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

the Spectrum

Editor:
Lawrence M. Carlino

MARCH - APRIL 1978

MARCH MEETING: The March 10, 1978 meeting of the BAA will be held beginning at 8:00 PM in the New Science Building Auditorium of the State University College at Buffalo (Buffalo State). (PLEASE NOTE!!! Due to construction, the Grant Street entrance to the new Science Building at Buffalo State is temporarily obstructed. Use Elmwood Street entrance on the opposite side of the building. Parking is available there.) Featured speaker at the meeting will be Richard Karlson of Pittsford, New York, whose topic is "Stonehenge, a Critique of Recent Theories". This promises to be a fascinating presentation in the realm of astro-sociological fact and fiction.

APRIL MEETING: The BAA's April 14, 1978 meeting will commence at 8:00 PM, again at the S.U.C.B. New Science Building Auditorium. Dr Gunter Wessel of Fayetteville, New York, will speak on "Stellar Evolution", a complex and intriguing topic on which Dr. Wessel expounds in terms understandable to those without detailed knowledge of math and physics.

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FROM THE EDITOR:

As Spectrum editor, I've been very pleased with the quality and volume of material submitted for publication by various BAA members and the many kind comments received regarding the past few issues. I would be very much remiss in not acknowledging the essential contributions of our informal Spectrum "staff". The typing of Elaine Deazley and Eileen Rupp has done much to polish my own ludicrous one-finger attempts. Marty and Tom Dessert have been an efficient liaison with the printer and have also handled distribution and mailing of Spectrum copies. Consistent and enthusiastic contributions from Edith Geiger, Darwin Christy, Rowland Rupp and many others too numerous to mention have been instrumental in keeping our newsletter's entertainment and informational value at a high level. I extend my sincere thanks to those who have been such a great help, and I solicit the contributions of those who have not yet had the opportunity to submit material.

L.C.

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NEWS NOTES:

Dr. Fred Price will address the Hamilton Chapter of the Royal Astronomical Society of Canada on May 4, 1978 on the subject of Jupiter.

REminder: The Edward Lindberg Telescope Competition is fast approaching. The final judging will take place at the May Instrument Section meeting at the Museum of Science. First prize awards of $25, $50, and $75 in the four, six and eight-inch categories (respectively) should make entering a worthwhile endeavor. Trophies will be presented to the second and third place winners. Telescopes are to be evaluated on the basis of construction,

Performance, and economy of materials utilized. Results of the contest will be announced at the June '78 general meeting.

We wish to express our appreciation to the Buffalo Society of Natural Sciences for the privilege of displaying the Buffalo Astronomical Association's photographic exhibit at the museum during the month of February.

We are grateful to the members who gave of their time to help set-up and watch over the exhibit. The following were responsible for hanging the exhibit: Irving Goetz, Charles and Nancy Miess, Tom and Marty Dessert, Carroll and Edith Geiger.

The following members were on duty on one or more days during the exhibit: Tom Broad, Darwin and Ruth Christy, Philip Cizdziel, Gertrude and Bruce Cook, Bob Dietrich, Carroll and Edith Geiger, Irving and Esther Goetz, Richard Janas, Steve Jaworski, Carl Kalweit, Beverly Kiefer, James Lehmann, Bob Mayer, Carl Milazzo, Tom Pasek, Margaret Rabe, Irene Rupp, Richard Schultz, Pat Schneider and Lillian Von Gerichten.

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SKY TEST - The Criterion Dynascope RV-6

The RV-6 Dynascope is an extremely portable 6-inch Newtonian reflector. At $265, it is very reasonably priced and therefore an excellent choice for the novice astronomer.

The Dynascope is equatorially mounted on a steel pier with aluminum legs. Despite the impression given in magazine advertisements, the legs have pods and not the more desirable leveling screws. The moung itself is equipped with a clock drive that tracks accurately, but its stability is poor, as a simple focus adjustment may cause tremors lasting five seconds or more. The RV-6 is at the mercy of the wind, and on windy days something to shield the 'scope is absolutely necessary. This is perhaps to be expected of a telescope whose total mount and pier weight is only 35 pounds.

In contrast to its mount, the RV-6 has excellent optics. Most cloud belts on Jupiter are visible as are occasional festoons. The main equatorial belts of Saturn are also quite discernible. Resolving power is excellent; I have easily separated both Eta and Lambda Orionis.

The tube assembly itself is 50 inches long and weighs about ten pounds. The primary mirror is a six inch, F/8 paraboloid accurate to 1/8 wave, a claim proven by the 'scope's good optical performance. In cold weather, the RV-6 takes 20 to 30 minutes to "cool down". Just set it up before dinner and be ready to observe after the meal.

Overall, the RV-6 Dynascope is an exceptional value. It has a rather poor mount but really excellent optics. Obviously, the $265 price must be taken into consideration. I feel the RV-6 is a good value and a fine 'scope for "getting acquainted with the stars".

David George

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FOR SALE

Dynamax 8 telescope. Has clock drive, 8 eyepieces, tripod, wooden case. Mint condition. $1,000. Call 892-0716.

WANTED

More astronomical items to sell, buy, or trade. Free advertising - this is your newsletter. Call Larry Carlino, 832-0491.

ASTRO-MATH

Question: What would be the apparent magnitude of a typical globular cluster seen around the Andromeda galaxy (M31) on a standard photograph?

Answer: A well-known astronomical formula we shall use is:

$$\text{(Magnitude difference)} = 5 \times \log \text{(Distance ratio)}$$

or

$$MD = 5 \log (DR)$$

The distance ratio would be how many times farther away M13 would have to be moved to be at the distance of M31. This is easily calculated by:

$$DR = \frac{r_{31}}{r_{13}} = \frac{2,100,000 \text{ ly}}{20,950.6 \text{ ly}} = 102.19$$

Therefore, to find the magnitude difference, we use the above formula.

$$MD = 5 \log 102.19$$

$$\text{Magnitude difference} = 10.05$$

So, the magnitude of M13 at the distance of M31 would be:

$$m_{13} + 10.05 = 6.43 + 10.05 = \underline{16.48}$$

Therefore, assuming M13 is a typical globular cluster, the globular clusters around M31 should appear to be of magnitude $16\frac{1}{2}$. That computed magnitude agrees well with the data found in standard astronomy texts.

Phil Cizdiel

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Constellations of the Ancients

Omitted and written out of the star formations in 1843 was the constellation of "Antinous". It lies in the Milky Way, directly south from the star Altair, the head of the figure being Eta and Rho of Aquila. The rest of the figure was outlined by the stars Theta, Iota, Kappa, Lambda, Nu and Delta.

This constellation was introduced into the sky in 132 A.D. by Emperor Hadrian, in honor of his Bithynian favorite, whose soul his courtiers had shown him shining in its lucida after the youth's self-sacrifice by drowning in the Nile from his belief that his master's life might thus be prolonged. This was because the oracle at Beza had asserted that only by the death of that object which the emperor most loved could great danger to the latter be averted. The new asterism, however, was little known among early astronomers; and although Ptolemy alluded to it, he did so but slightingly in calling half a dozen of the 'unformed' of Aquila 'to do of Antinous'.

After his day it seems unnoticed till Mercator put it on his celestial globe of 1551 with six components; Bayer following him in illustrating it with Aquila, although with no distinct list of its stars. Tycho also utilized it; but it first separately appeared in print on a plate in Kepler's Stella Nova of 1606, and in his Rudolphine Tables. Longomontanus (Christian Longberg of Denmark) had it in his Astronomica Danica of 1640; Hevelius included it in the Prodromus, but added a Box and Arrow, the ancient Sagitta; Flamsteed mentioned it in the Historia Coelestis as "Aquila Antinous, Aquila vel Antinous, and Aquila cum Antinoo"; and the Hungarian Jesuit, Abbe Maximillian Hell, had it in constant use in his Ephemerides Astronomicae of 1769 and 1770. Bode also distinctly catalogued and illustrated it, but Argelander omitted its title from his Uranometria

Nova of 1843, although he showed it as a part of Aquila. It is now hardly recognized, its stars being included with those of the latter constellation.

"The second is Cerberus---
To Cerberus too a place is given---
His home of old was far from heaven."
quoted in Smyth's Bedford Catalogue

Cerberus is the Italian Cerbero, Secchi associating it with Ramo, the branch, and the French combining both in the title "Rameau et Cerbere".

This sub-constellation, a former adjunct of Hercules, but now entirely disregarded by astronomers, is supposed to have originated with Hevelius in his Firmamentum Sobiescianum, although Flammarion asserts that it was on the sphere of Eudoxos with the Branch. The 4th to 5th magnitude stars that Hevelius assigned to it are Flamsteed's 93, 95, 96 and 109, lying half-way between the head of Hercules and the head of the Swan.

The royal poet James I designated the infernal Cerberus as "the three-headed porter of hell", and the heavenly one has been so figured, although with serpents' darting tongues. The abode and task of the creature would seem to render very inappropriate his transfer to the sky, so that it probably was only made for the purpose of mythological completeness, as the death of this watch-dog of Hades fittingly rounded out the circle of Hercules' twelve labors.

Others have said that the figure typified the serpent destroyed by the Hero while it was infesting the country around Taenarum, the modern Cape Matapan.

Some of the stars of Cerberus were known in China as "TOO SZE", the Butcher's Shop; and others as "MEEN TOO", a Cloth Measure.

Darwin Christy

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BAA PROFILE

Walter W. Whyman

Walter W. Whyman has been an outstanding member of the B.A.A. for many years. He is a quiet, humble man of consummate skill, a man of great ability.

Born in East Pembroke, NY, Walter was one of seven children of Walter and Louisa Whyman who had come to this country from London, England, in 1906. When Walter was five years old, the family moved to Batavia, NY, the town which would become his life-long home, where he would be educated, married, raise a family and follow a career.

After graduation from Batavia High School, Walter went to work in a shoe factory. After nine months he left, due to a bout with pneumonia. Needing fresh air and exercise to bring him back to good health, he spent five months working on the railroad (his father was a railroad man).

Walter's next employer was the American Telephone and Telegraph Company, for whom he worked from November 1929 until his retirement in August 1975, a period of almost 46 years. His work for them was primarily testing and maintenance of long-distance telephone lines and equipment.

In September of 1933, Walter married Gertrude Courtney, a young lady from his home town, and they were blessed with twelve children. Ten now survive. Walt and Gertrude are proud grandparents of 20 grandchildren, and they also have two great grandchildren.

In 1946, Walt obtained a commercial first class radio-telephone license under which he maintained the telephone company's microwave equipment between Buffalo and Syracuse until 1959. He maintained mobile and base radio-telephone equipment for fire departments, hospitals, sheriffs, contractors, etc. until 1964, working mainly on Saturdays for a Batavia firm that covered this work in three counties. He has CB's in both of his cars, but has never transmitted on them. If he ever decides to do so, he thinks "Arcturus" would be a fitting astronomical "handle".

Walt has always been an avid reader, extending his knowledge in various areas. He has had a life-long interest in science, especially in astronomy. He built his 6" Newtonian reflector in 1948 after seeing one that had been built by an AT&T acquaintance in Syracuse.

In 1951, while he was working with the telephone company in Rochester, a printer learned of Walt's interest in astronomy and passed this information on to Ralph Dakin of the Astronomy Section, Rochester Academy of Science. Ralph invited Walt to attend their meetings. Walt joined the group in 1951, and later served as their secretary-treasurer from 1958-1961, as vice-chairman 1961-1963, and as secretary 1973-1974. Walt also served briefly as secretary to the NE Region of the Astronomical League in 1961.

It was in late 1952 that Walter learned of the B.A.A., and after attending a few meetings, joined our association where he has continued his membership for 25 years. Walt was a member of the Board of Directors from 1967-1971, and is at present serving another term.

In 1956, Rochester organized a Moonwatch team to look for artificial earth satellites, and Walter became a charter member of this group. Walt met Dr. J. Allen Hynek, well-known astronomer, when Dr. Hynek came to instruct its members. As this group used 50mm 'scopes in a "meridian fence", all the early satellites were missed and interest in the project lessened. Learning that larger instruments had been found better suited for the search, Walt acquired surplus optics to assemble a 4" refractor. The results obtained by teams with larger instruments convinced Smithsonian Astrophysical Observatory, which sponsored Moonwatch, that "meridian fences" should be discarded in favor of individual observers at scattered sites. During the period from May 1960 to May 1969, Walter submitted over 450 observations covering 70 or more individual objects. In recognition of this accomplishment he was elected a Fellow of the Rochester Academy of Science in May 1968. His successful project was finally brought to a standstill as high intensity lighting encroached around his site.

In 1963, the Lockport Astronomical Society asked Walt to assist them in forming a Moonwatch team. The team never became a reality, but as a result Walter became a member of the Lockport Astronomical Society and has continued to be a member of this group.

In December 1969, the B.A.A. along with the Kellogg Observatory held a photographic exhibit at the museum in which Walter exhibited his color photo of comet Ikeya-Seki taken in November of 1965. During the exhibit several photos disappeared, one of which was Walter's. His comment on this happening appeared in the March 1970 Spectrum: "First, my regrets on the loss of a part of the astronomical exhibit....as my daughter, an amateur artist, said when I expressed the hope that nobody made off with any of her pictures while on display, 'If anybody stole one of my paintings, I'd feel flattered by their display of good judgment' - so, that's the way I'm going to look at it."

In 1970, Walter was elected to the College of Fellows of the B.A.A. "for his work with amateur associations in this area, for his long and distinguished membership in the B.A.A. and his service as a member of the Board of Directors, for his work in satellite observations, and for his often novel, yet simple designs in portable instrumentation." Walt has written articles for the Spectrum, and has been a speaker at our meetings and those of the Rochester and Lockport astronomical societies.

Along with Walt's membership in area astronomical groups, he and his wife, Gertrude, have been members of the Holland Purchase Historical Society in Batavia for the last five years, and he is presently on the Board of Directors.

Walt and his family enjoy traveling and camping though they were unable to pursue this activity when the children were very young. They started tent camping with the family when they went to Stellafane in 1964. Walt has been to seven of the Stellafane get-togethers. Starting in 1967, the family traveled in search of covered bridges, and to date, Walter has over 1150 slides in his color slide file of these "timbered tunnels". They include 484 full sized covered wooden truss bridges on highways, railroads and private roads, and 52 privately owned footbridges, scattered through 21 states and two provinces, from New Brunswick and Ontario in the north, to Georgia and Alabama in the south. In July of 1967, Walt visited Leslie C. Peltier, famed discoverer of comets, at Delphos, Ohio. In 1972 Walt, Gertrude, and three of the children went to Prince Edward Island where they viewed the total eclipse of the sun. Walt had seen, in 1970, a total solar eclipse from Williamston, N.C. in the company of John Miller from the Lockport group and several from Rochester who used Williamston as a base. The Whymans have been to the far west on three trips, two of which took them to the Pacific and one to Las Vegas, visiting children and grandchildren along the way.

Walter enjoys listening to good music, mostly the classics and semi-classics, but also some old time popular music. He listens to FM radio for the good music aired on some of the stations. His love of music has passed on to his children, for all of them have played at least one instrument. The Whyman's two youngest sons are now music majors in college, and two of the children are or have been members of symphony orchestras.

Walt's creative mind has produced some very interesting and useful objects. Through the years he accumulated a quantity of "retired" telephone equipment which he has used in remarkable ways, among which are: an electronic egg timer for Gertrude, a once every hour synchronizer for a spring wound 60 day pendulum clock, together with indicators in the cellar to warn when it has nearly run down, or, with an audible alarm if it stops, and a very useful intercom system throughout the house. He developed a means for indicating, at his home, the operation of a sump pump at a tenant house some distance away - with a light while operating, a clock to tell cumulative running time, a counter, and an alarm if it runs continuously - from all of which he can compute average intervals between operations, and average running time (usually 14 seconds), all while simultaneously indicating the temperature above their furnace, and all using one pair of wires between the two houses. Then there is an electronic room thermostat which keeps the temperature constant during the day (within 0.2 degrees) with a device to reduce night temperature, resulting in substantial fuel saving. Walt has also made an electronic thermometer

consisting of tubes, relays, a motor, a gear drive, a circular scale with degree divisions 3/8" apart on a 24" square panel, with a thermistor outdoors as a sensing element. Then there is an ingenious "alarm calendar" on which Walt pre-sets dates of meetings or appointments up to six weeks in advance, and as each one comes due, the family rises in the morning to find a light operating to remind them that something important is to be done that day. These are but a few devices that have come about because of Walt's exceptional creative ability.

We are very happy that Walter chose to become a member of the B.A.A. His membership in the various astronomical societies has given many people the pleasure of knowing a very fine, pleasant, kind, sincere, helpful, and very skilled gentlemen.

Edith L. Geiger

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METEOR SHOWERS FOR MARCH AND APRIL

In March there are three showers: Zeta Bootids, Corona Australids, and Virginids. The Zeta Bootids appear on the morning of the 11th. Although they do have a three day period, the maximum is on that morning. The radiant in Bootes is 14h 32m right ascension and 12 degrees north declination. It is an irregular shower with about eight seen hourly at the height of any shower. The maximum magnitude is 4.5, making it a hard shower to resolve from my vantage point.

On March 16th, the Corona Australids can be seen coming in from the south. This is an annual shower lasting about four days. The average magnitude of these is about 4.0 and they are short and fast in trajectory. Maybe five can be seen hourly, but it is worth the try to find them. The Virginids which reaches maximum on the 26th starts on the 20th, and lasts until about the 31st. This shower is known as a stream. That is, they are not grouped closely together, but are stretched out into a long stream of meteors. They are almost in the plane of the Earth too, which is why we see them for such a long period. One should see more than five hourly with a magnitude of about 4.5 to 5.0. They are rather rapid and short.

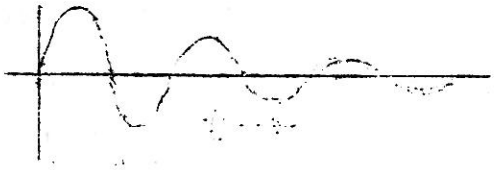
These are not to be confused with Alpha Virginids, which will appear at maximum on the 9th of April. This is also a stream with a duration of 20 days. Because they will be appearing at the same time as the Virginids of March 26th, it will take a good eye and careful record-keeping to distinguish between them. The difference in radiant is 12h 40m RA, 0 degrees for the Virginids and 14h 00m, -10 degrees for the Alpha Virginids. The Alpha Virginids have about the same characteristics as the Virginids so you can use that as a guide line in observing.

On April 21st the famous Lyrids will put in their appearance. This is an annual shower with swift white streaks of 3rd magnitude. About 12 to 15 should be seen hourly. This is related to Halley's comet 1861I.

May 4th reveals the Eta Aquarids. This is an annual shower related to Halley's comet 1910 II. About 20 third magnitude meteors should be seen hourly. The trajectory gives us swift, very long paths of light-blue light.

The Quadrantids of January 3rd did not prove to be spectacular this year. For one thing (at the Honey-House observatory), we encountered clouds for all but about an hour. I did not see any, but because they do radiate

at about 27 megahertz, I was able to hear about seven as they ionized in the upper atmosphere. They sound a little like hailstones hitting on a tin roof. To see them on an oscilloscope, they would appear as a damped oscillation as pictured.



Darwin Christy

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SPY AND TELL

Bob Mayer is always so busy helping others that he never has time for himself. At last, he is going to take a few hours here and there and make a new mount for his telescope. At present he is working on the setting circles.

Elaine Deazley is head of the Buffalo Philharmonic Drive in the Marilla-Wales-Cowlesville area.

The Gehrkes rescued a rather stunned opossum from the highway, fed it and returned it to the outdoors near their home in Derby.

Joe Provato had a nasty bout with the flu - one of those Texas, Hong-Kong, Victoria A, or etc., etc., etc.bugs.

In CB radio monitoring, Channel 10, Orrin Christy's "handle" is "The Spirit", and Darwin's is "The Rogue".

Mike Korale will have eye surgery on March 5.

By now, most of you have heard of the "hot time in the old town" of Marilla in the wee hours of Feb. 5 when fire broke out in the Dessert's home because of a faulty fireplace. It did, however, give Marty an excuse to repaint the family room which she had wanted to do anyway.

Tom Pasek purchased a Cave 12.5, f5 which arrived in January. His observatory on Cable St., in Buffalo, will be called "The Surveyor" and he along with his brother, James, will specialize in solar, lunar and planetary photography.

Darwin Christy has a new 27mm, f2.8 lens to be attached to his camera for photographing constellations, etc.

Edith L. Geiger

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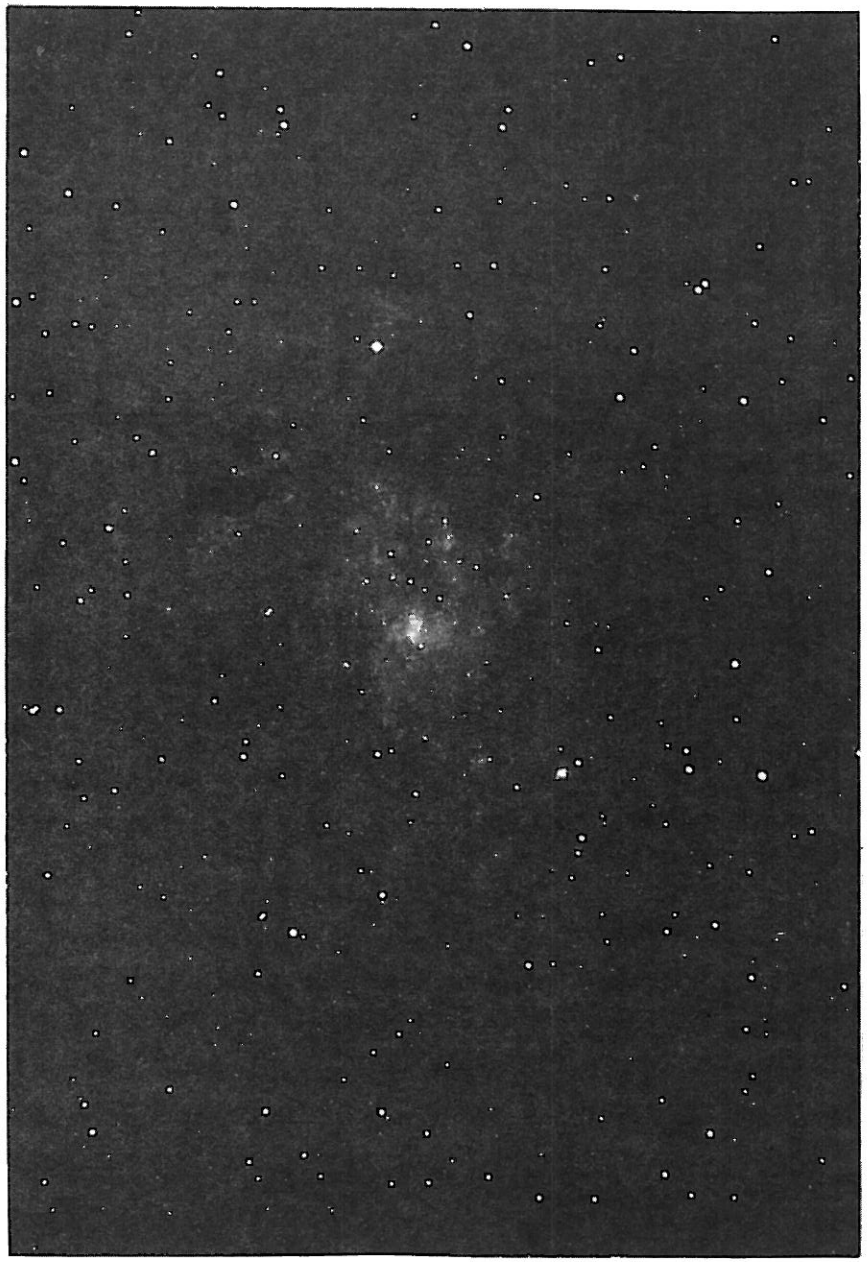
In the next issue ... Darwin Christy reports on "The Skies from Honey-House"

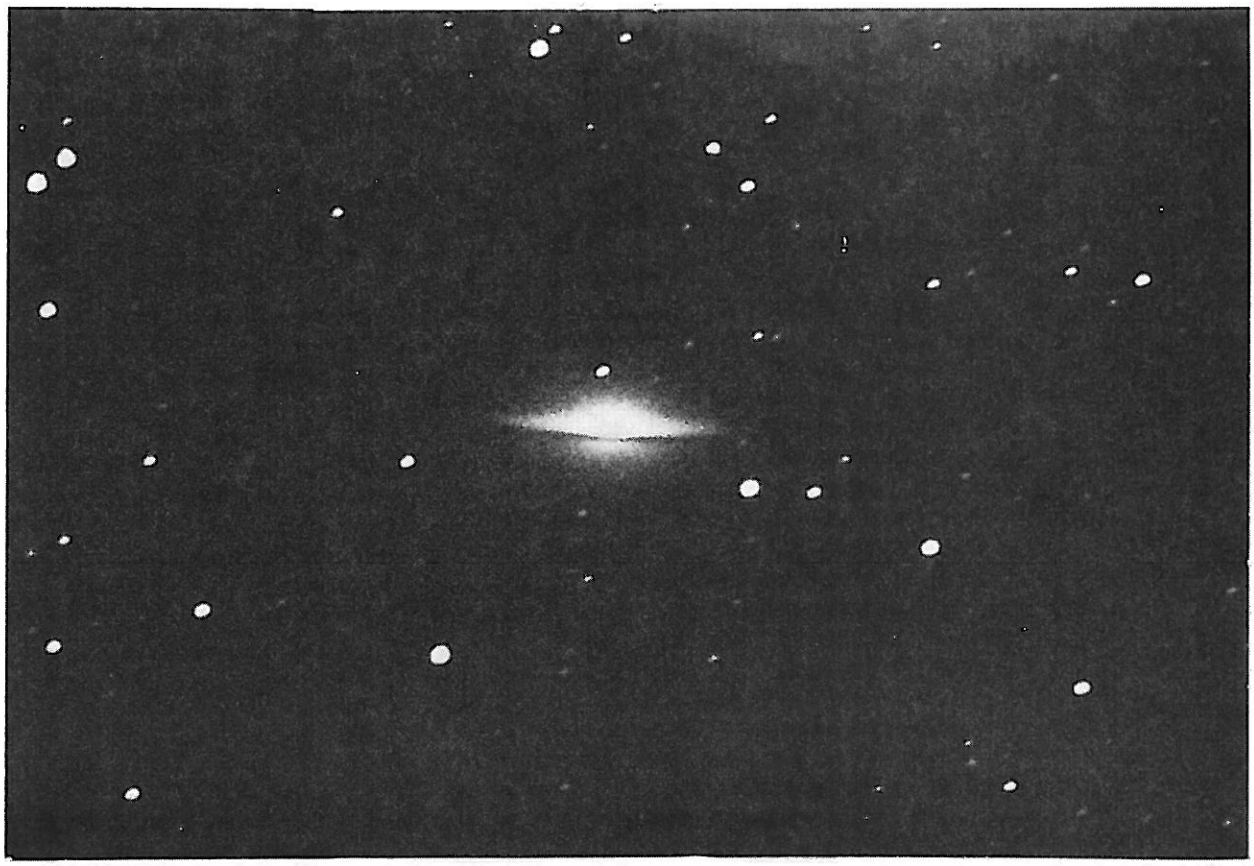
... The Cepheid Variables

... Sky Test: The Cave 12½-inch Newtonian



THE GREAT SPIRAL GALAXY M33 IN TRIANGULUM
by Charles Miess. 20 min. on 103aF film.

THE HORSEHEAD NEBULA IC 434 IN ORION
by T. L. Dessert. 40 min. on 103aF film.



THE SOMBRERO GALAXY IN VIRGO by William Hewitt
25 min. exposure on 103aF film.

The Buffalo Astronomical Association, Inc.
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FIRST CLASS