



# the Spectrum

BUFFALO ASTRONOMICAL ASSOCIATION INC.  
BUFFALO MUSEUM OF SCIENCE  
HUMBOLDT PARKWAY  
BUFFALO NEW YORK 14211

Editor:  
Lawrence L. Carlino

NOVEMBER - DECEMBER 1978

NOVEMBER MEETING: The November 10, 1978 meeting of the BAA will be held beginning at 8:00 P.M. at (please note the change in location!) the Buffalo Museum of Science on Humboldt Parkway. This one-time return to the Museum will feature as guest speaker, Museum Curator of Astronomy, Ernst Both. Mr. Both's topic will be the enigmatic "red planet" Mars, and his expertise as a planetologist promises to provide us with a fascinating and informative picture of Martian topography and climate.

\*\*\*

## NEWS NOTES:

A list of members, revised since the publication of the BAA Directory, will be available at the November meeting in order to allow members to keep their directory booklets up-to-date.

The BAA Study Section, led by Tom Giosomo and consisting of members who have specific interests in the various aspects of astronomy, is now meeting on the third Friday of each month at 8:00 PM in Dr. Fred Price's biology lab on the second floor of the Buffalo State New Science Building. Interested club members are cordially invited to attend.

\*\*\*\*\*

HAVE YOU PAID YOUR DUES FOR '78 - '79?!

\*\*\*\*\*

\*\*\*

## A FOR SALE:

Unfinished 8-inch mirror. Call Bill Smith, Orchard Dr., Tonawanda.  
Telephone. 873-8807

## FOR SALE:

Edmund 4 $\frac{1}{4}$ -inch, F/10 Newtonian reflector on medium-duty equatorial mount without clock drive. This telescope is approximately five years old but is unused and in mint condition; the tube assembly has never been removed from the shipping carton. Two eyepieces and a Barlow are included with the 'scope. Current replacement cost: \$259; will sell for \$95 or best reasonable offer. Call Larry Carlino at 832-0491.

CHRISTMAS PARTY!! - DECEMBER MEETING - The annual BAA "Christmas Party" will commence at 8 PM on December 8, 1978, in the New Science Building Auditorium of the State University College at Buffalo (Buffalo State). This is our traditional yearly gathering which combines an evening of socializing with Edith Geiger's now legendary "Candid Camera" slide show of BAA members and their families.

## SPY AND TELL

Irving and Esther Goetz spent some time in Minneapolis visiting son, Peter, and family. Peter Goetz is a well-known and distinguished actor at the famous Guthrie theater. He is also seen in TV commercials. The theater company is going on a mid-west tour for six weeks in the Russian play, EFROS (Marriage). It is going to be reviewed in Time magazine the week of November 6th.

Orrin Christy is always a very busy fellow. He is a research physicist with Moore Business Forms. During August and September, business trips took him to Chicago, Green Bay and Hartford. On October 30th, he left for England for several weeks work for the company. He is based at Cambridge Consultants Limited.

Charles Miess had his photos of the motion of Mars and Jupiter on May 25, May 31, and June 4th published in the September issue of Sky and Telescope.

The Mayer's cottage on the Bruce Peninsula in Canada has been closed for the winter.

Walt Whyman has an excellent slide collection of covered bridges from various parts of the country and Canada, on which he is currently speaking.

Darwin Christy has repaired his observatory with new siding on the upper section so it no longer leaks. He took a trip to Ithaca to have his 8" mirror re-aluminized, after 15 years, and his 12.5" mirror aluminized. Two trips gave him a poor excuse to visit two different wineries in the area.

Every year the Christys have a special wedding anniversary (Oct. 14) celebration. This year on their 35th anniversary, they went to Gettysburg and Lancaster, Pennsylvania, and returned to stay at the Honeymoon suite at the Niagara Hilton. Ann Landers would give you her blessing.

Billie Both is up to her old tricks again. This time when alighting from the Both Horse, she stepped right into a hole and broke her ankle. Billie should have a full-time guardian angel.

Edith L. Geiger

\*\*\*

## IMPACT AND OTHER CRATERS

I read with interest Carl Milazzo's article 'The Moon isn't the only world that has craters' in the September - October 1978 issue of the Spectrum and think that some remarks about the origins of lunar and other planetary craters may not be out of place.

Impact theorists consistently and gratuitously overlook the fact that the crateriform features of the Moon, Mars and Mercury are a heterogeneous group comprising many different morphological types ranging from simple pits a few hundred yards across to vast and complex walled plains many miles in diameter. Detailed study of the ring structures of the moon

in particular reveals that they must have had widely different origins. The features and distribution of pits up to a mile or so in diameter suggest a meteoritic or other type of impact origin, though not necessarily so in all cases. The large walled plains, on the other hand, have quite different morphology and distribution characteristics, clearly indicating various types of endogenous origin such as collapse of gas- or magma-filled domes (calderas), sinking of fracture-delimited crustal blocks (graben) and ring or spiral crustal fracturing followed by extrusion of magma resulting in ring or spiral structures.

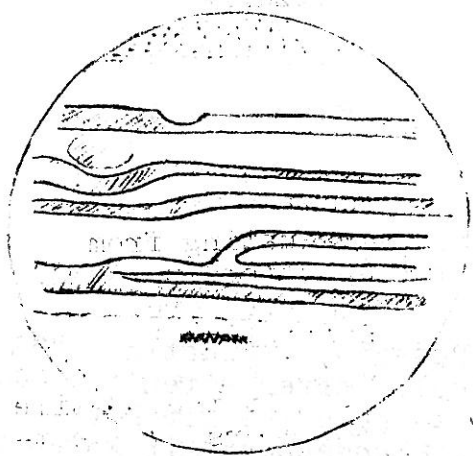
At a glance, the crateriform structures of the moon and some other planets seem to be one class of object but careful study shows this to be probably incorrect. Meteoritic impact may account for the smallest ring structures but these do not contribute significantly to the major surface topography of the moon and possibly also Mars and Mercury.

Fred W. Price

\*\*\*

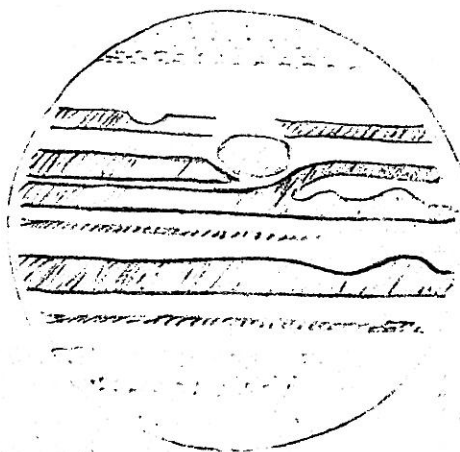
TWO VIEWS OF JUPITER SHOWING THE GREAT RED SPOT.

F.W.Price. 8in reflector.



1977 December 4th.

22.35 - 22.55 EST



1978 February 14th.

21.05 - 21.30 EST

# ASTROMATH

Q. When two stars are very close together in the sky, they appear as one. Knowing the magnitudes of each, how do you find their combined magnitude?

A. Use the following table. (From Naked Eye Stars by Richard Lampkin c. 1972, p. 4)

Combined Magnitude of Two Stars That Are Seen as One	
Difference of Magnitude	Brightening Effect
0.0 to 0.2	0.7 mag.
0.3 to 0.4	0.6 mag.
0.5 to 0.7	0.5 mag.
0.8 to 1.0	0.4 mag.
1.1 to 1.4	0.3 mag.
1.5 to 2.0	0.2 mag.
2.1 to 3.3	0.1 mag.
3.4 and up	0.0 mag.

The brightening effect is the amount by which the magnitude number of the brighter star in a pair is decreased.

Or, for more precision, the exact formula is:

$$m_c = \frac{3.2 - \log_{10} [ 10^{0.4(8-M_a)} + 10^{0.4(8-M_b)} ]}{.4}$$

where:

$m_c$  = the combined magnitude  
 $m_b$  = the magnitude of star A  
 $m_a$  = the magnitude of star B

Phil Cizdziel

\*\*\*

Thomas L. Dessert

Thomas L. Dessert was born and educated in Buffalo, graduating from School 66 and Hutchinson Technical High School. After attending the University of Buffalo for one year, he left to join the Air Force (1961-65). His basic missile training was at Vandenberg Air Force Base in California where he was stationed for two years before being assigned to the Intercontinental Ballistic Missile launching crew at the missile silo in the middle of Nebraska. He served here for two years as electronic trouble shooter on the Atlas Missile System. Tom experienced a great deal of pressure as a young man in his early twenties working with this "doomsday machine".

It was during Tom's basic training that he met Martha Jo Fay, whom he married a few years later. After leaving the service, Tom and Marty lived in Springville where Tom's father ran a TV repair, sales and service

store. Tom worked in the store for one year. His father also had a family owned sand business in Buffalo, known as Founders Supplies, so Tom left Springville to settle into the sand business. Many members of the family from grandfather, father, uncles and cousins have been a part of the business. Now in the third generation, it is in the hands of Tom and his cousin. Several hundreds of thousands of tons of sand go from their company throughout the state, Pennsylvania and Canada by truck and railroad. The Chevy-Tonawanda plant uses 100,000 tons a year for metal castings for engine blocks.

Tom first became interested in astronomy when he was in his mid-teens. He read a great deal of science fiction about space, which led to the purchase of an Edmund 3" Reflector with which he viewed the sky from his home in the North Park section of Buffalo.

After Tom and Marty were married, they went on several camping trips, two of which took them to Mammoth Cave in Kentucky and the Luray Caverns in Virginia. Preceding one of their camping junkets which would take them to Golden Beach State Park at Old Forge in the Adirondacks, Tom decided to buy a new telescope to take on the trip. He purchased a 4.5" Tasco. The sky was beautiful at Old Forge, and Tom set up his new telescope on the camping grounds, only to find that there were such things as setting circles with which to contend. He asked the campers if anyone knew how to use a telescope, but this proved to be futile. On arriving home, Tom contacted Ernst Both, who provided him with the necessary information.

In November of 1970, Tom attended his first B.A.A. meeting. Mr. Both was the speaker of the evening, and his talk on galaxies further whet Tom's appetite for astronomy. He joined the B.A.A. in February of 1971.

Tom went to his first star party at Stoklosas on West Hill in Boston where he met John Riggs, a member at that time. He and John became very close friends, and John became his teacher. They had long discussions on how to use the telescope, find deep-sky objects, and analyze what was found. Tom also learned that a tape recorder was a useful, quick and simple way of keeping a record of his observations.

It wasn't long before John decided that Tom should have a 10" Newtonian, so Tom inquired about telescopes from various companies and chose the Dynascope to be his instrument. When the telescope was ready, Tom and John drove to the Criterion Manufacturing Company in Hartford, Conn., to pick it up. Tom found that he was \$200 short on his purchase, but the company trusted him to pay it later. On arriving home, Tom discovered that the new bills for his telescope were stuck together against the side of the dresser drawer. The next problem was with the trunk of Tom's Oldsmobile which was  $3/4$  of an inch too short for the telescope. They finally managed to squeeze the tube between the front bench split-back seat, and journey on toward home, only to run into a blinding blizzard starting about 40 miles outside of Buffalo.

By the time Tom had had his new telescope two weeks, he had taken it completely apart and found himself appalled by the flimsiness of its



structure. He set about modifying his scope by rebuilding the clutch, installing new gears and an off-axis telescope for taking pictures. It was in March of 1971 that he, with John's help, took his first picture. With John's 3" refractor as a guidescope, he took a three minute exposure of M27, which turned out beautifully, without any trails.

Tom always had been fearful of photographic chemicals, but John convinced him that anyone could use them, so Tom bought an old enlarger and converted the laundry room into a darkroom at his home in Cheektowaga. He started to take astrophotography seriously, and decided that the off-axis telescope was not satisfactory as it did not have a high enough magnification. He set about working on a better guidance system. He purchased a 4.5" refractor from Jaegers, and Bob Mayer assembled it, converted the focuser over and mounted it on huge telescope finder rings.

Tom has photographed all but two of the Messier objects and all of the planets, and has been very successful with lunar photography. He has taken about 1000 pictures of different deep-sky objects with his telescope and about 50 with the B.A.A. telescope at Beaver Meadow.

When Ernst Both first discussed Beaver Meadow as a possible site for the Newstead 12.5" telescope, Tom became interested, and he, along with several B.A.A. members, served on a committee to help raise funds for the observatory. After three years of fund-raising, Tom undertook the responsibility for supervising the construction of the building. In March 1974, he received permission from the board to order the materials. Tom and John selected the site, and Tom hired Ken Biggie, our Vice President, and Ken's brother, who had worked for a construction company, to do the work. The Biggie brothers lived and worked at Beaver Meadow for two weeks building the observatory, after which a number of members helped with wiring, paneling and carpeting. The building was ready by February 1975.

Bob Mayer rebuilt the telescope system, patterning it after Tom's telescope. Tom was appointed the first director of the Beaver Meadow observatory, and has continued in that post, where he thoroughly enjoys the look of awe on the faces of observers as he takes them on a tour of the Beaver Meadow sky. Tom's photography classes at the observatory have been well attended and the B.A.A. has received several new members as a result of these classes.

Tom is very hopeful that the day will come when he will have a comet named for him. After photographing M88 last March, he did not notice an extra object among the cluster of galaxies until June, when he was checking another photo taken of the same area. By comparing the two photos he discovered that there was an object in the March picture that did not appear in the one in June. Could that have turned out to be Comet Dessert, if discovered in time?

Mr. Both has, at the museum, a catalog of 30,000 galaxies covering the area from 0° to Polaris. Of this number, Tom feels that he can photograph around 15,000 of the objects to 16th magnitude, and he will keep working toward this goal.

Tom has sent 30 astrophotos to Astronomy magazine, 40 to Sky and Telescope and 24 to Astrograph, an astrophotography magazine. He hopes that these will be accepted for publication in upcoming issues.

In the future, Tom plans to continue to update his equipment and darkroom. Bob Mayer recently built a huge Porter-Mayer mount for Tom's telescope, and as of this summer, Tom has automatic tracking equipment. He is now experimenting with long exposures in red and blue light. He says that he will never go back to observational astronomy after seeing all that astrophotography reveals. He has at his disposal, as do any members of the B.A.A., some 2000 feet of spectroscopic film 103, which was donated by Walter Semerau. This film is stored in Tom's freezer.

Tom has been instrumental in arranging for two B.A.A. exhibits at Erie Community College South and one at the museum, consisting of astrophotography, paintings, sketches and telescopes.

Marty and their sons, Bob, age 12, and Donny, age 13, have been very involved in all of the astronomy projects. Marty, who is the hostess at the Beaver Meadow Observatory, is there with Tom every Saturday night, weather permitting, serving coffee to observers and keeping the observatory clean. She is also our ever jolly refreshment hostess at our regular monthly meetings. Son, Bob, is building an off-axis Newtonian, and Donny is busy in the darkroom developing pictures, often helping his father when time is pressing.

The Desserts moved into a beautiful new home in Marilla in 1974, and Marty's fine Crewel work can be seen throughout the house. Marty also raises lovely, colorful African violets. With the energy crisis, the family logs and cuts the wood from a nearby housing development, and burns the wood in the fireplace. With a heat exchanger, the heat in the fireplace goes to the furnace, and thence to the whole house. Gas is used as a backup when room temperatures drop below 65°.

Tom has been a dynamic force in the B.A.A., and has served as Vice President, part of a term as Treasurer, and as a Board of Directors' member for a number of years. He was elected to the College of Fellows of the B.A.A. in 1977. His boundless energy in astronomical pursuits and his willingness to help those who would like to further their interest in astrophotography, is worthy of commendation.

Edith L. Geiger

NOVEMBER MEETING: 8 PM, November 10, 1978, at Buffalo Museum of  
Science on Humboldt Parkway.  
Speaker: Ernst Both, subject: Mars

DECEMBER MEETING: 8 PM, December 8, 1978, at New Science Building  
Auditorium of the State University College at  
Buffalo (Buffalo State).  
Annual BAA "Christmas Party"

HAVE YOU PAID YOUR DUES FOR '78 - '79 ??

The Buffalo Astronomical Ass'n., Inc.  
c/o Lawrence L. Carlino, Editor  
The Spectrum  
453 Niagara Falls Blvd.  
Buffalo, New York 14226

FIRST CLASS