2 days, 1500 mile and through 9 states we arrived at the Merritt Reservoir and the Snake Campground at dusk on July 15th. The first thing you notice is the apparent lack of sky glow in all directions except one! In the southwestern part of the sky coming out of Sagittarius you see what first appears to be sky glow but is actually The Summer Milky Way or better stated the central bulge! It is an incredible site seeing the Milky Way as if someone took a white paintbrush and made a stroke through the heavens. Ed and I spent the rest of the evening after we setup camp just laying back and taking it all in. But, back to "the potential for sudden changes"! Like something out of the Wizard of Oz the wind starts to pickup, you see amazing thunderstorms all around in every direction and the clouds suddenly move in about 2:30am. Well after a long day and it was time to head for the tent and a good nights sleep (at least that was the game plan). The weather had other ideas! For a good half hour our little tent held up pretty well, I actually felt the potential for the whole thing to go airborne. Now I know what the pig felt like when the Big Bad Wolf huffed and puffed, with a snap crackle and a few pops our fiberglass poles gave way about 3:00 am. Between the tent flailing around us, thunder and the rain beginning to fall we had to act quickly. Luckily we never unloaded any of our equipment so we collapsed the rest of the tent grabbed our sleeping bags and headed into town about 25 miles away. After traveling 1500 miles what did we get ourselves into? The BMO and it's less than perfect skies are sounding pretty good about now. After a few miles in the truck we both started laughing wondering what the heck we got ourselves into! It's at this point that we coined the term "Extreme Astronomy"!

Well the next morning we arrived back at camp at about 12:00 noon to find that we were not alone in our dilemma. It seems that NSP is know for the sudden onset of "Gusty" winds and "scattered" thunderstorms are always in the forecast. With a role of duct tape, additional tent spikes and some ingenuity the "Hilton" was open again for business.

The skies were clear all day long and the temps climbed to 98 degrees, without a cloud in the sky the Night looked very promising. The skies did not disappoint and were just awesome the Lagoon, the Trifid,

Dumbbell and the Veil Nebula just popped out of the eyepiece. We were treated to aurora on several of the nights it would start as a faint glow on the northern horizon and then gradually streak high into the sky, shimmering green in a deep emerald hue. It is at this point that you start to appreciate a truly dark site, a good part of the evening can be spent just looking upward. It was easy to find many messier objects with the unaided eye; M31 was easy to distinguish along with the double cluster. With so many stars in the sky constellations are sometimes difficult to pick out, it's all a matter of adjusting your expectations. The Whirlpool had a tremendous amount of detail, in fact everything we looked at had an incredible amount of detail. With so much to see it is almost overwhelming. Our first night ended with Saturn, Venus and beautiful thin crescent of the moon rising in the Northwestern sky, a perfect end to a spectacular night. If this was our only clear night it would have been worth the trip!

The next evening we started out with partly cloudy skies, but this is NSP and "Extreme" Astronomy. A short time after dusk the winds started to kick up, needless to say Ed and I got a little nervous. Distant thunderstorms seemed to surround the entire in the horizon adding a bit of surrealism to the evening. It was a good evening to socialize and get to meet the other attendees; those who hung out were rewarded with clearing after midnight albeit a windy night. Even with the wind we enjoyed the night it was tee shirt and shorts astronomy at its best. As the winds died down we had an opportunity to view several faint object including Pluto which we verified its travel on separate nights. The wind got the best of us and we called it an early night.

Our final evening proved to be one of the best. This evening we went through most of the Messier objects in Sagittarius and Scorpius. The seeing was terrific for viewing Mars. The real catch of the evening was Stephan's Quintet, the cluster of five galaxies could be seen with averted vision. Once again Aurora could be seen on and off in the northern skies. Being our last night I went back through some of my favorite objects star clusters! With the help of "goto" and Starry Night Pro these Diamonds in the sky dazzled. I viewed over 20 clusters, M13 still ranks as my favorite. The enhanced contrast provided by these incredible skies and excellent seeing gave the M13 a whole new look. This being our last evening I spent some extra time just sitting back and taking in the Milky Way.

The trip was a great experience we met amateurs from around the world. We did have to dispel a few myths; 1. Everyone from New York State is from New York City. 2. The sky glow from New York City makes it impossible to do any astronomy, even as far west as Buffalo!

Extreme winds, extreme heat, extreme skies, EXTREME ASTRONOMY!

Pictures from our adventure can be found at my WEB site: <http://www.premcom.com/Astro/LX250.htm>

— Peter Proulx —

BOARD ELECTIONS

As mentioned in the last Spectrum, we failed to have a quorum at our June Business Meeting and so our election of members –at – large for the Board was invalid. We'll try again in September - please help – come and vote! As before , candidates for the two year term are: Frank Chalupka, Alan Freidman and Bob Titran. Write in votes will be accepted as will mail in votes sent to the Secretary, Joe Orzechowski.

PRESIDENTS COLUMN

by Dan Marcus

Welcome back from Summer. Now that the mosquitos at the Observatory will be gone, it is time to enjoy the longer cool nights and do some viewing. There has been much talk on the E-group about getting our LX200 10" up and running robotically, as well as finishing the upgrades to the clubs 12" to make it more usable for variable star work, as well as for photography. Normally I would recommend one large project be finished before another gets started, but I have confidence Bill Aquino will get the 12" as at present we have plenty of volunteers for the 10 robotic project. There is a group lead by Mike O'Connor (662-7456) now working on the project. He will be presenting his plans to the Board at 5pm at the Beaver Meadow Observatory, on September 15, 2001. We will have to work out a list of all items we need to purchase and the costs. We also need to design a telescope enclosure and obtain permits and permissions from Buffalo Audubon. How to get money! The money maybe the easiest part, the time to do all this will be another subject. Keep in mind when you do this sort of thing at home, you can do it in 30 minute blocks of your spare time, and the only one you have to discuss it with is your spouse. Do it out at the Observatory you will need 2.5 hours of spare time, and have the input of a committee! This additional time factor is a real killer, and a large part of why people do this on their own at home. One thing this project will do for us all, including the public, is allow 1 person to make the run to the Observatory, and the rest of us can stay home! Now there is an interesting thought! How would you like to do Asteroid Occultations, or Super Nova patrol from home? Team up with

The Stars Come Out At The Galaxy Ball

The BAA (an affiliate organization of the Buffalo Museum of Science) has been asked to participate in the Galaxy Ball fundraiser for the Museum. Proceeds for this year's event go towards the Kellogg Observatory Renovation Project, benefitting astronomy education in Western New York. The Galaxy Ball (the Museum's annual dinner/dance/auction), will be held on Saturday, November 10th at WNED Studios (next to Adams Mark Hotel in downtown Buffalo). BAA members are asked to help with the following: *Auction donations of astrophotographs or artwork (unframed or framed). *Display items (not for auction) such as personal astrophotographs or artwork to decorate the hall. *Members bringing portable telescopes to the Galaxy Ball for public to see. The BAA is also donating club t-shirts, club memberships, and a private tour of the Beaver Meadow Observatory for the auction. Deadline for donations is Wednesday, October 31. Anyone interested in participating or donating an item should contact Marilou Bebak at 627-2333 or e-mail:

mbebak@sciencebuff.org.

Membership Corner

Dues are Due

The membership year runs from September 1st through August 31st - your BAA dues for 2001-2002 are due! BAA membership remains the best astronomy bang for your buck to be found anywhere: **20.00 for individuals/ 25.00 for families/ and 15.00 for students and seniors.** You should have received your renewal form in the mail - please bring it with you to the meeting on September 14th - or send it by mail in the envelope provided. Why not do it today! Any questions on membership?

Contact: Alan Friedman/ 881-4310/ alanfgag@aol.com

Tristan Dilapo/ 941-5613/ dilapo@localnet.com

A Party to Welcome New Members

I'll be hosting a welcome back BAA party at my home in Buffalo before the September meeting. It's a chance to meet our newest members, share "what I did last summer" stories and have a relaxed bite to eat before the meeting. Everyone is welcome. Friday, September 14th from 5 to 7pm at 200 Lancaster Ave. in Buffalo (about a mile from the meeting.) Take Elmwood Ave. south from Buffalo State College and turn left on Lancaster Ave. (It's one block south of Lafayette, between Elmwood and Delaware). Look forward to seeing you there.

— Alan Friedman —

an Observatory halfway around the world and do astronomy in the daytime! The club intends to pursue a joint venture with UB to get us access to a 16" fully robotic scope, which should really add to our viewing pleasure! I always wanted to do photography while I was either looking through the 20" or laying back watching for meteors!!!

BAA Announcements:

Tees and Sweatshirts will soon be available again, thanks to Gene Belstraz who has graciously offered to manage the sales.

Galaxy Ball will be held to benefit the Buffalo Museum of Science on Saturday, November 10, 2001. The Museum has asked us for help as some of the funds raised will go toward the Museums Observatory. Marilou Bebak is coordinating the efforts for this event.

Annual Telescope Clinic will be held on Sunday, November 11, 2001 from 1pm to 4pm, at the Buffalo Museum of Science. Bob Titran will be organizing this event, so if you wish to help prevent Christmas telescope disasters give him a call at 773-2742.

March Dinner Meeting March 8, 2002? Does anyone wish to organize it? Looking for a fearless leader to get this astronomical event off the ground! Give me a call at 773-5015 if you would like to help out. In addition to the elections for member at large positions, we will be confirming Neil Dennis and Bill Aquino as Co-Observatory directors, and Tim McIntyre as Spectrum Editor. Fasten your seatbelts for another great year of astronomy

STAR PARTIES!!

Hello again everyone!

We just want to take some time out to thank everyone who elected to have a Star Party this year! As you all know we had quite a busy spring and summer with wonderful Star parties. Each and every party was unique in their location as well as their themes. We had parties during the day, at member's cottages, at member's homes, and most unique of all at Griffis Sculpture Park. What a perfect location for a party and astronomy get together. This was a two-night party with quite a large turnout of members and friends. We were told that views were good on Friday with some haziness, but still a good night by most standards. Saturday started out to be a night we all pray for, clear skies with the Milky Way from horizon to horizon. What more could we ask for? Meteors you ask? Yes, it was a perfect night for viewing the Persied Meteors. Well as usual, approximately midnight with just a few meteors observed, the notorious cloud nebula showed up and obscured our views. The faithful astronomers that we are, we waited for the sky to clear with no luck at all. We slowly packed up our belongings and headed home. I guess we'll all have to wait till next year! But thanks again to all whom have been generous enough to share their homes and time with us! Just a reminder, we still have plenty of weekends open for fall parties! Contact Janice and Jeff Gardner at 639-0866 or MMDAWG@AOL.COM

Current Star party schedule:

September 14-16: Black Forest Star Party at Cherry Springs State Park*

February 10-16 2002: Cedar Key Star Party! Need a break in the middle of winter? Head down to Cedar

Key Florida for a little warm weather observing. Tom Bemus has organized a week of astronomy activities at this wonderful dark site. All BAA members are welcome to come on down.

For details: www.members.aol.com/bemusabord/cedarkey.html*

* Contact: Tom Bemus (H) 386-7150 (W) 483-0343 e-mail: BEMUSABORD@AOL.COM

BAA ANNALS

by Rowland A. Rupp

5 Years Ago : George Fazekas, from Monroe Community College, started off our 1996-1997 season with "CCD and Computer Imaging Systems". In October, David Meisel spoke on comets. Dr. Meisel hails from the State College at Geneseo and has been our speaker frequently. Bob Hughes was President then, Gene Witkowski was Vice President, Lynn Sigurdson was Secretary and Bev Orzechowski was Treasurer. Joe Orzechowski wrote on Starfest, the Canadiana Stellafane, sponsored by the North York Astronomical Association. HE noted that the BAA's Gene Witkowski and Carl Milazzo both spoke at the 1996 convention. There was also an interesting article from a non member, Peter O. Taylor of the Atlanta Astronomy Club, in which he cited evidence that the Maunder sunspot minimum that occurred in the late seventeenth and early eighteenth centuries was real and not just the results of a lack of observation. Notice of Doris Koestler's pre-mature death appeared in this SPECTRUM. Doris had been a very active member of the BAA, and had served as President and Vice President in the 1980's.

10 Years Ago : CCD imaging was the topic that opened our season back in 1991, as it was to do five years later. Tristan DiLapo was the speaker. Dan Marcus was scheduled to be our second speaker that evening. His topic was his trip to see the forthcoming solar eclipse in Hawaii. Unfortunately clouds prevailed. Officers then were: President - Rowland Rupp, Vice-President - Bob Hughes, Secretary - Lynn Sigurdson and Treasurer - Steve Kramer.

This SPECTRUM was full of articles. Darwin Christy described his measurements of the partial solar eclipse of July 11, 1991. Even though we had only a 5% eclipse in Buffalo (it was total in Mexico) Darwin's three instruments recorded light decreases ranging from 4.94% to 5%, which I think is remarkable consistency. The source of the initial problems of the Hubble Telescope was reported in a letter from an employee of Perkin Elmer who, wisely, left it unsigned. It was entitled *Hubble Trouble*. Dave Fliss reported on observations using a OIII filter, and Edith Geiger's profile was on Tom Nigrelli. Steve Kramer reported on a book entitled *Dividing the Circle* by Alan Chapman which covers the challenge of precisely dividing the circle into degrees minutes and seconds, much if it from an historical perspective. Finally, Ed Lindberg highlighted the Instrument Section's plan for their fall meetings, particularly mirror testing and the techniques for doing it.

15 years ago: The lead-off speaker for 1986 was - I don't know! The SPECTRUM made clear the meeting was to be held at Buffalo State,

with the assurance of President Ken Biggie that a speaker would materialize. The same hope was expressed for October. Aiding Ken were: Vice - President - Doris Koestler, Secretary - Dave Sepulveda and Treasurer - Jack Empson.

Paul Noye wrote about a method he developed to obtain polar alignment with a portable telescope, and also how to use setting circles to find objects. His polar alignment method sounds a bit complicated, but aren't they all? Paul also contributed an article on adding relativistic velocities. If you're wondering, Paul was a scientist. Dr. David Meisel wrote a summary of the recent apparition of Halley's Comet, in which he highlighted the observation made by the Giotto spacecraft rendezvous. Gene Witkowski was the subject of Edith's profile. Michael Idem and Carl Milazzo provided observation reports. Michael noted he had just observed his 3000th Deep-Sky Object.

25 years ago: Dr. Gunter Wessel gave a talk on Jupiter in September 1976. In October Dr. Martin Green spoke on "Television Astronomy". A suggestion was made that members should offer short topics of their own to supplement programs throughout the year. Newly elected President Fred Price reminded seasoned members to welcome new members and teenagers, and for all members to contribute to the SPECTRUM.

The BAA was having some difficulty with the Buffalo Museum of Science at the time when the latter suggested strongly that all members of affiliated organizations also had to be members of the Buffalo Society of Natural Sciences (BSNS). The BAA said No!; eventually the stipulation was withdrawn by the BSNS.

An article by an unidentified BAA member entitled "Mars Then" summarized what was known about Mars a hundred years ago. The source of this material was a book by the English astronomer Richard Anthony Proctor, *Other Worlds Than Ours*. The soon to occur Viking landings precipitated this article.

35 Years ago: Ernst Both's topic at the September 1966 meeting was "Amateur Astronomy through the Ages". Did you know the BAA once had an exhibit at the Hamburg Fair? We did in 1966. Edith Geiger's and Fred Price's lunar drawings were featured, as was Walter Semerau's new rich field telescope.

The speakers for October were members of the Instrument Section, supplemented by short reports from Ron Clippinger and Ernst Both. Plans were in process for the Astronomical League convention to be hosted by the BAA in the coming spring.

SPY & TELL

by Edith Geiger

Along with Reports of observers from the public, some of our own members reported on the spectacular daylight meteor/fireball/bolide as it pierced the skies on July 23rd. **Carl Milazzo** saw it at 6:19 P.M. low in the southeast. It was bright orange with light core, streaking almost parallel with the horizon. **Bill Smith** was also a witness to the event, as was **Michael Krasner**, who saw it from Cheektowaga. **Jack Mack** appeared on Channel 4 with enlightening comments for those who wondered what they had seen.

Michael Krasner had the good fortune of observing the awe-inspiring June 21st solar eclipse from Africa.

Tristan DiLapo has become an official asteroid researcher. He is listed as Observer 227. He sends his reports to the Minor Planet Center, where they are recorded at the asteroid headquarters. Tristan and **Mike O'Connor** are doing isometric positions of asteroids taken with Tristan's CCD from his backyard and recorded.

Carl Milazzo gave a talk on basic wide angle photography at the Starfest Convention, held August 16-18, at Mount Forest, Ontario.

Tom Bakowski decided to go to Stellafane this year instead of Starfest. **Darwin Christy** has been a busy church soloist, as usual. On July 22nd, he sang the Introit, "We Have Come Into His House," (by request) on August 12th, "I'm in His Hands" from *Salvation Soldier*. On August 3rd, Darwin became Service Officer at Legion Post 264.

On August 19th, Darwin and his grandson, Mike, heded back to Gettysburg for another great trip. In the year's canal fest, Orrin Christy and his friend, Mike Lance, entering into the Sika Challenge Cup, as they have done many times in the past, building a boat to race on the final day.

This year it took them 59 minutes to build the boat from three 4'x8' pieces of plywood. This was the shortest time recorded for all the boat builders. In their first "heat" of the race they took first, and in the final "heat" they gained fourth place. They received the first ZEK ZEITZ Sportsmanship Award. Mr. Zeitz was the organizer of the event 16 years ago. He passed away in February of this year, and the committee decided to initiate the new award in his memory.

Each year the Buffalo Museum of Science curators, research fellows, associates and partners produce scientific papers, many of which are seen in books put out by the Museum, scholarly journals, bulletins, and various other publications. The Museum lists the research conducted for the year 2000, which includes **Ernst Both's** long list of research conjointly with other well-known mycologists specializing in boletes: Syracuse University Press. Also in the Museum's July-August issue of *Collections & Events*, a photo accompanies an article about Governor Pataki's tour of the Kellogg Observatory, after announcing the \$250,000 grant to restore the Observatory. The photo includes Governor Pataki, President of the Museum, David Chesebrough, and Ernst Both, Curator emeritus of Astronomy/Mycology. Repairs will begin in the fall. **Marilou Babak**, astronomy educator at the Museum, will be assisting to "maximize" the educational impact of the project.

Five families camped out at Griffis Sculpture Park to observe the Perseid meteor shower. A total of 30 people came to enjoy the event. At three in the morning they were serenaded by owls and coyotes.

COCKTAILS..... DINNER..... SPEAKER RADIO ASTRONOMY – SETI

The BAA and the Buffalo Section of the IEEE have joined forces for an exciting dinner/ speaker evening on October 4th. The speaker is Dr. George Swenson, professor of astronomy and electrical engineering at the University of Illinois . He is a world authority on radio astronomy and has participated in many big projects as Well as SETI studies and national panels. The meeting will be at Classics V banquet hall , 2425 Niagara Falls Blvd., Amherst. Cocktails (cash bar) at 6:00 pm, dinner at 7:00 pm and speaker at 8:00 pm. Cost is \$18 per person— spouses and guests encouraged . It should be a fun evening ,even for those who have only a small Interest in the subject. Call Carl Klingenschmitt at 759-6428 for reservations and or information by October 1st.

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.

BAA WEB SIGHT

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

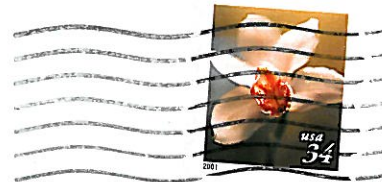
WANTED ! SPECTRUM EDITOR

The club is in search for a new Spectrum Editor to begin his duties for the November / December issue . I had to make a tough decision to resign my post as editor , but I just can not balance my time to fit this project in . No experience is necessary ! You can design your own unique format as you wish . Contact Dan Marcus or any other club Officer/ Board Member if interested .

———— Tim McIntyre ————

NEWSLETTER OF THE BUFFALO ASTRONOMICAL ASSOCIATION INC.

Ella Abate (Circulation)
1575 Love Rd.
Grand Island , NY 14072-2308



ROWLAND RUPP
c/o ARCHIVES
132 BURROUGHS DR
SNYDER

C
NY 14226

