

THE SPECTRUM

Newsletter of the Buffalo Astronomical Association Inc.

Published Bi-Monthly

Buffalo, New York

Sep - Oct 1996

MEETINGS NOTICE

FRIDAYS: SEP 13, OCT 11

Sep 13th: "CCD and Computer Imaging Systems" - George Fazekas, a professor at Monroe Community College will kick off our Fall lineup

Oct 11th: "Comets: Going and Coming" - David Meisel, a professor at the State University College at Geneseo, will enlighten us on this, as of lately, rather busy topic.

Meetings: 2nd Fridays @ 7:30 pm Sep-June.

Location: New Science Building Auditorium at Buffalo State College on Elmwood Ave.

We hope to see you at these meetings.
As usual refreshments will follow.

Bring a friend and come on down!

PRESIDENT'S MESSAGE

Bob Hughes

The public nights at the Beaver Meadow Observatory have been well attended by the general public as well as the numerous BAA members who have helped out showing the public various celestial objects. We have had beautiful clear skies for practically all public nights this summer. The people who have attended these public nights have been delighted by the views of the Moon, Jupiter, and Saturn through our newly donated 6 inch refracting telescope. We have also during this summer watched Comet Hale-Bopp grow from a faint smudge to a bright object in even small telescopes. Dan Marcus and others have been taking CCD images of this comet which will be displayed at one of our fall general meetings.

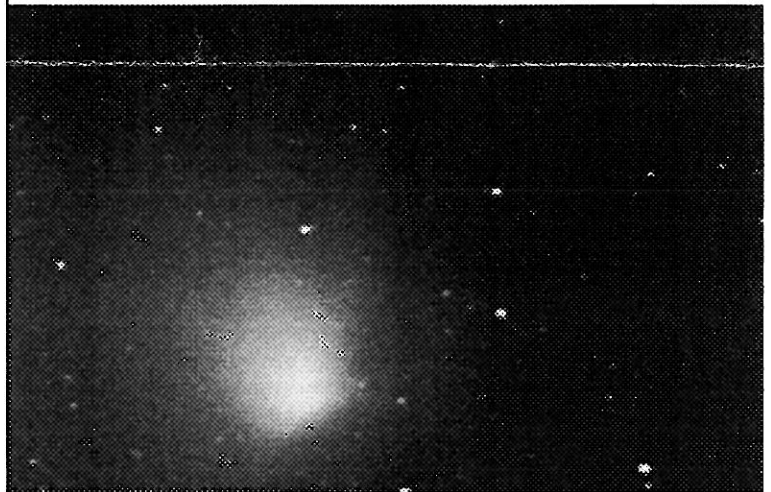
We have also had a number of people attending our public nights join the BAA this summer. I hope to meet some of the new members at the September 13th general meeting at Buffalo State. I also would like to thank all those BAA members who have hosted star parties and helped out at public nights at Beaver Meadow this summer. Your efforts are greatly appreciated, thank you.

Finally I am saddened by the passing of Doris Koestler who ably led the BAA as president during the years 1988 to 1990. Doris' cheerful personality and her efforts on behalf of the BAA will be greatly missed. My condolences go out to Bill Koestler and her family.

Comet Hale-Bopp is Heading North

Photo taken by Dan Marcus with the club's CCD camera.

Like to try it yourself? Dan holds CCD classes every month or so — give him a call!



BOARD MEMBER ELECTION

A special election will be held at the September meeting to replace Gene Witkowski as a Board Member At Large for the one year remaining in his term. Gene was elected Vice President in June. Candidates for the position are Augie Grillo and Bob Titran. Nominations will also be accepted from the floor.

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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TAXACOM computer bulletin board - 716-896-7581
for more information call Jack Empson at 716-745-3138

MEMBERSHIP CORNER

Joe Orzechowski

I've notice a nice turnout of both members and non-members at our public nights the last few times I've attended. The many members who showed up with their own scopes not only helped to distribute the load of catering to the visiting public but also made some refreshing additions to the list of viewed objects. After everyone got a look at Jupiter and the usual summer roster of M13, M27, M57, Albero, and Lyra's Double-Double, the public was treated to views of less frequented objects such as M11, the Veil Nebula, NGC-457 and, last but not least, Comet Hale-Bopp. Good job!

**September is the start of the BAA's membership year
which means it's time once again to pay your dues.**

Dues may be paid at one of the upcoming general meetings or dues may be mailed to me at 125 Roycroft Blvd., Amherst NY 14226. The annual fee is \$15 for an individual membership and \$20 for a family membership. Senior members (60 and older) and full-time students are eligible for a discounted rate of \$10 per year.

It's been several months since I've listed the benefits of membership in the BAA so here's the short list. Members have access to all the equipment, the reference library, and the computer at our Beaver Meadow Observatory. Members are also entitled to reduced subscription rates for Astronomy and Sky & Telescope magazines and discounts on orders from Sky Publishing. And, of course, all members receive the Spectrum newsletter every two months. There are also some less tangible benefits of membership which I should mention. The interaction with other members can greatly expand your knowledge of astronomy as well as your enjoyment of the hobby. Mingle with other members at a meeting or at the observatory and you may hear about techniques which can improve your observing skills, new or used pieces of equipment that are available and where to get them, simple ways to locate a star cluster or galaxy that always seems to take you forever to sweep up, or upcoming events or conventions with interesting speakers and/or dark skies. So don't be bashful! Just walk right up to another member and ask: "Whacha lookin' at?" or "Seen any good comets lately?" There's no telling where the conversation will go from there.

However, I would like to inject a word of caution here. All new members should be forewarned of the possibility of meeting a creature at the observatory which, for lack of a better word, I shall call an astronomy junky. These members are most likely to be encountered on clear nights but can appear at the observatory at any time. Sometimes we (I mean THEY!) may take on a zombie-like demeanor which comes from spending too many hours at the eyepiece searching for elusive objects with cryptic designations. Their behavior can, at times, be mistaken for rudeness. Do not hate them, pity them. Some of us (THEM! I mean THEM!) have, from time to time, been known to let their enthusiasm for astronomy run amok. Don't confuse their zeal and fervor with impertinence and arrogance. Remember, these creatures pose no physical danger to you. If any of us (Yes, US.) have unintentionally inflicted minor wounds to your interest in astronomy, please give us another chance.

Finally, I would like to present the BAA's newest members:

Milton and Mary Ann Pankiewicz
430 Chairfactory Road
Elma, NY 14059 652-0932

Michael Buccieri
PO Box 60
Java Village, NY 14083 457-9349

Please join me in welcoming them to the BAA. Until next issue, I hope

everyone enjoys clear skies, dew-free nights and, that Holy Grail of the Newtonian crowd, permanently collimated optics

BAA ANNALS

Rowland A. Ruff

5 YEARS AGO - Two BAA members spoke at our September 1991 meeting. Tristan DiLapo spoke on "CCD Imaging for the Amateur, a new topic at that time. Dan Marcus showed slides of the July 11th solar eclipse he had viewed in Hawaii. For October our speaker was also a member, Steve Kramer, who described the Antikythera Mechanism that he and the late Bob Mayer had constructed.

According to the president's report (mine), we had committees studying the feasibility of procuring a CCD camera for Beaver Meadow Observatory and for considering holding meetings at the Museum of Science. We did the one, declined the other. We were also planning to participate in the Community Bazaar at Boulevard Mall. One try at that was quite enough for us!

Dave Fliss reported on observing with an OIII Filter, and Darwin Christy reviewed some light intensity data he acquired during the recent partial solar eclipse. Edith Geiger did a profile of Tom Nigrelli, and reported in her "Spy and Tell" column that both Kevin and Chris Biggie were studying engineering at Carnegie-Melon University in Pittsburgh. She also noted that Joan Eschner received a runner-up award for New York State Mathematics Teachers, beating out over 1000 competitors.

10 YEARS AGO - I wonder who spoke at the September and October 1986 meetings. According to the SPECTRUM the president would announce the speaker at the meetings. (Don't look at me—I wasn't president yet.) Paul Noye contributed an article on a method he had developed to polar align an equatorial telescope. Paul claimed the method is fast, but from my glance at it you may need a calculator.

Michael Idem reported on the incidence of fog at Beaver Meadow. His conclusion was "... Beaver Meadow as an observing site is usually free of observationally prohibitive fog." He went on to say that only about one night in ten during the summer presents a problem. Observation reports by Carl Milazzo, Darwin Christy and Richard Jakiel also appeared. Dr. David Meisel summed up the recent apparition of Comet Halley with his article "Hail and Farewell Comet Halley".

15 YEARS AGO - Reports on summer star parties, observations, Stellafane, Mees Observatory and "various members' astrological experiences" were the features of our first meeting of the 1981-1982 season. Orrin Christy spoke in October on "Mapping Our Galaxy Using the Hertzsprung-Russell Diagram". Speaking of Orrin, Edith Geiger reported that he and his partner, Michael Lance, came in second in a 320 mile canoe race across New York State for the benefit of the American Heart Association. Edith's husband Carroll was busily conducting local band concerts that summer. She also did a profile on Robert Schnieder, an active member in 1981. The SPECTRUM carried the obituary for Rudy Buecking, one of the BAA's founding fathers, past president and member of the College of Fellows.

Jupiter was featured in this SPECTRUM. Jim Machowski described the planet in a short article, and Fred Price reported on his observations during the recent apparition. He sketched the planet, showing and labeling the several belts and zones in its cloud pattern. Other observation reports were by Dave Beruca, Carl Milazzo, Steve Desmond and Darwin Christy.

25 YEARS AGO - We featured our own members at our September 1971 program. Larry Hazel spoke on his visit to Ford Observatory in California, Ed Lindberg on the Syracuse Summer Seminar, John Riggs on his classification system for deep-sky objects, Bob Burdick on his just completed 12-inch Cassegrain and Dale Hankin on his efforts to produce a

(Continued on page 3)

Officers

Bob Hughes - President
Gene Witkowski - Vice President
Lynn Sigurdson - Secretary
Bev Orzechowski - Treasurer

Dr. Jack Mack - Museum Representative

Board members at large

Joe Orzechowski - Bill Smith
- One to be elected

Rowland Rupp - Fellow Representative
Joe Orzechowski - Membership

Observatory Directors

Dan Marcus & Bob Titran

SPECTRUM STAFF

Bill Smith - Editor / Layout
Bev Orzechowski - Circulation

BAA Annals continued from page 2

new astronomy magazine The Amateur Astronomer. For October, Walter Semerau spoke on his specialty, "Solar Activity".

The SPECTRUM had an article on "The Barlow Lens" written by Ralph Dakin, who should know something about the subject. John Riggs wrote about re-organizing the BAA's Observing Section to promote observation for the enjoyment of it, rather than for scientific purposes. There was good news in 1971. According to the SPECTRUM, Edith Geiger dropped her camera and would no longer be able to take embarrassing pictures of us. Alas, it appears her camera has long since been mended.

35 YEARS AGO - I don't have a September 1961 SPECTRUM, I don't think we even met in September back then; but for October we featured our own members, as we seemed to do at the first meeting of the season in subsequent years. Paul Redding's topic was "Observation of Perseus", Ron Clippinger talked on "Pioneer Life in University Observatories" and Lou Reinagle on "The Facts on Project West Ford". (I wonder what that was about. Could it have something to do with the Ford Observatory mentioned above?). By the way, this was our first meeting to convene on the second Friday of the month, Friday the 13th ominously enough. The meeting was held at the Museum of Science.

The SPECTRUM announced the appointment of its new editor, Bruce Cook, who took over from Paul Redding. The BAA had an Elementary Study Group, an Advanced Observers Group and an Advanced Study Group in 1961. The president at the time was Herman Elson, one of the three members of the Advanced Observers Group.

SPY AND TELL

Edith L. Geiger

We all know that **Melissa Marcus** is very active in the Federated Garden Clubs of New York State, and has taken many garden study and environmental courses and workshops. She is now a student judge and is qualified to be on a panel with two other accredited judges.

Larry Carlino has a black and white security camera frame grabber to image the planets.

After a year as Principal/Headmaster of Archbishop Walsh High School in Olean, **Ken Biggie** decided to return home. Looking forward to seeing you at the meetings again.

On July 25th, former member **William Halbert**, was vocal soloist with the Lancaster Town Band at Depew Veterans' Park. He has been studying voice in Germany this past year and has been singing at the Ulm Opera. In the fall he will be heard in the role of Morales in the opera Carmen.

Works of **John Yerger** and two other artists were on exhibit throughout August at Rainbow Connection...Revisited, Elmwood Avenue.

In the Stars & Planets department of the Sky & Telescope September issue, pg. 64, appears an article on "Stars on a Summer Stream" by Fred Schaaf, in which **Carl Milazzo's** photo of the summer Milky Way is shown. Sky & Telescope relayed a message to Carl that a reader from England, Carole Henderson of North Yorkshire, would like to have two of Carl's pictures that have been published in the magazine.

Orrin Christy was in charge of the running clock for the Thunder on the Niagara Hydroplane Regatta held on the weekend of July 27-28. **Bob Hughes** was working the two-way marine radio, coordinating rescue boats. This was the first Regatta in five years, and a good time was had by all.

Former member, **Phil Cizdziel**, who lives in California, will be in Buffalo for his sister's wedding on October 12th. Phil has his Masters in astronomy and is working on his Masters in electrical engineering.

Tom Bemus is planning to attend the Hidden Hollow Astronomy Convention held near Mansfield, Ohio, on the first weekend in October. Speakers will include: Stephen O'Meara, a contributing editor of Sky & Telescope, David Levy, and Don Parker.

In the July-August issue of the Spectrum, "Spy and Tell" reported that **Orrin Christy's son, Michael**, who was then in 6th grade, had his poster on the dangers of alcohol, exhibited at the Summit Park Mall. Additional information reveals that this poster had won an award given by New York State. Congratulations Michael!

At the Starfest convention at Mt. Forest in Canada on the weekend of August 8-11, **Carl Milazzo** won 2nd place in the category for expert photographers of natural sky phenomena, with a photo of an aurora. He was in a perfect place to view the Perseid meteor shower, seeing around 60 per hour. He saw two -4 meteors with a glowing train of 8 sec.



DORIS KOESTLER

We are deeply saddened by the passing of Doris Koestler on August 12th. She was a loyal and devoted member and played a very important part in the BAA. Doris became a member in 1980; served on the Board of Directors for several years; was a very capable Vice President from '84-'88, and an efficient, energetic President from '88-'90, who accomplished much for our association for which we are exceedingly grateful.

She was acutely conscious of the needs of our organization, and through her leadership, she and Dan Marcus took on the responsibility for organizing three well-attended meetings to discuss what should be done about getting a new telescope, and where it should be housed. This resulted in the group deciding on a 20-inch Dobsonian to be placed at Beaver Meadow, giving greater opportunities for better viewing for our members, and for the general public which the BAA has served faithfully.

Doris Zimmerman was born in Buffalo, and graduated from East High School. In 1955, while still in high school, she met her future husband, Bill, who was on leave from service in the Navy. They were married in 1959, and had two children, Kevin and Lori. Doris and Bill became involved in endless activities as they and their children enjoyed many memorable family outings and events, from traveling around the country with their small tent camper to woodland camping.

Doris worked at Hens & Kellys Transitown as a department manager for four years, followed by many years working in the children's department in Sears at Eastern Hills.

Besides astronomy, Doris found pleasure in sewing, making clothes for herself and her children; refinishing furniture; entering craft shows with dolls, parts of which she put together, fitting them over plastic bottles and clothing them with her designs and fashions. They were sold at Joyce's Dolls in Batavia. She was also an excellent cook, and baked all kinds of goodies. For relaxation she liked to read Civil War history and novels by Irving Wallace, Sidney Sheldon, and Frank Yerby.

Doris will be greatly missed. We will remember her kindness, her pleasant friendly manner, her sense of humor, her serenity of mind and all she brought to the BAA in enthusiasm and direction.

Our outflow of sympathy goes to the members of her family, relatives, and her many, many friends.

E.L.G.

SPECTRUM DEADLINE

The deadline for the Nov-Dec issue is
Oct 11th.

Send all submissions to Bev Orzechowski
125 Roycroft Blvd., Buffalo, NY, 14226.

Preferred format is typed or PC readable WordPerfect for DOS 5.1 or earlier, MS Word for DOS or ASCII.

-- scanning available --

Handwritten or other formats are fine too -- we really like submissions!

ASTRONOMICAL HAPPENINGS

TIME WELL SPENT IN ASTRONOMY

Moon

Last Qtr Sep 4	New Sep 12	1st Qtr Sep 20	Full Sep 26	Last Qtr Oct 4	New Oct 12	1st Qtr Oct 19	Full Oct 26	Last Qtr Nov 3
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Excellent or very pretty events are italicized and bold.

NOTE: After midnight events are listed for the proper day! Thus 1 am on the 10th means you must be prepared be up late on the evening of the 9th.

Date	Time	Elevation	Direction	Evening events left aligned	Event description	Morning events right aligned
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Astronomical Events In September

1-11	5:40 AM	29°	E		Watch Venus catch up and pass Mars below constellation Gemini	
4	5:45 AM	61°	SE		Quarter Moon within the Hyades star cluster	
7	dusk- 10 pm				Public night @ Beaver Meadow Observatory Sagittarius, Lyra and Vulpecula - No Moon	
8	6:15 AM	36°	ESE		Venus 5° left of the Moon, reddish Mars 4° above Venus	
9	6:15 AM	27°	E		Venus and Mars straight above thin Moon	
13	7:30 pm				MEETING of the BAA	
16-24	6:00 AM	27°	E		Mars passes within 0.7° of star cluster M44 - BINOS	
18	8:15 pm	20°	SW		Head of Scorpio and reddish star Antares 8° below and bit left of Moon	
19	8:45 pm	22°	SSW		Small hazy spot that is the globular cluster M9 is 1° right of Moon - BINOS	
20	8:15 pm	28°	S		Moon in Sagittarius Milky Way, Jupiter 6° below & left of Moon	
21	dusk- 10 pm				Public night @ Beaver Meadow Observatory Jupiter, Saturn (rises 8 pm), Neptune, Uranus - Qtr. Moon	
26	all night				Saturn rises 2.5° below full Moon @ sunset, they are 5° apart @ sunrise on the 27th - watch both times!	
26 Thurs.	9:13pm to 12:37am	24 to 48°	SSE		LUNAR ECLIPSE Entering partial phase starts at 9:13pm, totality from then to 11:30pm, leaving partial phase from then until 12:37am. Well off the horizon - don't miss this one!!	

September is **LUNAR ECLIPSE MONTH**. This is the good one folks. It is the **LAST TOTAL ECLIPSE** until the year 2000 for us in North America.

Saturn returns with its rings tipped at a low angle. Its moons are still identifiable as in a somewhat straight line. They form a cloud around Saturn when its rings are well seen as the moons orbit in the ring plane.

Uranus and Neptune have the globular cluster M75 between them. Jupiter is within 0.5° of globular M22 all month.

Astronomical Events In October

2-5	6:15 AM	27°	ESE		Venus passes by bright star Regulus in Leo	
4	6:15 AM	62°	SSE		Qtr. Moon at feet of Gemini, Gemini sits sideways to left	
5	dusk- 10 pm				Public night @ Beaver Meadow Observatory Cygnus, Pegasus and Andromeda - No Moon	
7	6:45 AM	44°	ESE		Mars 6° above and left of the Moon	
8	6:45 AM	35°	ESE		Venus 5° below & left, bright star Regulus in Leo 3° left of the Moon	
10	6:50 AM	15°	ESE		Mercury 7° below & left, bright Venus 15° above the Moon	
11	7:30 pm				MEETING of the BAA	
12	6:50 AM	5°	E		Very thin Moon 3° below and bit right of bright Mercury	
18	7:20 pm	28°	S		Jupiter 6° below & bit right of Qtr. Moon: can you see any Milky Way?	
19	dusk- 10 pm				Public night @ Beaver Meadow Observatory Jupiter, Saturn, Neptune, Uranus - Qtr. Moon	
22	★ ★		NE		Fair conditions for Orionid meteor shower - gibbous Moon in sky until 2 AM	
25-11/3	5:45 AM	50°	SE		Mars passes within 1° of the bright star Regulus in Leo	

The year's best morning appearance of Mercury. October is normally the most cloud-free month.

Only a fair Orionid meteor shower this year.

This is the last month for public events. Stop by to help or learn the ropes as a 'visitor', & stay for members-only viewing afterwards.

Astronomical Events In November

10/25-3	5:45 AM	50°	SE		Mars passes within 1° of the bright star Regulus in Leo	
5	5:50 AM	46°	SE		Mars is 7° and reddish star Regulus 9° above the Moon with Sickle of Leo higher	
8	6:25 AM	23°	ESE		Venus 3° above and bright star Spica 10° below the Moon	

The Milky Way is still high on November evenings.

BEAVER MEADOW OBSERVATORY 457-3104

Oops. My apologies to Neil Dennis for getting his name wrong in the last Spectrum. It is due to Neil's help that the 6" refractor is working as good as it is.

Summer Star parties and doings at the Observatory have been for the **most** part clear, and we have all been enjoying the views of Comet Hale-Bopp. Public nights have been successful, on most nights we have been averaging 20 to 30 people. Now that we have 4 scopes out at the site, we can use more people than ever to show the stars to the public, and keep down the waiting lines.

CCD: Frank Chalupka, John Marino and I think we have the autoguider circuit working! We imaged a star, set up the periodic error correction program and then made a 4 minute unguided exposure of that star. The image was better than the hand guided one! Previously we could only go unguided for 30 seconds. While

imaging Hale-Bopp on July 20, I think we managed to photograph a jet coming from the nucleus of the comet!! I will continue holding CCD classes after public nights, just call me first to be sure I will be there, or talk to Frank Chalupka, or John Marino.

Observatory Directorship Open!
Beat the rush — volunteer early.

The Club is still looking for a replacement Observatory Director. If you are interested or know someone who is, please contact me or any Board Member. What the heck does an Observatory Director do? Mostly they coordinate activities at the Observatory, like public nights, schedule activities, work with Beaver Meadow on joint activities, and schedule repairs to the

(Continued on page 5)

STARFEST: MY ASTRONOMICAL RETREAT

I spent the second weekend in August at the Starfest convention near Mt. Forest, Ontario. It was my second time at this annual convention sponsored by the North York Astronomical Association. This is a well organized event with an excellent variety of presentations and activities for astronomers of all ages and experience levels. For me personally Starfest is an opportunity to relax, get away from the daily work routine and spend some time learning and doing astronomy. . . an astronomical retreat.

Starfest includes a full schedule of activities on Friday and Saturday and, weather permitting, observing every night. Of course, everyone is free to set as relaxed or as busy a schedule as they'd like. I chose to set mine a bit on the busy side. I arrived at the River Place Campground at about 1:00PM on Friday and immediately set up my sleeping quarters for the weekend. This consisted of parking the truck, removing a grill and my scope from the back, and unrolling my sleeping bag. I then headed over to the rec hall for a couple of afternoon presentations: "Science and Magic in the Sky" by Tony Ward and "The Care and Cleaning of Optics" by Abe Slomovitz. Afterwards, it was off to Mt. Forest with BAA members Dan Marcus, Bob Titran, and Gene Witkowski for a bite to eat. We returned to Starfest in time for a slide presentation by ESA astronaut Claude Nicollier who described his experiences on the Space Shuttle during the Hubble repair mission. Mr. Nicollier operated the robot arm which moved the HST in and out of the Shuttle's cargo bay and also provided a mobile work platform for the other astronauts during their EVAs. Other speakers that evening included our own Gene Witkowski, who showed off some of his exceptional videos of the Moon, and Carl Milazzo, who presented some of his best wide angle photographs of the night sky.

After that it was time to begin setting up for a night of observing. The clouds which had kept the daytime temperatures tolerable had dispersed and the skies were clear. The thin waning crescent Moon had already settled into the muck along the horizon so Jupiter was first on the list of observing targets. As the skies grew darker Dan, Bob and I viewed Comet Hale-Bopp after Bob provided a little navigational assistance. The comet was quite bright and visible in binoculars. Since I recently moved up to a 4" refractor (a very generous birthday gift from my wife, Bev) and the skies were so dark, I next tried for some of the fainter Messier objects. The M76 nebula was surprisingly easy, M97 wasn't too bad, but M108 was a bit challenging. Naturally, I couldn't resist some of the better showpieces so off I went to the Hercules Cluster, the Lagoon Nebula, M92, M11, the M81/M82 double header, and the M31/M32/M110 hat trick. I spent an extra few minutes viewing the two galaxies in Ursa Major. The thought of intercepting the light from not one but two galaxies which are tens of millions of light years away was quite stirring.

All was not perfect with the night's weather. The falling temperature and the high humidity eventually led to extensive dewing problems for me and several others. I wonder how much electrical power was consumed that night by electrically heated dew removal systems, hair driers, fans, etc. I was without any such electronic aid and so I had to resort to wrapping my hands around the outside of the tube near the objective to warm it sufficiently to remove the accumulated moisture. It was a slow process but it gave me plenty of opportunity to scan the sky for Perseids. I eventually lost the battle and called it quits at 2:30. By that time a light fog had started rolling in, making conditions even more marginal. And what do amateur astronomers do when the fog starts rolling in? Well, they break out their camera flash units and start an impromptu laser battle with the people on the next hill.

The next morning after a late breakfast I attended two more presentations. In "To Explore Strange New Worlds" Ivan Semeniuk talked about the numerous new planets discovered around other stars and what we do and do not know about these objects. During "Thirty Years of Astrophotography" Jack Newton covered the history of astrophotography through his own personal experiences. He talked about his advancements in the area starting with a small 50mm refractor all the way to his current "observatory with attached living quarters" (his home on Vancouver Island). Next on my busy schedule was lunch at the "Back of the Truck" diner (sandwiches and cold drinks from my cooler) and a visit to the

eyepiece cleaning station to desmudge my 26mm low power unit. At 2:30PM I was off to the big tent for a listen to "A Tribute to Hyakutake: Preparing For Hale-Bopp", a panel discussion moderated by Terence Dickinson. On the panel were Peter Ceravolo, Jack Newton, Don Parker and Tom Bisque. Mr. Ceravolo showed us a very impressive video of Comet Hyakutake which was made from over 600 still photographs he had taken of the comet over several nights. The photographs were digitized, stored on a compact disk, processed, and then transferred to video tape for a most impressive and dynamic view of what goes on in a comet's tail.

Saturday's buffet dinner on the Starfest grounds was followed by the presentation of numerous awards and prizes. Hats off to Carl Milazzo for his 2nd place finish in the expert photographer class, natural sky phenomena category. Afterwards, it was time to set up my scope for another night of viewing. Although cooler than Friday night, there was much less dew on Saturday night so I was able to spend more time looking through my scope rather than holding hands with it. Like the previous night, Jupiter and Hale-Bopp were early viewing targets. Later I moved on to a few deep sky objects and a half-dozen long-period variable stars. Variables are a recent addition to my repertoire, an attempt to view objects which change in appearance. Deep sky objects are OK but once you've seen them, you've seen them, unless you're lucky enough to catch a supernova going off in some distant galaxy. Besides, tracking the changes in brightness of many variable stars is something I can do even from the light polluted skies of my back yard with a relatively modest instrument. At 2:00 in the morning I finally capped my scope and crawled into my sleeping bag for a good night's sleep.

After a quick breakfast on Sunday morning I headed back to Buffalo with some fond memories of a great weekend. I'd recommend Starfest or any similar convention to any BAA member who's interested in having a fun weekend while learning a little astronomy or picking up an observing tip or two.

Joe Orzechowski

Beaver Meadow Observatory continued from page 4

Observatory, and last but not least, write the article you are reading! Note, not being computer/CCD literate is not a problem, as I have volunteered to give lessons in their use, and to keep them in working order.

Starfest '96: Several members went to Starfest at Mt. Forest, Ontario. The skies were exceptionally dark! We saw more Perseids on the night of Aug 9/10 than on Aug 10/11! But the most interesting thing was the passing of a trio of satellites going from N to S in a 2 degree formation, we saw them on Aug 9/10 and again on Aug 10/11! There was going to be a duel with fully loaded checkbooks by a couple of members at the swap tables, but pickings were so slim that no one won! A tip of the dew cap to Joe Orzechowski who spent both clear nights using his new 4" refractor, instead of goofing off and watching for meteors.

Daniel R Marcus

PUBLIC NIGHT HINT

Most people have no idea what objects will look like through a telescope. Their experience is news photos and such. Some words about what to expect are needed — if not they'll probably be disappointed at seeing a dim fuzzy blob when they expected to see a dramatic swirling Whirlpool galaxy — in color!

As a rule visitors don't tell you they're disappointed. That old rule of thumb applies: "2 hours of boredom and it is never used again" rings true for astronomy as well. Visitors will always get an experience — we want them to have a good one!

For Sale:

Celestron SPC-80 3.1 inch, f/11.25 refractor with 1.25" focuser, 6x30 finder, brand new 20mm (45x) Kelner eyepiece, full-aperture Mylar solar filter, and Celestron User's Manual. Also included is a stable Super Polaris equatorial mount with integral polar alignment scope, setting circles and wooden tripod. Everything quickly breaks down into three easy-to-handle components (tube assembly, mount and tripod) for convenient storage and transportation. This telescope has given me many years of excellent service and is a great first scope for the beginner. Asking \$450, including user training and delivery anywhere in Western New York. Contact Joe Orzechowski at 632-7091 (days) or 839-9109 (evenings) for more information or to arrange a demonstration.

The following 'educomics' are supplied by Jay & Debbie Ryan, two amateur astronomers from Cleveland, Ohio

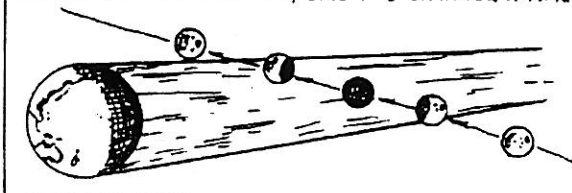
For September



ON THE EVENING OF SEPTEMBER 26, A TOTAL ECLIPSE OF THE MOON WILL BE VISIBLE OVER NORTH AMERICA.

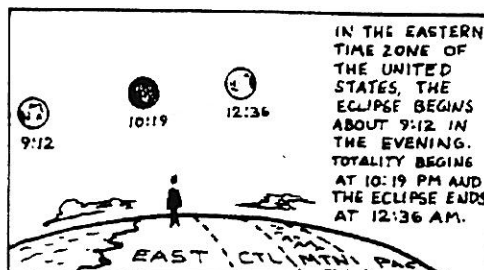
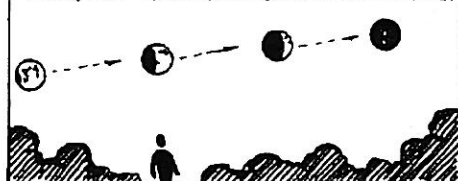


EVERY 30 DAYS, DURING THE FULL MOON, THE MOON PASSES THROUGH THE EARTH'S SHADOW, BECOMING DARK FOR A TIME.

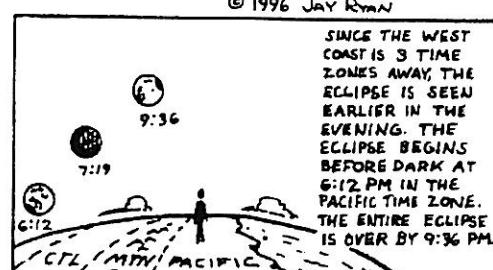


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OVER THE SPAN OF AN HOUR, AS THE MOON CROSSES THE SKY, THE DARK EDGE OF EARTH'S SHADOW COVERS THE MOON. FOR THE NEXT HOUR, THE MOON WILL BE IN TOTAL ECLIPSE.



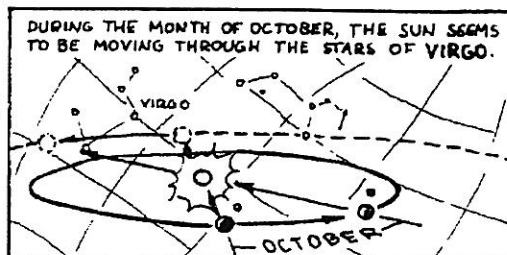
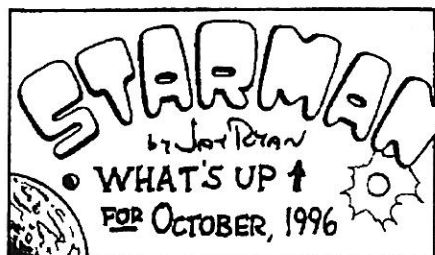
IN THE EASTERN TIME ZONE OF THE UNITED STATES, THE ECLIPSE BEGINS ABOUT 9:12 IN THE EVENING. TOTALITY BEGINS AT 10:19 PM AND THE ECLIPSE ENDS AT 12:36 AM.



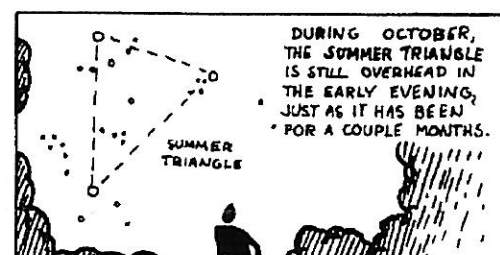
SINCE THE WEST COAST IS 3 TIME ZONES AWAY, THE ECLIPSE IS SEEN EARLIER IN THE EVENING. THE ECLIPSE BEGINS BEFORE DARK AT 6:12 PM IN THE PACIFIC TIME ZONE. THE ENTIRE ECLIPSE IS OVER BY 9:36 PM.

<http://www.en.com/users/cygnus>

For October

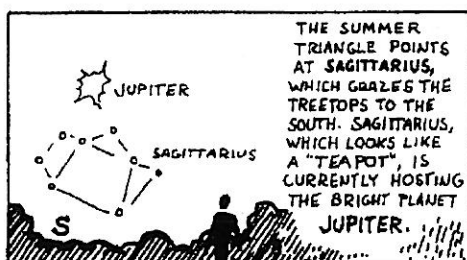


DURING THE MONTH OF OCTOBER, THE SUN SEEMS TO BE MOVING THROUGH THE STARS OF VIRGO.

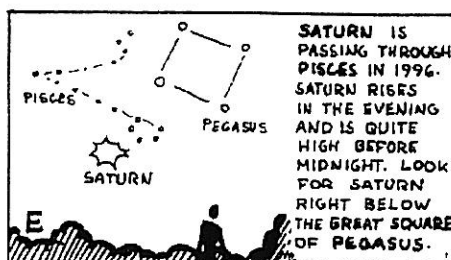


DURING OCTOBER, THE SUMMER TRIANGLE IS STILL OVERHEAD IN THE EARLY EVENING, JUST AS IT HAS BEEN FOR A COUPLE MONTHS.

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THE SUMMER TRIANGLE POINTS AT SAGITTARIUS, WHICH GRAZES THE TREETOPS TO THE SOUTH. SAGITTARIUS, WHICH LOOKS LIKE A "TEAPOT", IS CURRENTLY HOSTING THE BRIGHT PLANET JUPITER.



SATURN IS PASSING THROUGH PISCES IN 1996. SATURN RISES IN THE EVENING AND IS QUITE HIGH BEFORE MIDNIGHT. LOOK FOR SATURN RIGHT BELOW THE GREAT SQUARE OF PEGASUS.



EVEN A CHEAP DEPARTMENT STORE TELESCOPE IS GOOD ENOUGH TO SHOW THAT SATURN HAS RINGS!

<http://www.en.com/users/cygnus>

POETRY CORNER:

PLEIADES SONG

Look as they rise, up rise
Over the line where sky meets the earth.
Seven stars!
Lo! They are ascending, come to guide us,
Leading us safely, keeping us one.
Seven stars,
Teach us to be, like you, united.

A Pawnee Song

How Andromeda was Saved

A 5 page story by Darwin Christy, complete with pictures is available by mail from the SPECTRUM editor, Bill Smith. It is too large to fit in a SPECTRUM issue and it would lack continuity to split it up over 2 or more issues so... It will be available for free at the September meeting. To get it by mail send me a note and I'll mail you a copy. An SASE would be appreciated. Bill Smith 184 Creek Rd, Jamestown, NY 14701

OBSERVING TIP

Finding the best in Sagittarius: If you have trouble finding M8 or M17 .. you're not alone. Familiarize yourself with their locations on a map before you go outside. Use bright stars and extend lines to point to or box objects in. Ex. M8 and M20 are found by extending a line from ϕ to λ the same length. Also note that the string of Messier objects from M8 to M11 (10 Messiers) runs just inside the bright Milky Way. Use binoculars first (10x50s recommended) to pick them out before you fuss with the scope.

Astronomer from the Past**DAVID TODD**

David Todd was an American astronomer, born in Lake Ridge, New York on March 19, 1855. He died in Madison Heights, Virginia on June 1, 1939.

He was a graduate from Amherst in 1875 where he became a professor of astronomy as well as director of the observatory from 1881-1920. From 1882-87 he was also professor of astronomy and higher mathematics at Smith College, where he supervised the building of that institution's observatory. Following his graduation from Amherst, he spent three years at the Naval Observatory in Washington, D.C.

In order to make observations in astronomy, Todd conducted several expeditions: one to Texas in 1878, another to study the transit of Venus at Lick Observatory in 1882. He went to Japan in 1887 and again in 1896. He also traveled to West Africa in 1889-90, to Tripoli and Barbary in 1900 and in 1905, to the Dutch East Indies in 1901, to the Andes and Chili and Peru in 1908, and finally

to Russia in 1914.

He helped to organize an expedition in 1925 to photograph the first total eclipse to be taken from the air, at an altitude of 16,000 feet over Poughkeepsie, New York. He had become a member of the Aero Club of America and the Advisory Association of Aeronautics.

Todd was made a fellow in many organizations, among which were the Americans for the Advancement of Science and the American Astronomical Society. He wrote and/or edited many textbooks on astronomy. His publications include "Stars and Telescopes" (1899), "Lessons in Astronomy" (1902), and many other reviews and magazines.

Darwin Christy

STAR PARTY

October 12: Saturday: Star Party 3 pm on

Bill Smith & Carol Lorenc's rural horse farm near Jamestown.
Great skies, overnight camping, dish to pass cookout & breakfast.
Give Bill a call (664-0841) if you'd like a map.

Inside:

- 1 President's Message
Board Member Election
Comet Hale-Bopp a comin'
- 2 Membership corner
BAA Annals
- 3 Spy and Tell

- Doris Koestler, remembered
- 4 Astronomical Happenings
Beaver Meadow Observatory
- 5 Starfest: My Astronomical Retreat
Public Night Hint
- 6 The Maunder Minimum
Treasurer's notes
For Sale: Sharp 3.1" Celestron Refractor

- 7 Jay Ryan educomics
Poetry corner
How Andromeda was Saved
Observing Tip: Sagittarius' Messiers
- 8 David Todd, astronomer
Star Party Notice

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HOW ANDROMEDA WAS SAVED BY PERSEUS

BY DARWIN CHRISTY

Beginning with the constellation Cassiopeia, the sprawling "W" or "M" which ever would appear from season to season, we hear tell of how she was so vain because of her beauty. Cassiopeia was the queen of Aethiopia, but the Gods punished her and her husband, Cepheus, king of Aethiopia, by having her daughter, Andromeda, the princess, chained to a rock by the seashore. As Andromeda was about to be eaten up by the sea monster, Cetus (the Whale) Perseus, the hero, swooped down and saved her. Perseus was riding the winged horse, Pegasus, at the time, returning from the task of beheading the Gorgon, Medusa. At the sight of the eyes of the Gorgon, any mortal was turned to stone. To rescue Andromeda, Perseus faced the Gorgon's head towards the sea monster. Cetus did indeed turn to stone, thus Perseus saved Andromeda from the monster's jaws.



According to legend, Cassiopeia believed that she was the most beautiful of all creatures on earth, even more beautiful than the exquisitely lovely Nymphs or Nereids. Cassiopeia was so vain and conceited that she was lacking in tact, and thus got her daughter in trouble with the Nereids of the sea.

THE STORY OF THE CHAINED LADY

Chapter 1 CASSIOPEIA

A place where Cassiopeia sits within inferior light, for all her daughter's sake.
"Paraphrases on Nonnus" by Mrs. Browning



Cassiopeia, the Queen of Aethiopia, is among the oldest constellations on record. It is a popular constellation and is also known as her throne, "the shine Cassiopeia's chair", from Spencer's Faerie Queen. When below the pole, it appears as the celestial "W", and when above the pole, an "M".

Chapter 2 CEPHEUS

Kepheus is like one who stretches forth both hands.
from Aratos by Brown

Cepheus, the King of Aethiopia, is shown wearing royal robes, one foot near the Pole star and the other on the colure. His head is marked by a triangle of 4th magnitude stars: Delta, Epsilon, and Zeta. In many stories by the Greeks, this stellar majesty was associated with the Argonautic expedition.

As the story of the Nymphs portrays, Cepheus, the father of Andromeda and husband of Cassiopeia, appealed to the Nereids, but was told that he must make sacrifice of his daughter to the sea monster. Thus commanded, Cepheus had Andromeda chained to a rock near the seashore, exposing her to the sea monster, Cetus.



Cepheus is noted for one particular star called the Garnet Star because of its unusually deep red color. It is visible to the unaided eye and is an irregular variable which was acclaimed by Sir William Herschel for its color. Piazzi entered the Garnet Star into his "Palermo Catalogue", yet it was omitted from Flamsteed's list.

Chapter 3 ANDROMEDA

*Andromeda! Sweet woman! why delaying
So timidly among the stars: come hither!
Join this bright throng, and nimbly follow whither
They all are going.*

John Keat's "Endymion"



Andromeda, the Chained Lady, was the daughter of Cassiopeia and Cepheus, the queen and king of Aethiopia. This constellation is among the oldest, going back to the 7th century B.C., and perhaps even further back than that.

The legend concerning Andromeda and the surrounding constellations is well told in a movie, "The Clash of the Titans", which has appeared on television. As told, her mother, Queen Cassiopeia, enraged the nymphs so much by boasting of her beauty, that Neptune punished her by chaining her daughter to a rock by the seashore. Andromeda was there laid prey to a terrible sea monster, Cetus, which was ravishing the coast.

Aratos, Eratosthenes, Hipparchus and Ptolemy all have their versions of the story of the Chained Lady. The tales are all so similar that their differences may not all be apparent as told here. Even in the 7th century B.C., Sappho is supposed to have mentioned her; in the 5th century B.C., Euripides and Sophocles wrote of her plight.

In this constellation, the Great Galaxy Andromeda (M-31) may be visible to the naked eye. In a telescope, individual stars may be observed. The Andromeda Galaxy measures about 3 degrees in length.

Chapter 4 PERSEUS

*There was the knight of fair-hair'd
Danae born, Perseus*
as translated by Elton in "Shield of Hercules"

*Perseus, even amid the stars, must take
Andromeda, in chains aetherial!*

"Paraphrases on Nonnus" by Mrs. Browning

Perseus, the Champion, was shown in early illustrations as an unclad youth wearing the 'Talaria' -- the winged sandals of Mercury. He had a light scarf draped around his body and held the 'Gorgoneion', the head of Medusa-Guberna, a mortal of the Gorgons. With this head, Perseus rescued Andromeda by holding it with its eyes toward the sea monster, Cetus, thus causing it to turn to stone.



*In the mirror of his polished shield
Reflected, saw Medusa slumbers take,
And not one serpent by good chance awake;
Then backward an unerring blow he sped,
And from her body lopped at once her head.*



This legend about Perseus, who was one of the great heroes in Greek mythology and the son of Jupiter and Danae,

began when his father Jupiter visited him in the guise of a shower of gold. As he was returning from his visit, Jupiter was confronted by Zeus and challenged to rid the earth of the Medusa, an ancient constellation represented as the Gorgon's Head and containing the Demon Star, Beta Persei. Medusa was an unprepossessing creature whose hair was a nest of venomous snakes or serpents. Its glance was so frightful that it would turn anyone to stone who looked into its eyes. According to legend, Perseus borrowed a pair of winged sandals from Mercury to meet up with the Medusa. Upon confronting her, he used the polished surface of his shield, Scutum, to see her reflection, and was therefore able to slay the creature without looking directly into its face.

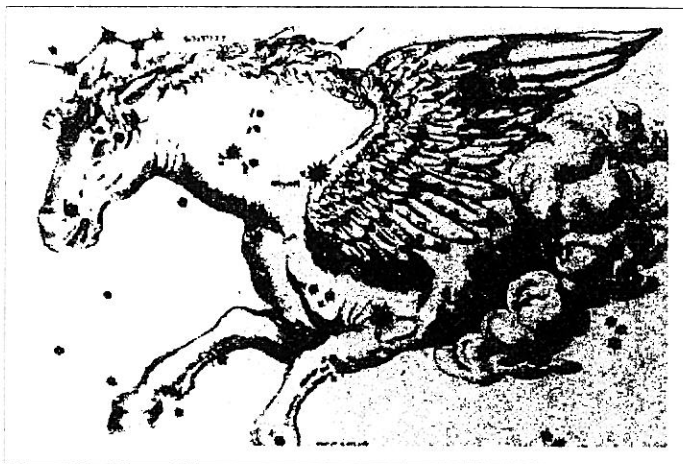
The Demon Star, Beta Persii, is the eye the Gorgon's Head and was named Algol by the Arabs and Ghul by the Greeks -- a nightmare that haunted men and destroyed them. Next to the Demon Star, Algol, is the noted Double Cluster, h & k.

Chapter 5 PEGASUS

*That poetic steed,
With beamy mane, whose hoof struck out from earth
The fount of Hippocrene
Bryant's "The Constellations"*

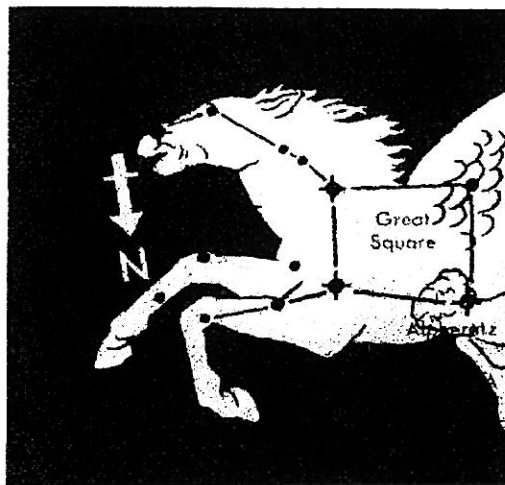
Pegasus was snowy white in color and was the favorite of the Muses because his birth had caused to flow their fountain -- Pirene of Helicon.

Longfellow described the birth of Pegasus and the inception of the fountain in his "Pegasus in Pound" thus:



*To those stars he soared again
But they found upon the greensward
Where his struggling hoofs had trod,
Pure and bright a fountain flowing
From the hoofmarks in the sod.*

When Perseus had slain the Medusa, its blood spilled upon the ground, and the blood began to soak into the earth. As the blood dried, it transformed into a Winged Horse, Pegasus. This untamed steed was captured by Perseus. He tamed the steed and thus was able to return homeward from his adventures.



As he was soaring above the Mediterranean Sea over the coast of Africa, an owl, Noctua (an ancient constellation), caught sight of a large sea monster, Cetus, and set out looking for Perseus to warn him of the pending tragedy to befall the beautiful lady, Andromeda, chained to a rock on the shore far below.

In time, classical legends gave Pegasus wings to aid him in ascending to heaven. Jupiter was highly incensed by his boldness and caused an insect, Musca Borealis, the Southern Fly (an ancient constellation), to sting him, throwing his rider.

As Wadsworth wrote:

*Old Bellerophon (so Jove
decreed in wrath) fell
headlong from fields of air.*

The constellation Pegasus is known as the Great Square and contains slightly more than 100 square degrees. Many clusters can be observed throughout Pegasus.

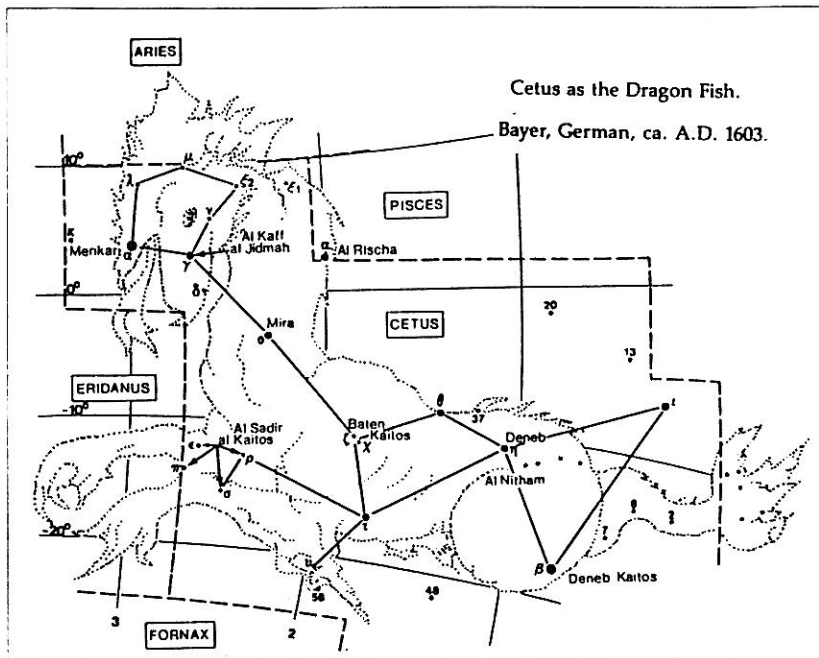


Chapter 6 CETUS

*The south wind brings her foe
The Queen beast*

Far out to sea, churning its way toward the lady Andromeda, was the sea monster, Cetus. Noctua, the owl, caught sight of the monster and flew as fast as he could to catch up with Perseus to inform him of the disaster threatening the beautiful lady chained to the rock.

Perseus, riding his newly acquired flying horse, Pegasus, saw the sea monster approaching Andromeda chained to the rock. Still carrying the head of Medusa, he swooped down and tricked Cetus into looking into the Medusa's eyes,



thereby turning the monster into stone. In doing this he was able to rescue Andromeda and took her to be his wife.

In the Great Square, one may observe Omicron Ceti whose proper name is Mira ("Marvelous"). It's a variable star whose period varies around 332 days from minimum to minimum.

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