

**HISTORY
OF THE
BUFFALO ASTRONOMICAL
ASSOCIATION, INC.
1947-1993**

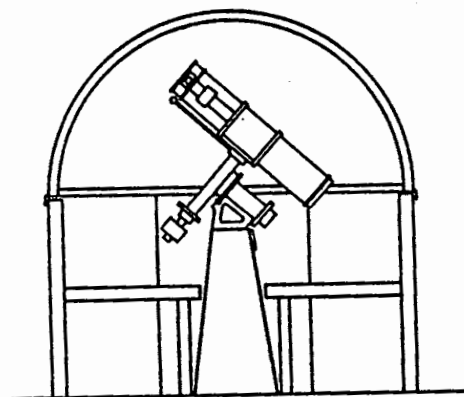


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PREFACE

This history of the Buffalo Astronomical Association is a preliminary effort designed to preserve information obtained from club records and personal recollections in the event that these resources should be unavailable when a final history is written. For the years 1947 through 1980 the material was extracted from an earlier BAA history written for a similar purpose. Active contributors to this initial work were: Edward Lindberg, Robert Mayer, Rowland Rupp and Walter Whyman. James Dow, one of the founders of the post-World War II club contributed significantly by discussing early activities with the compilers. The work was hastily written and was left, basically unedited, in the BAA's archives until 1992. The unedited preface of the original history, "History of BAA, Inc., 1947-1967", follows. It was unsigned, but the author is believed to be Walter Whyman. The ending date, 1967, refers to the period of BAA history submitted by Whyman; the complete original history extends to approximately 1980.

Additional material appears in this newer edition. A brief description of the activities of precursor astronomical societies that existed in the Buffalo area before the war was extracted from an article, "Astronomy in Buffalo", written by Lindberg for the February 1956 issue of *Hobbies* magazine. This material has also been updated to summarize activities from 1980 to early 1993. A fuller description of these later events may be in order for a final history.

The original work has been partly edited and reorganized for easier reading. Material dealing with special sections, newsletters, observatories and officers, etc., has been put in four appendices. The appendices provide a supplement for those interested in details of particular BAA projects.

In addition to its printed form, this history is available on a 3½-inch floppy disk in WordPerfect 5.1/5.2 format. It can be run on any IBM-compatible computer. Thanks are in order to Irene M. Rupp, who typed and edited the manuscript, and who provided many valuable suggestions along the way.

Rowland A. Rupp

Snyder, New York
December 1993

HISTORY OF BAA, INC., 1947-1967

The attached twenty-two sheets relate a partial history of the group of amateur astronomers known initially (1947) as "Amateur Telescope Makers and Observers of Buffalo" and presently (1979) as "Buffalo Astronomical Association, Inc.," as gleaned from written minutes of periodic meetings of that group.

In the interest of brevity (and to avoid copying the minutes verbatim), routine business items such as reading of minutes of previous meetings and treasurer's reports, and introduction of speakers by the presiding officer, or comments by the secretary on the quality of the talks, have been omitted in favor of names of speakers and subjects of their talks, and accomplishments of the organization or its individual members.

Since these notes are gleanings from only minutes of periodic meetings, much of BAA's history does not appear in these notes. The active work on construction of two observatories and a club telescope is only occasionally mentioned in the minutes; and to incorporate these projects in BAA's annals will require research into other records and interviews of many people who took active part in the projects omitted. Much of BAA's history, including decisions that determined the future direction of BAA, is covered in minutes of the meetings of the board of directors, very little of which is available to this historian, and therefore not included in these notes.

Since the attached sheets were only intended as preliminary notes for BAA's history, they were typed on scrap paper with the intention of transcribing them later into more permanent form on better quality stock. When this is done, it is anticipated that spaces will be left between successive meetings, and the notes covering meetings for one season (September through June) will occupy two sheets (more if needed), for a total of forty-two or more sheets. A condensation or summary of BAA's activities for each season may also be incorporated into the "second draft" of the history.

Items suggested for incorporation in a later draft would be the number of members during each year (to indicate growth), and the number in attendance at each meeting (to indicate interest), as well as the state of the treasury on occasion (to reflect our financial condition), and the amount of dues required for membership. A listing of the club's officers for the various years could also be included; most of this information is only infrequently included in minutes, but is undoubtedly available from other sources.

1980

Walter Whyman
(See Preface)

STATEMENT OF PURPOSE

The Buffalo Astronomical Association, Inc., traces its beginnings to the early 1930s, when a small but eager group of amateurs formed the "Buffalo Astronomical Society". In 1934 the "Buffalo Amateur Telescope Makers" was born from the original group and continued to flourish while the parent club waned. After many years of happy and constructive association, through the medium of instrument making, the interest of both old and new members alike began to widen into other areas of astronomical inquiry, such as observation and theory. In keeping with this new spirit, and in hopes of encouraging a more diverse membership, the organization decided to change its name. Thus, the "Buffalo Astronomical Association" was born. After many years of successful operation, the group, in 1960, sought and received corporate status under the laws of the State of New York. In 1975 the association was recognized as a non-profit corporation entitled to tax privileges.*

The objectives and goals of our association are both numerous and varied.

Of prime importance is the encouragement and promotion of amateur astronomy as a useful adjunct to the field of professional astronomy. We subscribe to the goals of the amateur astronomer everywhere: To explore the universe to its limits with our minds and instruments in hopes of establishing our own place in the scheme of creation.

In common with other amateurs, we recognize and appreciate the beauty and wonder of the universe for its own sake, apart from any other utilitarian considerations.

We, as an association, will endeavor to lend our services to any person who feels that he or she can make a contribution to astronomy, and to a better understanding of the universe as a whole.

We encourage continued interest in and exploration of the universe, and serve as a source of pertinent information to the community at large.

In addition to these goals and purposes, the Buffalo Astronomical Association, Inc., recognizes the need for concern for all aspects of our environment. With this in mind, the Association joined with the Buffalo Audubon Society, Inc., to establish an environmental education center. Here the Earth and surrounding universe can be studied together in hopes of teaching that conversation is everyone's concern, and that together we can preserve the world of nature for posterity.

Robert Kartyas

1973

*Sentence added after the original draft.

HISTORY OF THE BUFFALO ASTRONOMICAL ASSOCIATION

1947-1992

INTRODUCTION

The "Amateur Telescope Makers and Observers" (ATMOs) was, in 1947, an organization of about thirty-five persons interested in making and using astronomical telescopes. They met the first and third Wednesday evenings, October through May, in the Roosevelt Room at the Buffalo Museum of Science. The name was changed in October 1952 to "Buffalo Astronomical Association"; the word "Incorporated" was added to that name in 1960.

With the adoption of the new name in 1952, formal meetings were rescheduled to the first Wednesday, reserving the third Wednesday for observing on the Museum roof with the Museum's 5-inch and 8-inch refractors. September was added to the schedule of formal meetings in 1956, and June in 1958, extending the active season to ten formal monthly meetings each year. In 1961 the meeting nights were changed to the second and fourth Fridays of each month, September through June.

BAA members (and their predecessors, the ATMOs) have been a very active group astronomically. A large percentage of members own instruments ranging from simple binoculars to large telescopes, including refractors and reflectors having objectives from two to twenty-six inches in diameter, some portable, some in fixed locations, some alt-azimuth and some equatorially mounted. Many have built their instruments, including grinding, polishing and figuring the optics, designing drive mechanisms, and providing setting circles and camera mounts for long exposure astronomical photography. Several have their own backyard observatories. One in particular, Walter Semerau, built a fully equipped solar observatory, including a spectrograph, spectroheliograph and coronagraph. With this equipment, first located in his back yard and later in his cellar, he has done work comparable to that of some of the world's foremost solar observatories.

For years the club held classes to teach the art of instrument making. Members have attended solar eclipse expeditions at distant locations and have provided speakers and telescopes for public viewing of lunar eclipses and planetary observations. The BAA has assisted Boy Scout and Girl Scout groups in their Merit Badge activities, projecting and explaining astronomical slides when weather was unfavorable for direct observation. Several BAA members have specialized in observing and sketching lunar and planetary surface details. The

BAA has hosted (and members have attended) conventions of the Astronomical League and its Northeast Region; the BAA was the instigator in 1967 of the Niagara Frontier Council of Amateur Astronomical Associations (NFCAAA) which now includes societies throughout western New York and southern Ontario. Between 1958 and 1961 the BAA organized and maintained a team of observers of artificial satellites who participated in the Smithsonian Astrophysical Observatory's Moonwatch program. The club has built two observatories, the first in 1959-65 at Newstead, New York, housing a 12½-inch reflector constructed by its members, and the second in 1975-76 at Beaver Meadow Environmental Center at Java, New York, housing the same instrument completely rebuilt and equipped for long exposure astronomical photography. It is used frequently for public viewing.

Membership has varied from about thirty-five in the ATMO days to over a hundred, with attendance at meetings running from twenty to sixty and more, and averaging about forty. The programs are varied, from commercial astronomical films to talks and demonstrations by either members or guest speakers on such subjects as construction of telescopes and observatories, mirror making, collimation of instruments, clock drives, the physics of color, theories on origin of lunar craters and the formation of the solar system, sunspots and solar prominences, meteors, auroras, variable and exploding stars, light theory, rocket research, the chemical composition of the universe, interstellar gas, the red shift, and quasars, pulsars and black holes, not to mention UFO's.

THE EARLY YEARS

The Buffalo Astronomical Association traces its history back to 1932, when the Amateur Telescope Makers club (ATMs) was formed by fledgling mirror grinders and telescope makers. Charter members were Thaddeus Czerniejewski, George Kreis, Jr., Joseph Schneider, Carl Wanak, William Almendinger, Edward Kennedy, Robert Foltz and Madam Blaauw, a well-known concert pianist.

Meetings were held at Buffalo's Museum of Science, and the programs consisted largely of instruction in telescope making with classes having as many as eighteen in attendance. Between meetings much work was done by the members in their homes, and their work was brought in for testing and expert criticism by more knowledgeable instrument makers.

The Amateur Telescope Makers grew by leaps and bounds, numbering about seventy members by 1934. On summer evenings star parties were held at nearby parks, and members gathered to compare their finished telescopes and get ideas for solving optical and mechanical problems.

In 1933 another group, led by George A. Davis, Jr., formed the Buffalo Astronomical Society. Other charter members included Harold Hollenstein and Dr. Merrill, then the director of the Museum's Kellogg Observatory. This group, unlike the ATMs, was less concerned with telescope making, but instead concentrated more on observation and study of astronomical objects (stars, comets and nebulae).

Both Museum groups disbanded during World War II years, when many of the members entered the armed services or worked at the Spencer Lens plant. In 1946 the Telescope Makers reorganized, calling itself the Amateur Telescope Makers and Observers of Buffalo. Rudolph Buecking, one of the pioneer members of the earlier group, James McArtney and James Dow sparked the new club. McArtney became the club's president and its most enthusiastic worker. Dow, from East Aurora, was then in his early teens. The new club grew quickly, adding many new members; Richard Nigro, Raymond Missert, Eugene Wallmeyer, and William Oberem were among them. Telescope making classes were resumed as a club project, and all funds received were donated to the club treasury.

During the period from 1946 through 1952, the organization now known as "Buffalo Astronomical Association, Incorporated" had the name "Amateur Telescope Makers and Observers". Meetings were held on the first and third Wednesdays, October through May, in the Roosevelt Room at the Buffalo Museum of Science, with membership in 1947 (the first year for which minutes are available) at thirty-five persons. In October of 1947 the group voted to make the Curator of Astronomy at the Museum, George Davis, an honorary life member of ATMOs. The "Moon Illusion", which causes the moon's diameter to appear

greater near the horizon than when overhead, was investigated in April 1947 by Oberem and Dow and in February 1948 by Missert and Nigro in connection with a projected paper on the subject by Jim Dow. During 1947, the Museum acquired a Spitz planetarium, and the services of ATMOs were offered (and accepted) in conducting demonstrations on Sundays and when special groups were in attendance. A Coordinate Projector added to the planetarium in January 1950 was financed partially by a donation of \$50 by ATMOs.

Telescope making classes were started in 1950, conducted by Buecking, McArtney, Oberem, Nigro, Robert Mayer and Missert, several of whom had previously made either mirrors or complete telescopes. The Museum granted use of its 5-inch refractor on the roof to ATMOs in November 1949, and in April 1950 extended this privilege to include the 8-inch Lundin refractor in the Kellogg Observatory. An occultation of Venus was observed there on February 7, 1951, prior to the formal meeting. In May of 1950, a list of instruments owned by members included thirty-eight telescopes, a micrometer and a star camera. Later that year Ray Missert discovered and acquired a Russell Porter Garden Telescope, which was later reconditioned by the American Optical Society and put on display at the Museum. The group created a library in early 1950 to acquire books for members' use.

Joint meetings of the ATMOs and its counterpart at Rochester (Astronomy Section, Rochester Academy of Science) were held, at Rochester on December 1, 1950, at Buffalo on April 18, 1951, and at Letchworth Park on June 10, 1951, the last being an observation session to time an occultation of Regulus. In addition, the two societies hosted the 1952 convention of the Astronomical League at Rochester on May 30th and 31st and June 1st.

BAA DURING THE 1950s

Late in 1952 (October 1), the society's name was changed to "Buffalo Astronomical Association"; and meetings were re-scheduled to the first Wednesday for the formal meeting, and an observing meeting, weather permitting, on the third Wednesday, using the 5- and 8-inch refractors on the Museum roof. A star party was planned to view a lunar eclipse on January 18, 1954; it was so well publicized that 1700 people showed up in spite of rainy weather that prevented any view of it. Dr. Shirley Jones and Rev. George Walker attended a solar eclipse at Mattice, Ontario on June 19, 1954; this also was clouded out. Public star parties to observe Mars were planned for June 24, 1954, and to observe Jupiter for February 14, 1955. The latter was an "Open House" at the Museum with the title "Jumping Jupiter, by Gemini":

A club newsletter named "BAA Club Bulletin" was instituted in 1957, a single sheet affair, mimeographed and distributed to club members. This was supplanted in August 1958 by "The Spectrum", a publication of several pages including articles by members as well as star maps, predictions and other features. It was distributed monthly to members for several years, but later published on a bi-monthly basis.

During this decade, Walter Semerau completed the principal features of his first (outdoor) solar observatory. In April 1950, he described to ATMOs his initial telescope, equipped with setting circles and an astrographic camera. By May 1951, he had completed construction of a 12½-inch reflector. In February 1952, he described three cameras and a finder he had made from large binoculars. Shortly thereafter, rapid development of his neighborhood with high intensity lighting so adversely affected his night sky that he turned his attention from the stars at night to the sun in the daytime. In November 1954 Semerau described his construction of a coronagraph, which incorporated a quartz monochromator and an occulting disk, all home made. In October 1955 he had completed a spectrograph, followed in March 1957 by an optically controlled drive mechanism for the telescope and a spectroheliograph. Scientific American published a description of his solar observatory, and in May of 1960, Walt showed BAA members films describing construction of the quartz monochromator, and time lapse photos of coronal activity, surge prominences and solar flares. In later years all this equipment, much improved, was moved into his basement where sunlight, collected by a heliostat mechanism on his roof, was transmitted to his cellar for observation and analysis.

In October 1955 D'Youville College requested assistance in restoring an 8-inch reflector that had been donated to them. Gene Wallmeyer examined it, found it in poor condition but repairable, and with his advice and assistance it was restored to usable condition by May 1956.

A satellite tracking program for observation of earth satellites to be placed in orbit during the International Geophysical Year was first mentioned in March 1956 and volunteers for a team were requested in March 1957. The BAA organized the team during the summer of 1958, and set up an observing site at Clarence, New York. Though few satellites were seen, a film was made showing the Moonwatch Team in action; this film was shown to the BAA in September 1958 and is now part of the BAA's archives. Ed Lindberg, the team leader, presented a citation awarded to the team by SAC in March 1959. It was followed by certificates of appreciation to five team members in April 1959, and by pins to all team members in recognition of their merits in June 1959. Satellite observation sessions continued until August 1961 when the team was disbanded.

The BAA held a joint meeting with the Buffalo Audubon Society at Chestnut Ridge Park on July 21, 1956; and held "Open House" for Boy Scouts on January 4, 7, 12 and 18, 1957. A joint meeting of the BAA with the Rochester and Corning societies was held at Corning, New York, on May 18, 1957, at which the upcoming IGY was a major topic. "Open House" for Girl Scouts was held January 31 and February 21, 1958, with a star party for the girls on May 16, 1958.

Dues had been set at \$4.00 in mid-1956, and included a subscription to *Sky and Telescope* as a privilege of membership. In November 1958 dues were raised to \$5.00; for Juniors the rate was \$3.00, with a subscription to *Sky and Telescope*, or 50¢ without. The membership year coincided with the calendar year.

Dues were raised in September 1960 from \$5.00 to \$5.50 (including a subscription to *Sky and Telescope*), and in November 1962 to \$6.00 for membership plus \$3.00 for S & T or \$2.00 for "Popular Astronomy". In June 1964 the price of *S & T* advanced another \$1.00. A year later, subscriptions to *S & T* as an adjunct to BAA membership were discontinued, primarily due to conflict with the sovereignty clause of BAA's by-laws.

BAA DURING THE 1960s

In 1961 a number of innovations were made in the BAA's operations. In February a "Coffee Hour" was introduced at the end of each business meeting to encourage more social mixing and better acquaintanceship among members. Three groups, an Elementary Study group headed by Ron Clippinger, an Advanced Study group headed by Lou Reinagle, and an Advanced Observing group headed by Ernst Both, were established in the BAA. In September the meeting date was changed from the first Wednesday to the second Friday of each month, September through June, to avoid conflict with other meetings and to permit joint meetings with the Rochester group that met on the first Friday. The change also gained use of the Kellogg Observatory by members on meeting nights, and permitted Both, Curator of Astronomy at the Museum, to attend BAA meetings.

The dominant activity of the BAA during the first half of the 1960s was the construction of the club's first observatory on grounds owned by Cornell Aeronautical Laboratory in the Town of Newstead. This project, conceived in 1959, was completed in 1964. The BAA designed and constructed the 12½-inch Newtonian telescope, which is still the club's primary astronomical instrument. The observatory building was erected by CAL, but the BAA undertook the complex construction of the fifteen-foot rotating dome.

By 1964 the Advanced Observing group, still headed by Ernst Both, was renamed the Lunar Section. A new group, the Instrument Section, led by Ed Stoklosa, was formed. In December the College of Fellows was established to honor BAA members for long-standing membership, service to the organization and recognition of their contributions to astronomy. Ernst Both, Rudy Buecking, Ed Lindberg and Walt Semerau were its first inductees.

A coalition of amateur astronomical societies, first proposed by Ed Lindberg in May 1964, was finally formed in early 1967, and included societies as far east as Syracuse, west to Hamilton, Ontario, and south to Elmira and Corning. Its primary purpose was to make available speakers from each society to give their talks to other clubs. The name selected was Niagara Frontier Council of Amateur Astronomical Associations (abbreviated to NFCAAA); it usually met twice each year, May and November, with hosts rotating throughout the member groups. At these conventions the speaker lists are updated, astronomical papers are read and new instrument designs are displayed. It concludes with a dinner and a featured speaker. The BAA hosted the first convention in April 1967.

Membership in the BAA stood at about 100 by the late 1960s. Club activity was increasing at that time under the leadership of President Ronald Clippinger, Vice-President Edith Geiger, Secretary Richard Zygmunt and Treasurer Paul Redding. Several building projects were undertaken by members that resulted in instruments and facilities that brought astronomy to the public and knit participants together through a common purpose. BAA members played

an important role in constructing the Solar Observatory that now complements the Kellogg Observatory at the Museum of Science. They also built telescopes that benefitted children not only locally, but also at a mission school in South America.

The idea for a solar observatory evolved when Alan Gee, an optical engineer at American Optical Corporation, offered a 6-inch, f/10 refractor telescope to the Museum of Science. Gee was also a first rate machinist, having a machine shop in his home, and had built the telescope himself. When Ernst Both accepted the telescope, which is now used as a guide scope for the 8-inch Lundin refractor, he was also given a valuable solar prominence filter made by Gee. A mutual interest in solar astronomy led the two to discuss plans for a solar observatory.

Gee had already gathered many parts that were eventually used for the project with the original intention of assembling them to make his own equipment. He decided instead to turn over the instrument to the Museum, but he asked that Walter Semerau should build the spectroheliograph while he worked on the rest of the equipment. Although not a member of the BAA himself, Gee obtained help from its members through Ernst Both. Ed Lindberg ground the mirror for the heliostat and Dick Zygmunt built the power supply and remote controls for the instruments. All the equipment was built by amateur astronomers with the exception of the grating and some of the lenses.

The project took a year to complete, and the Solar Observatory was dedicated March 1, 1967. Former BAA President F. Shirley Jones, then a lecturer astronomer at Trinity College in Connecticut, was the guest speaker. Dr. Jones had been classifying solar prominences for several years and had a keen interest in solar astronomy. Lindberg, Semerau, Zygmunt and, of course, Alan Gee were cited for their efforts at the dedication.

The Solar Observatory was first used at the Northeast Regional Conference of the Astronomical League hosted by the BAA in the spring. It continues in use today and is open for public observation during the summer.

A second construction project completed in 1967 was the refurbishment of the Walker telescope. Like the Solar Observatory it too came about through a gift that led to a project.

Reverend George Walker, Minister Emeritus of the Walden Avenue Presbyterian Church and past President of the BAA, died November 17, 1965. Before his death, he contacted Ronald Clippinger and offered to the BAA an illuminated constellation viewer he had made. He also gave Clippinger a copy of a lecture describing the use of his viewer.

Several months after Rev. Walker's death, Clippinger drove to Walker's home in Franklinville, New York, to pick up the gift. Helen Walker, Rev. Walker's sister, told him of her brother's

wish to bequeath his 3-inch refractor and complete sets of *Sky and Telescope* magazine and *Science Newsletter* magazine to the club as well. These gifts were gratefully accepted.

Late in 1966, while plans to refurbish the mount of Walker's telescope were underway, Edward Stoklosa informed the Board that a mission school near La Paz, Bolivia, headed by a Rev. Waclawski, had asked the BAA to supply parts to build a reflector telescope. How Rev. Waclawski came to know about the BAA is unknown. Clippinger suggested the club send the Walker telescope instead.

Miss Walker agreed that her brother's telescope should be given to the mission school and Stoklosa offered to complete the work on the mount. The refurbishment was finished in 1967 and the resulting instrument was judged to match professional quality. It was sent to the school later in the year.

The set of *Sky and Telescope* was stored at the Museum of Science for a time and is now part of the library at Beaver Meadow's Fred T. Hall Building. The whereabouts of the constellation viewer and the issues of *Science Newsletter* are not known.

A third project was carried out by Richard Zygmunt. Although not strictly a club sponsored activity, the work he did at Camp Sprucelands later greatly benefitted club members who enjoyed many star parties on the camp's grounds. The camp was a favorite site for star parties because it was located far from populated areas and had beautifully dark skies. Although primarily a camp to teach children horsemanship, its proprietress, Mrs. Octavia Black, was enthused about astronomy, and decided to add an observatory to the camp. Zygmunt became acquainted with Mrs. Black when his daughter attended Sprucelands, and he offered his skill in building the telescope and observatory.

Zygmunt built a 5-inch, $f/5$ rich field telescope and altazimuth mount. When used with a long focal length Erfle eyepiece it gave marvelous wide angle views of the sky. With help from Dale Hankin, Zygmunt built a small roll-off roof observatory to house the telescope. The building was completed in 1968.

The telescope was frequently used by club members when star parties were held at the camp. Parties and picnics held at Camp Sprucelands were a special treat because Mrs. Black usually served a delicious snack in the dining room. Often the campers joined us at the telescope where they received an introduction to astronomy.

Mrs. Black sold the telescope to BAA member Robert Schneider in 1977. He reworked the instrument, adding a large star diagonal and a portable equatorial mount. He proclaimed it an excellent instrument with a field of view exceeding 3 degrees.

The club had also worked successfully with the Boy Scouts. In the middle 1960s, various members gave lectures and telescope demonstrations at area Scout camps. This program was casual and informal, just a one night star party for the Scouts. George Wallper, Director of Camping Services, later wrote to thank the BAA for putting on a successful program during the summer of 1965.

One of the BAA's most rewarding efforts was hosting the Northeast Regional Conference of the Astronomical League in the spring of 1967. Approximately 100 people attended the three-day meeting held from May 26th to 28th. Extensive preparations by club members were necessary to achieve a smooth-running, enjoyable occasion for our guests. Chairmen for various activities were:

Publicity - Paul Redding
Exhibits - Edward Stoklosa
Brochure - Edward Banaszak
Printing - Richard Zygmunt
Papers - Ronald Clippinger

Because many BAA members worked at Bell Aerospace Company and Cornell Aeronautical Laboratory, we asked these companies to give us financial support for the meeting. Each contributed \$75.00, funds badly needed to offset our deficit in hosting the conference.

Buffalo's Statler Hilton Hotel was the base of operations for the convention. Registration, presentation of technical papers, exhibits, the business meeting and the banquet were held there.

The first evening was devoted to observing. Sixty people attended a star party on the roof of the Museum of Science. The clear weather afforded a fine view with the 8-inch refractor at the Museum's Kellogg Observatory. Later, the group was given a tour of the club's 12½-inch reflector at the Newstead Observatory, and the high power radar operated by Cornell Aeronautical Laboratory. Dr. Seville Chapman explained details of the radar and, with assistance from other CAL employees, demonstrated how the facility could acquire and track artificial satellites.

Technical papers were given the next day. In all, ten papers were presented, the following five by members of the BAA:

Ray Manners - "Visual Meteor Observation for Amateurs"
Walter Semerau - "Some Solar Observations"
Fred Price - "Ring Structure and Lunar Crater Formation"

Edward Lindberg - "The Story of Stellafane"

Walter Whyman --"Analysis of the Eccentricities of Echo I"

During breaks in the proceedings, attendees studied thirteen astronomy exhibits, including several telescopes. Again, BAA members contributed enthusiastically. Walter Whyman, Walter Semerau, Larry Hazel, Darwin and Orrin Christy, and Paul Redding were BAA members who exhibited. John Riggs, Jr. displayed his Stellafane prize-winning Newtonian telescope.

Ernst Both gave the banquet address, "Selene Was Their Destiny", that evening. He stressed the importance of the amateur's role in lunar and planetary observation, particularly during the 19th century. He noted the field was still open today.

The final day of the conference was dedicated to solar observation. The group toured the solar observatory at the Museum of Science, however, clouds prevented observations. Afterwards, nearly eighty people saw Walter Semerau's solar observatory at his home in Kenmore. Luckily, the skies cleared, giving the visitors a view of the sun with Walter's excellent, largely homemade, equipment.

BAA members had long appreciated Walter Semerau's talents as designer, artisan, observer and author. Wider recognition of his achievements resulted from his participation in this convention. Present was Walter Shawcross, Managing Editor of *Sky and Telescope* magazine, who was very impressed with Walter's paper and his home observatory. He suggested that Semerau write an article for the magazine and that a color photograph of the tower housing his heliostat should be used for the cover. Semerau promptly wrote the article, "A Remotely Controlled Backyard Solar Observatory," which appeared under "Gleanings for ATM's" in the November 1967 issue of *Sky and Telescope*. Photographs of Semerau's equipment were featured on the cover.

The monthly general meeting continued to be the focal point for the club, and it was enhanced when the Museum of Science made a new club room available to us. Before then the club met on a catch-as-catch-can basis, using different, smaller rooms as they were available. This new meeting area was comfortable and spacious, while down the hall a lounge provided members with a place to chat over refreshments.

Coffee and doughnuts following the meeting became an essential ritual for our membership. Margaret Rabe was hostess, seeing to it that refreshments and supplies were always available. By 1969, Lillian Von Gerichten had taken over this important BAA post. Often members talked about their activities and compared notes on astronomical projects. In this informal atmosphere, observations and photographs were exchanged by members who were reluctant to exhibit or speak before the full membership.

Sometimes these private showings brought the wrath of leadership down on the heads of the participants. Fred Price editorialized in the December 1968 Spectrum, shortly after he was elected President, asking members to share their drawings and photographs with everyone instead of showing them "furtively to select groups." He jokingly suggested a dollar fine for those caught in the act. Not long afterwards, Robert Burdick was accused of displaying photographs "furtively." The record does not tell if this expert astrophotographer was found guilty and duly fined.

The emphasis on topics in the general meetings drifted away from telescope making toward the more academic aspects of astronomy. Speakers were still drawn mostly from club members or local industry, a tradition that was soon to alter when the Niagara Frontier Council of Amateur Astronomical Associations (NFCAAA) was formed in 1968. Thereafter, we could call on speakers from other clubs who had talks already prepared from previous speaking engagements.

Nonetheless, the telescope makers remained active although their numbers were not large. Ed Lindberg continued his leadership of the Instrument Section which met monthly. Occasionally a general club meeting was devoted to this topic such as Ron Clippinger's "Standard Telescopes" talk in January 1968. Notes of interest to telescope makers also appeared in the Spectrum, now under its new editor, Ernst Both. The spirit of do-it-yourself in telescope making still prevailed. Member Charles Ware was gently chastised in the "Spy and Tell" column of the January 1968 issue for buying a mirror instead of making one with "Imagine, buying a mirror!"--a meaningful criticism from a club founded by mirror grinders.

In addition to the Instrument Section, the club had an Advanced Study Section and an Observing Section. Sometimes enthusiastic members belonged to all three groups and meeting times were scheduled to accommodate them.

BAA DURING THE 1970s

Many members of the club have always enjoyed photography of the heavens as well as visual observation. Astrophotography is especially appealing to some because of its unique technical demands, to others because it permanently captures the beauty of the night sky. Still others note that astronomical photographs offer detail and light grasp unobtainable in ordinary observations. Tom Dessert pointed out that faint galaxies appearing on his photographs could never be observed visually with the same instrument. The club finally decided that its photographic achievements had attained a caliber that justified their being shared with the public.

The BAA held its first astrophotography exhibit in December 1969 in the Print Room of the Buffalo Museum of Science. Approximately ninety photographs taken by ten BAA members using their personal equipment, and by several members of the staff of the Museum's Kellogg Observatory, were displayed. Star fields, planets, the moon, the sun and deep space objects showed the diverse talents of the club's astrophotographers. Unfortunately, the exhibit was marred when several of the photographs were stolen. Walter Whyman, one of the victims, stoically observed that he would accept the loss as a flattering display of good judgment on the part of the thief. Apparently other members felt much the same way, because the club decided to repeat the exhibit in the future.

The second show was held in March 1971; it too was a success, prompting a call for photos for the next year. This time, all pictures were to become the property of the BAA so they could be used in future shows. Few photos were submitted, causing the display for 1972 to be canceled entirely. The third astrophotography exhibit was finally held in January 1973, after the policy of retaining submissions was dropped.

A much more elaborate public display was held at Eastern Hills Mall during the week of April 8 to 14, 1973. Gretchen Schork was responsible for organizing the exhibit, which included astrophotography, pictures of members' astronomical equipment and their observatories, telescopes and telescope-making. An automatic slide presentation showing the steps taken in mirror-grinding was augmented by various members demonstrating the procedure on a real mirror blank. Approximately fifteen telescopes were displayed, offering a wide variety of types ranging from a 3½-inch Questar to 2-inch refractors up to a 12-inch reflector. Many members contributed their time to set up the display and to stay on to meet the public and answer their questions. Models of telescopes and sketches of the proposed observatory at Beaver Meadow were also shown. Earlier in the year, Robert Kartyas wrote a statement of the club's objectives to be distributed at the Mall; it remains our statement of purpose today. (See page ix)

Membership in the NFCAAA expanded the club's choice of speakers through the 1970s. Talks by members from associated clubs in the first years of that decade were given by Dr. Martin Green from Elmira-Corning Astronomical Association, William Ottemiller from Finger Lakes Astronomy Club, Ralph Dakin from Rochester Academy of Science, and others.

The club has long realized, however, that members are eager to hear from one another, and in many instances are pleased to have an opportunity to speak before their own group. Some years earlier, when interest in the general meetings lagged, Walter Whyman suggested we overemphasized the use of outside speakers and should give our own members the floor more often. Since then, we have encouraged BAA members to give talks, a policy that has continued even after we obtained access to speakers through the NFCAAA.

Dr. Seville Chapman, Ernst Both, Walter Semerau, Dr. Frederick Price, William Chambers and Dr. Frederick West were among those members who spoke at general meetings between 1970 and 1972. President Richard Zygmunt encouraged others to get up and tell what astronomical activities they were up to. Sometimes the program consisted of a series of brief talks from several members, an ideal plan for speakers hesitant to give lengthy lectures. Once the ice was broken speakers found it much easier to talk at meetings thereafter.

A Christmas speaking tradition became established around this time. The December meeting was devoted to light topics given mostly for fun. For many years Ed and Olga Lindberg combined their considerable talents for a talk--often a brief travelogue. They've talked about their trip to Finland, another to Iceland and a visit to several other European countries in search of sundials and clocks. They were followed by Edith Geiger's candid camera show. She is the club's self-appointed photographer, catching her fellow members in outlandish poses during the year and then showing her best photos each Christmas. Her success in these shows comes largely from her witty narration describing the events leading to the picture. Of course, her comments are generally completely unrelated to what was happening when the photo was taken, but that's what makes her show so entertaining. A social hour complete with a Christmas cake and coffee always followed this meeting until the 1980s when a wine, cheese and dessert party, hosted by Joe Provato, became a tradition.

In June 1970 three new members were elected to the College of Fellows for their outstanding contributions to astronomy and to the BAA. Ronald Clippinger, Walter Whyman and Richard Zygmunt were the first new members admitted to this select group since it was founded in 1964. Clippinger had been a very enthusiastic and effective president during his term, as was Zygmunt later. Whyman had been a member of the organization since the early 1950s and, like Clippinger and Zygmunt, was a telescope building enthusiast. Among his achievements on behalf of the club was the clarification of the by-laws. His amended version, after being reviewed by the Board, was enacted at the June 11, 1971, business meeting at which Whyman was elected to the College of Fellows.

With hopes of engaging young people in astronomy, the BAA sponsored an Explorer troop of the Boy Scouts of America. The idea came from Mr. Applebaum, a representative of the Boy Scouts, who asked if the club would be interested in supporting the troop. The club agreed to supply volunteers who would present astronomical material to the scouts. The program lasted about a year, but had little success. Our sponsorship of the troop was dissolved following a report on the year's activities at the June 1972 general meeting.

By the early 1970s it became evident that the Newstead Observatory would have to be replaced by a new facility. It needed constant repair and viewing was hampered by increasing light pollution. The BAA reached an agreement with the Buffalo Audubon Society by which an observatory would be built at Beaver Meadow Environmental Center in Java, New York. The BAS would own the grounds and the building, and the BAA would own the contents of the building (e.g., the astronomical instruments).

Following an extensive fund raising campaign, the building was erected and the 12½-inch Newstead telescope was installed. Access to the sky was obtained by a roll-off roof. The observatory, which was dedicated in June 1976, features a "warming" room that houses the club's library and, later, its computer and serves as a place of refreshment and discussion.

Although much of the club's energies were expended in constructing and outfitting the new observatory during the middle 1970s, time was still found to pursue other activities. Another photography and sketch exhibit was held at the Museum of Science in 1974. Again a large number of pictures representing the efforts of many members versed in astrophotography were displayed. Walter Semerau had a fine series of solar photographs, while William Parker and Tom Dessert showed their skills in stellar photography.

A special public star party was held on the campus of Erie County Community College North in January 1974 to observe the highly touted Comet Kahoutek. Several members brought their telescopes on this cold night to give the public a view of the receding comet. The comet was faint and hard to find; Warren Steinberg went from telescope to telescope helping others to locate it. A good turn-out of interested people showed up, forty or fifty perhaps, but they were disappointed with the dim smear they saw. The bright illumination in the parking lot and the cold January weather did little to enhance the evening. Still, those attending could leave with the satisfaction of having seen "the comet of the century."

In the spirit of furthering public knowledge of astronomy, the BAA started a program of courses at Beaver Meadow Environmental Center in 1975. The main idea was to give novices an elementary background in astronomy, not so much as a science, but more as an appreciation for another facet of nature. We hoped to match programs given by the Buffalo Audubon Society in their fields of expertise. The Fred T. Hall Building was the classroom

and later, when it was finished, the observatory was the laboratory. Each course was taught by a BAA member qualified in that discipline and ran for six or eight weeks.

John Riggs taught the first class in the summer of 1975. His course, "Wonders of the Sky," emphasized naked eye astronomy, but also included the use of telescopes. The moon, planets, constellations and Riggs' favorite topic, deep sky objects, were his main subjects.

Two courses were given in 1976. In the spring Karl Kalweit taught "Introductory Astronomy", covering topics very much like those Riggs taught the year before. Tom Dessert held a class on "Astrophotography for the Amateur" during the summer, attracting students with no previous astronomical interest as well as BAA members who were eager to take up astrophotography. By then the observatory was in operation and students had a chance to try their newly developed skills on the spot. Unfortunately, the weather seldom cooperated on class nights, but dedicated photographers were welcomed back on clear nights to apply what they had learned. Often they were amazed with the fine results they quickly achieved with the 12½-inch telescope.

This successful course was repeated the next year; again it was taught by Tom Dessert. Another class in elementary astronomy, again entitled "Wonders of the Sky", was also presented, this time by Larry Carlino. A sharp-eyed planetary observer, Carlino was also expert at constellation recognition, an important but often neglected astronomical skill he stressed in his course. He supported his lessons with slides showing the main features of the constellations and with frequent observations at the Meadow.

The club continued its regular program of monthly general meetings. From 1973 to 1976 they were held at the Museum of Science with talks given by NFCAAA speakers and club members. Special meetings were held at Kleinhans Music Hall in March 1974 for a Buffalo Philharmonic Pops concert, and at Rochester's Strassenburgh Planetarium in April 1976. Home meetings, as always, were followed by coffee, donuts and conversation. Gretchen Schork was our hostess during the middle 1970s.

The club enjoyed good attendance at star parties held during the middle and late 1970s. However, fewer parties were held at Newstead and Camp Sprucelands as the emphasis shifted toward the new observatory at Beaver Meadow. The first parties there were held in 1973, before the observatory was started. We depended on members bringing their own equipment, which was set up in an open field, or in the Environmental Center's parking lot. Those who were there will remember clear dark nights, occasionally brilliantly illuminated by the flash from Edith Geiger's ubiquitous camera as she gathered material for the Christmas candid camera show.

Star parties held at private homes were consistently better attended than those held at the Meadow. The reasons, no doubt, were the opportunity to see a different observatory, a shorter drive, refreshments and a congenial atmosphere where members could socialize. The Brinks, Catipoviks, Darwin Christys, Deazleys, Desserts and Miesses hosted star parties in the late 1970s.

In 1977 the club sponsored a picnic at Chestnut Ridge Park that was repeated annually for a few years. No observing was planned--it was strictly a social function. Nonetheless, at the 1978 picnic Carl Milazzo, ever determined to observe, managed to locate Venus near the meridian in the middle of the afternoon. Apparently few of those there, perhaps none, had ever seen Venus with the naked eye at mid-day and found it fascinating. Venus was hard to find, but Milazzo helped each member locate this challenging and rarely observed sight.

Through the years many members have distinguished themselves with their mechanical aptitudes, photographic skills or literary capabilities. Recognition at Stellafane is always an honor coveted by amateur astronomers. Alan Gorski won the "Special Equipment" award there in 1973 for his spectrum camera. Ed Lindberg, respected beyond the Buffalo area as an expert in telescope making, has often judged the telescope competition at Stellafane.

The early 1970s saw a young member of the club achieve his long-standing goal--editor of a nationally distributed astronomy magazine. Dale Hankin had joined the BAA as a teenager, took a keen interest in telescopes and astrophotography, and longed to run a magazine dedicated to his hobby. He established his magazine, "Modern Astronomy", and worked tirelessly to promote it. Club members lent him support, not just by subscribing but by supplying articles for publication. Tragically, Hankin became seriously ill in the middle 1970s and had to give up the magazine he had founded. He died early in 1979.

Other astronomy magazines have also published articles by BAA members. *Sky and Telescope* has frequently printed book reviews by Ernst Both. Both specializes in reviewing books written in German, his native language. A brief description and picture of the Beaver Meadow Observatory appears in the September 1978 *Sky and Telescope*; Warren Steinberg was author and photographer. Astrophotos by Tom Dessert, Charles Miess and Walter Semerau were printed in the same publication in the middle and late 1970s.

An article on elementary astrophotography by Rowland Rupp appeared in the *Astrograph*, and articles by Larry Carlino and Darwin Christy were printed in The Reflector, the newsletter of the Astronomical League. Carlino's article, or rather editorial, first appeared in the Spectrum and dealt with the long delay in delivery he experienced when he bought a telescope from a major manufacturer. The Reflector, spurred on by Carlino's grievances, started a campaign to influence telescope manufacturers to adhere to their initial delivery schedule.

Christy's topic was micrometeorites, a subject in which he has become a self-taught expert. He has few compatriots in this country, but has found a small group of astronomers in Japan interested in this unusual discipline. Christy has had his work published in their newsletter-- in Japanese, of course.

Several individuals have received recognition for their achievements in astronomy or their services to the BAA. Four were elected to the College of Fellows in 1977, bringing that prestigious group to eleven members. Three of them, Tom Dessert, Edith Geiger and Fred Price, had served on the Board of Directors and had held various offices. Dessert was an authority on astrophotography and worked enthusiastically in his capacity as Observatory Director at Beaver Meadow since it was opened. Both Geiger and Price were serious and accomplished lunar observers who, in the past, had written on astronomical subjects. The fourth, Bob Mayer, also served on the Board and had extensively reworked the 12½-inch telescope before it was installed at Beaver Meadow. Through the years he had generously employed skills as a machinist to design and fabricate parts needed by other astronomers to improve the performance of their instruments.

Octavia Black, Rudy Buecking, Jane Dow and Walter Semerau were made honorary BAA members in 1977. Buecking and Semerau were highly respected for their technical expertise and had contributed greatly to the BAA. Both were members of the College of Fellows. When they no longer felt able to keep up an active role in the club, the Board voted that they should remain on the membership list. Generous contributions of facilities and funds from Mrs. Black's Camp Sprucelands and Mrs. Dow's Dow Company prompted the BAA to extend honorary membership to these two patrons.

With the new observatory at the Environmental Center and Vice-President Ken Biggie's efforts as Publicity Director, the BAA began to receive better exposure to the public. Biggie asked local newspapers to print notices of meetings, although the chance of their doing so often depended on how many "fillers" they needed.

Robert Wagner, writer of the column "Naturally" in the "Buffalo Evening News", became interested in our activities at Beaver Meadow. His June 21, 1978, column was dedicated to the club and especially to the Desserts and our 12½-inch telescope. Wagner followed up with a feature length article in "The Buffalo News Magazine" of October 22nd. This time he explored the work of several members. Miro Catipovic's 20-inch homemade Cassegrain and Walter Semerau's solar work were covered in detail, as were Edith Geiger's lunar studies and sketches; Ed Lindberg's radio expertise was linked to radio astronomy and the prospect of detecting intelligences among the stars. Photographs of Dessert's newly completed private observatory in Marilla, Geiger's observatory in Boston, and Semerau's complex sun viewing equipment in Kenmore were featured. These articles brought an influx of guests to Beaver Meadow for the Saturday public nights. Over 100 people came each Saturday following the

two articles, stimulated by the sense of awe and wonder for astronomy Wagner managed to work into his writing.

Additional exposure came from our continuing policy of putting on public displays. We were invited to set up shows for the South Towns Fair held at Erie County Community College South in the springs of 1977 and 1978. In addition to photographs and sketches, we exhibited a variety of telescopes, accessories, magazines and brochures. Orrin Christy brought his automatic mirror-grinding machine to the first display. These shows were supported by many members, with Tom and Marty Dessert, Robert and William Hewitt and Edith Geiger playing prominent roles in setting up and manning the exhibitions.

The fifth photography exhibit at the Museum of Science in February 1978 lasted a month and attracted a large public turnout. Over 125 photos and sketches by many members made the show broad based and successful. Constellations, deep sky objects, the moon, the sun, planets--all were represented. Some pictures were taken with relatively simple equipment--just a camera on a tripod; others showed the result of sophisticated instruments and technical skill such as experienced astrophotographers might obtain at Beaver Meadow. Price, Geiger, Semerau, Dessert and Charles and Nancy Miess all had excellent material on display, but so did many other members less well known for their work in the field of recording their observations in sketches or on film.

The BAA has had a long affiliation with the Buffalo Society of Natural Sciences, the organization that owns the displays and establishes policy at the Museum of Science. That relationship was placed in serious jeopardy in 1976 when the BSNS, threatened with a significant cut in operating funds for the Museum, initiated a policy requiring all members of affiliated groups to join the BSNS. If enforced, this policy would have tripled dues and, in the judgment of the BAA's Board, would result in a large reduction in membership. Further, it would discourage newcomers to astronomy from joining our organization to "give it a try".

Darwin Christy and Tom Dessert, along with representatives of other affiliated clubs, met with the BSNS to resolve the problem. Some groups withdrew their affiliation. The BAA was somewhat less militant, but nonetheless informed the BSNS that we would not accept their new requirement and would not alter our own membership policy.

At the same time, the Museum was being renovated and our meeting room was disrupted. This, plus the prospect of breaking ties with the Museum if the membership difference could not be resolved, caused us to seek new quarters, at least temporarily. Buffalo State College offered their facility for our meeting place. President Fred Price's teaching position at the College undoubtedly influenced their decision. Starting in November 1976, the BAA met in the spacious auditorium of the New Science Building at Buffalo State.

In time, operating funds became available for the Museum and the BSNS's restrictive membership policy was relaxed. The renovation of the Museum was completed and a somewhat smaller meeting room than before was made available for our use. We held our first meeting there in early 1978. Thereafter, the Board adopted a policy of meeting half the year at the College and the other half at the Museum. In 1979 the BAA was asked to participate in the Museum's fiftieth anniversary exhibit held throughout 1979. Photos, sketches and papers by club members were submitted in support of this celebration.

The by-laws were once again amended, partly to clear up wording, but primarily to account for the new observatory and its relation to the club. Edith Geiger, Rowland Rupp and Richard Zygmunt prepared the changes which were accepted at the September 1977 general meeting. The new by-laws call for the Board to appoint an Observatory Director annually and for an observatory operating account that is separate from the general funds of the club. The Board may authorize an exchange of funds between the two accounts if necessary. Increasing the quorum for business meetings from 10% to 20% of the voting membership was also included in these amendments.

BAA DURING THE 1980s

The BAA continued to bring astronomy to the public through displays at shopping malls. In the spring of 1980 the BAA exhibited at Eastern Hills Mall in Amherst in conjunction with Astronomy Day, newly established to promote astronomy nationally once a year. Al Kolodziejczak (Al K. to club members) took charge of the successful event. He repeated his effort the following year, again at Eastern Hills Mall. Photographs, telescopes, telescope models and slide shows were featured. To give the public a simulation of real observation, photographs of astronomical objects were located in the mall to be viewed through the telescopes. Gene Witkowski's 14-inch Newtonian reflector on an equatorial mount was a crowd-catching highlight. In the days before the large aperture Dobsonians, a 14-inch telescope was a very impressive instrument. Smaller reflectors, refractors, Cassegrains and homemade telescopes were also exhibited.

Later Astronomy Day celebrations were held at Buffalo State College, the BAA's second home. Buffalo State's astronomy club coordinated the show, with the BAA supporting their effort by providing a display and members who could talk about astronomy. In 1991 Buffalo State College won the Astronomical League and *Sky & Telescope* award for the best Astronomy Day presentation. Bob Hughes perennially managed the BAA's exhibit there. Dr. Jack Mack, professor of physics and astronomy at Buffalo State, provided liaison between the college and the club. The BAA's commitment continues to the present under Hughes' leadership and with the support of many members who volunteer their service and equipment for the day.

Mall shows provided a significant number of new member candidates and were a source of satisfaction for club members who could talk about their hobby. Throughout the early and mid-1980s Ken Biggie, Doris Koestler, Al Kolodziejczak, and John Yerger spearheaded efforts to put on shows, generally in the spring at Eastern Hills Mall. The tradition abruptly ended before the end of the decade when malls required exhibitors to carry liability insurance in the order of a million dollars. The several hundred dollar premium for a three-day show proved far beyond the means of the BAA. Although the BAA did put on a show at the Boulevard Mall Community Bazaar in 1991, it was apparent that a fund-raising bazaar featuring crafts, baked goods and a flea market was not a suitable environment for a BAA exhibit.

Conducting classes, both for members and for the general public, was another means of promoting astronomy. Ed Lindberg continued to give classes in telescope making at the Museum of Science into the early 1980s. The classes were discontinued partly because interest in that technology was waning and also because Lindberg lost access to the facility where the work was done.

Astronomy classes for beginners were also presented at the museum by Rowland Rupp, Al Kolodziejczak, Edith Geiger and, for a while, Ken Kimble. This course dealt with basic astronomy and included constellation recognition. A second, somewhat more advanced course, was later introduced by the same group. Each instructor specialized in his or her area of interest: Rupp in stars and cosmology, Kolodziejczak in galaxies and exotic objects, Geiger in the moons and asteroids. Kimble's specialty was the sun. Kimble also conducted an introductory course in astronomy as part of the University of Buffalo's Life Workshop program in the early 1980s.

With the demise of Kimble's Study Section in the middle of the decade, a program to bring fundamentals of astronomy to new members of the club was instituted by President Doris Koestler in 1988. The idea was to have experienced members respond to questions raised by beginners. Despite assurances that newcomers were teeming with questions, few were offered. Suspecting new members might be embarrassed to ask basic questions, Koestler suggested they write down their questions and give them to her. Still no response. Often questions were made up by long-time members just to keep the program in operation.

Other attempts to field questions and to encourage astronomical education within the club consisted of "panel of experts" meetings. Roughly every two years a meeting was devoted to questions put to expert club members. Frequently called upon to serve on these panels were Ernst Both, Jack Mack and Fred Price.

In the early 1980s general meetings were held at Buffalo State during the first part of the year (September to December or January) and at the museum for the remainder of the year. This policy continued until 1989 when a new magnet school was added to the museum, causing a disruption in the parking and meeting facilities. Thereafter, all meetings were held at the college, although the BAA remains affiliated with the Museum of Science. The classes in astronomy are held there and the club helps out during public observing sessions, supplementing Kellogg Observatory with members' telescopes. Hugh Pettit, who frequently brought his telescope to these observing sessions, fell and broke his arm one night while returning the scope to his car.

The BAA annually holds a telescope clinic at the museum. Club members advise new owners on how to get the most out of their instruments, although at times painfully little can be gotten out of this assortment of department store telescopes. Occasionally a gem emerges, and its owner needs just a little help getting started. Gene Witkowski, Dan Marcus, Dave Fliss, Tom Nigrelli and Bruce Newman frequently lend their service to this program.

The format of the BAA Christmas party saw a change. Formerly, a Christmas cake was the main attraction at the party that followed the December meeting, but in 1981 Rowland Rupp was charged with arranging a wine and cheese party. So successful was it that it has been

continued ever since, with Joe Provato officiating as host. A culinary virtuoso, he sees to it that Christmas cookies, cakes, soft drinks and coffee supplement the wine and cheese. It's not surprising that the December meeting is always well attended.

In 1985 the BAA instituted an annual dinner meeting. Perhaps the idea stemmed from a joint dinner meeting sponsored by the Lockport Astronomical Society a couple of years before to commemorate the twentieth anniversary of their Remick Observatory. The first BAA dinner was held at the Wilcox Mansion in Buffalo, the site of President Theodore Roosevelt's inauguration in 1901. Tristan and Debbie DiLapo catered the dinner; the speaker was Ernst Both on "Astronomical Foibles". The Lockport club was invited to join us. A tradition ever since, the May dinner meeting has been held at several restaurants and has featured both club members and guests as speakers, as shown in the table:

YEAR	RESTAURANT	SPEAKER	TOPIC
1985	Wilcox Mansion	Ernst Both*	Astronomical Foibles
1986	Buffalo State	Mark Shure	Infrared Astronomy
1987	Buffalo State	James Orgren	History of Astronomy
1988	Buffalo State	Trudy Brown	Stars for Great-Granddad
1989	Big Apple	Larry Carlino*	Planetary Nebulae
1990	Lord Amherst	Ernst Both*	Voyager
1991	Lord Amherst	Jack Mack*	Hubble Space Telescope
1992	Lord Amherst	Dan Marcus* & Bill Smith*	Comet Halley
1993	Coachman's Inn	Dave Toot	Solar Research

* BAA Member

Dan Marcus and Bill Smith were 1992 dinner meeting back-up speakers for John Dobson, the inventor of the famous Dobsonian telescope. During the preceding winter and spring, Don Lewis and Al Kolodziejczak negotiated for the elusive Dobson's trip to the Buffalo area. Dobson was to go first to Toronto for a speaking engagement, then to Buffalo. A staff member's last minute illness caused Dobson to cancel the trip, and Marcus and Smith, originally scheduled to speak in June, were moved up.

Their talk on Halley's Comet was a photographic essay of their trip to Australia in the spring of 1986 to photograph the comet as it receded. Expert astrophotographers, their work was commissioned by a grant from the Museum of Science. In 1986 Marcus won the College of Fellows Award for his outstanding astrophotos taken during this expedition.

The recipient of this award is selected solely by the College of Fellows. It was instituted in 1986, and is given to a BAA member who has made a significant contribution to astronomy beyond his activities within the club. The award, if given at all, is presented at the dinner meeting. Winners in addition to Marcus are Darwin Christy, Robert Mayer, Frederick Price and Stephen Kramer.

Always seeking ways to involve the membership, the club has frequently tried changes in the meeting format to further activity and participation. In addition to encouraging questions, a portion of each general meeting is set aside for observation reports. Once the ice is broken with the first report, a lively dialogue generally ensues. Sky calendars from Abrams Planetarium are made available each month at the membership desk, and a video tape on beginning astronomy was purchased by the club to be loaned to members. Since becoming president in 1992, Bill Smith has invited members to give summaries of objects currently suitable for viewing and brief book reviews at the monthly meetings.

The club encourages observation. The Kartyas Memorial 8-inch telescope is available for loan to members just starting out in observing. Smith and Carol Lorenc host Messier Marathons at their home near Jamestown, New York. These events are held in the spring with the intention of seeing all of the more than 100 objects on the list in a single night. So far they've come close, but they haven't done it yet. Star parties remain, as they have for decades, an important avenue for getting acquainted with one another, and with a variety of astronomical instruments and celestial objects.

Public nights at Beaver Meadow Observatory are effective in getting people together to observe, whether in the capacity of manning the club's telescopes to show the sky to the public, or to use their own portable telescopes. Generally the public gets to view through these privately owned instruments too, especially on well attended nights.

Another boon to astronomy has been the computer. Enthusiasts in this arcane art, like Dave Sepulveda, Jack Empson, Wade Sigurdson, Gene Witkowski and Bruce Newman, have brought computerized star atlases and charge coupled device (CCD) images to the attention of the club and the public. When Beaver Meadow Environmental Center holds a public day, the BAA supports it with computer shows in conjunction with viewing through the telescopes. The club plans to attach a CCD camera to the 12½-inch telescope and store the images on computers for later viewing. Thanks mostly to Sepulveda, Sigurdson and Joe Drabek, who have donated parts and time, two computers have been assembled and are available at the observatory for planetarium programs and, eventually, for CCD imagery.

The BAA continues to support the NFCAAA and has hosted meetings three times since 1980. The May 1981 meeting was held at Buffalo State College, where Dr. James Orgren presented a planetarium show "Springtime of the Universe". The main speaker was Dr. Jack Mack,

whose topic was "Echo of Creation--The Discovery of the Three Degree Microwave Radiation Background". Co-hosts for this meeting were Ed Lindberg from the BAA and Sylvia Mosher from the Lockport Astronomical Society. Dr. Fred Price assisted in arranging the dinner at the college. Lindberg headed up another NFCAAA meeting at Buffalo State in April 1985.

The third meeting, also at the college, took place in November 1992 and was arranged by Dave Fliss with Lindberg helping out by obtaining speakers. The principal speaker was Ernst Both on Mars. Although activity in the NFCAAA has declined somewhat as the organization approaches its twenty-fifth anniversary, this latter meeting had more than thirty in attendance.

For many years the BAA had a club membership in the Astronomical League. In 1983 the question of whether the \$114 annual dues assessed by the AL on the basis of our total membership was worth the cost. Although some favored retaining membership, the majority voted to drop it, citing that the only clear benefit of belonging to the AL was receiving their quarterly publication, "The Reflector". The magazine apparently was not held in high esteem by most recipients.

Beaver Meadow Observatory, along with the monthly meetings and the Spectrum, is at the hub of club activity. Now nearing the end of its second decade, the installation is enjoying a renewal in activity. The policy of having two astronomers on hand for public nights regardless of weather was instituted by Dan Marcus when he became director in 1989. This arrangement produces a more rounded presentation and also forms a nucleus around which other BAA members gather. Several privately owned telescopes are frequently brought out, making public nights something of a star party. When the observatory is opened for special astronomical events like an eclipse, a comet or a meteor shower, it is supported by the BAA and visitors are given a glimpse of a rare treat.

Enhancements at the observatory are underway. During the 1980s maintenance was the main emphasis at Beaver Meadow, but as the 1990s begin the key word has become *expansion*. A clock-driven equatorial mount donated by Bell Aerospace and a 6-inch guide telescope donated by Conrad Stolarski are being combined to become a permanent wide-angle camera mount. An extensive library is now in place at the observatory. The majority of these books, star atlases and magazines were loaned by Karl Kalweit, but other members have contributed too. Luann Szucs has cataloged these books, which can be borrowed by club members.

Loaning is not without its risks; from time to time the BAA suffers the loss of some of its possessions. Perhaps neglect contributes, but at other times more nefarious explanations may be in order. In 1981 several photographs were reported missing from the display at the observatory, and later in the same year a 35mm camera body kept at the observatory for astrophotography also disappeared. In 1984 two home-made telescopes were donated by Charles Kuhns. They had been his son's, a former member of the BAA. Bob Mayer

reworked the larger of the two, a 6-inch reflector. Neither has been seen for years. Mayer designed and built a filar micrometer, a precision device used to measure the angular separation of astronomical objects. That valuable instrument has been missing since Mayer's death in 1987.

As the end of the BAA's first fifty years approaches, the group founded by telescope makers looks forward to a new era in amateur astronomy. To meet it the club has purchased a new 20-inch Dobsonian reflector, and will soon implement plans to expand Beaver Meadow Observatory to accommodate it. A heated work room to house the new library and computers will also be added. Plans to obtain a CCD camera will be made final when the construction of the addition is finished. These projects form a rallying point, drawing members with differing skills together for their mutual benefit, for the benefit of all club members and for the public as well.

SPECIAL SECTIONS

Special groups have provided forums where BAA members with particular interests could gather regularly. These groups have prospered and waned with time, reflecting changing attitudes for members and amateur astronomy in general. While the club started as a telescope makers' organization, the ATMOs, it evolved toward more general astronomy. Members especially interested in building telescopes formed the Instrument Section. The availability of superior and affordable commercial instruments has steadily eroded the Instrument Section's membership over the years. Other groups specializing in observing or study have been formed from time to time, when interest and leadership was available.

The first three groups were organized in 1961: an Elementary Study group headed by Ron Clippinger, an Advanced Study group led by Lou Reinagle, and an Advanced Observing group under Ernst Both. By 1964 the Advanced Observing group was renamed the Lunar Section. That same year a new group, the long-lasting Instrument Section, headed by Ed Stoklosa, was formed.

Interest in special sections ran high. The Instrument Section met on the fourth Friday of each month from 7:00 to 8:30, the Advanced Study Section met bi-monthly on the fourth Friday from 8:30 to 10:00, alternating with the Observing Section. This arrangement made it possible for a BAA member to attend all three sections and be out only one night a month for section meetings.

Though the Observing Section met every other month, its members pursued a regular observing schedule and gave reports of observations at their meetings. In fact, they combined with the Advanced Study Section (they were generally the same people) to give a facsimile panel forum from one of their meetings at a general meeting in 1967. In that same year, the Study Section under Ron Clippinger concentrated on the Milky Way, the mass-luminosity law, and the atmospheres and interiors of stars.

Ernst Both led the Lunar Section, whose projects included measurement of the slopes of craters by observing shadows, the study and observation of ray and ridge systems, and the observation of lunar features under various illuminations. Members of the group gave reports of their observations at each meeting. In 1967, Both presented the Lunar Section with excellent notes on various lunar mysteries and on personalities like selenographer William Radcliff Birt. He also explained the measurement of co-longitude and made a chart available to members.

In 1969 the Lunar Section planned to look for lunar domes, with members expected to report on their findings at the next section meeting. The topic continued to fascinate one of the members, Edith Geiger, who has been profoundly interested in the subject ever since. She

has studied the origin of these features and has sketched them during the many hours spent observing at her telescope, often collaborating with Both on her research and observations.

These special sections that had been so active in the 1960s dissolved during the first years of the 1970s. The Elementary Study Section, Advanced Study Section, Lunar Section and Observing Section had all disappeared by 1971. A brief revival occurred when John Riggs attempted to reorganize the Observing Section. In an editorial in the September-October 1971 Spectrum, he suggested the group meet for the sheer pleasure of observing, not with any plan to contribute to scientific advancement. Meetings would be held at the Museum of Science on the fourth Friday of the month, following the Instrument Section meeting, in hopes of getting some members of that group to support the Observing Section.

Later, Riggs decided to meet at Newstead Observatory every Friday or Saturday night, depending on weather, in addition to the monthly meeting at the Museum. Topics would be decided at the time of the meeting. Poor attendance, however, caused the program to be discontinued, a decision reached by the Board at its August 1972 meeting.

Only the Instrument Section, with its determined band of telescope builders, continued to meet. Attendance varied from about five to fifteen people, but a sound nucleus of enthusiasts including Ed Lindberg, Rudy Newhauser, Bob Burdick and Rudy Buecking, kept the group healthy. Its members continued to grind mirrors and bring them to meetings where they were subjected to a variety of tests to determine their optical qualities. Buecking and Lindberg, with their many years of experience, were the chief testers, giving their expert opinions on the figure of the mirrors and offering advice on how to correct faults.

Warren Steinberg, who regularly attended, often wrote reports for the Spectrum about the Instrument Section's activities. These summaries are the only record the club has of the work done by the group at that time. Steinberg always included a list of people who attended meetings, making his reports a roster of most of the active club members from that era. He wrote about some of the "big mirrors" tested in 1970 and 1971, like Darwin Christy's 12 1/2-inch, Thad Czerniejewski's 10-inch and Gil Gagne's 10-inch, and about telescope building topics that came up among individuals or the entire group.

Occasionally Instrument Section meetings were held at private homes--Gerry Rote's in September 1973 and Tom Dessert's in January 1974--otherwise the group met at the Museum. Rote was building an observatory for his 12 1/2-inch telescope at the time. He received suggestions from Dessert for improvements he could incorporate in his design. Dessert noted that the worm gear on Rote's purchased telescope was too small for fine photographic work. Steinberg editorialized on the deficiencies of store-bought telescopes with: "I personally cannot understand why people invest hundreds of dollars in buying ready-made telescopes only to have to rip them apart to install new gears and electrical equipment upon finding

something desperately wrong with the original equipment." He went on to say people could build their own equipment for less cost and have a better instrument. Mirror-testing continued to be featured at Instrument Section meetings. Bill Deazley's 12 1/2-inch and Carl Milazzo's 4 1/2-inch were tested in late 1974. Other details of telescope building--mounts, drives and eyepieces--were discussed in detail at these meetings.

Another unsuccessful attempt was made to reorganize the Observing and Advanced Study Section during the middle 1970s. Both Dr. Fred West and Dr. Fred Price tried to bring the group to life, but poor attendance caused the section to disband despite some excellent presentations given by West and Price. West spoke on star clusters and his specialty, binary stars. Following the latter talk, he took the small group of five or six to Kellogg Observatory and gave a demonstration of the filar micrometer. The demonstration turned out to be academic--the night was overcast. With low attendance for the study part, and cloudy nights for the observing part, it's no wonder that the new section was short-lived.

A successful try at starting a Study Section occurred in late 1978. Tom Giosomo proposed a format for the section based on a similar group he had belonged to while living in New Jersey. In early meetings, the members concentrated on Kepler's Laws but, as before, membership began to decline. Giosomo promptly switched emphasis to more general topics. The group now selected its topics several meetings in advance so all participants had time for individual study. Someone versed in the subject led the discussion--and discussion was the important point. Self study and participation were the keynotes for the new group.

The leader was a regular member of the Study Section, or another member of the club who specialized in the subject at hand. Dr. Jack Mack, Rowland Rupp and Tom Dessert joined Giosomo in leading the group at one time or another during its first year of existence. Often informal papers were presented.

By late 1979 Ken Kimble took over the leadership of the Study Section, a post he held until the group disbanded in 1984. Many topics were discussed: coordinate systems, relativity, quasars, Steve Kramer's Antikythera model, celestial navigation, computers and even rainbows. While attendance often approached fifteen, the solid core of active participants included Darwin Christy, Jim Machowski, Carl Milazzo and Rowland Rupp along with Kimble and Kramer. The Study Section was revived briefly in 1987 under the leadership of Bill Rogers, but it met with little enthusiasm and dissolved after only a few meetings.

The Instrument Section continued its successful format throughout the 1970s and 1980s. Mirrors were still tested and dialogues between expert telescope makers continued. New members, enthused about telescopes and their construction, were often first introduced to the club at these meetings. Ed Lindberg remained the group's leader, his low-keyed approach always encouraging others to speak up and participate.

Interest in home-built telescopes took a different turn in the 1980s with the advent of large-aperture Dobsonian reflectors. Tristan DiLapo's 14-inch in 1982 led the new wave. Later he, Al Kolodziejczak, Carl Milazzo and Adrienne and Jerry Morris jointly owned a 26-inch. The Instrument Section's expert machinist, Bob Mayer, provided most of the mechanical work for this instrument.

Nonetheless, smaller mirrors continued to be tested, mostly by the section's leader, Ed Lindberg. A number of 4, 6, 8 and 10-inch mirrors were subjected to Ronchi and Foucault tests under Lindberg's scrutiny. Active members of the group during the 1980s were Bob Schneider, Len Milks, Dave Jauch, Dan Marcus, Gary Kielich, Joel Stuckey and Ed Czapl.

New projects were undertaken to offset declining membership. Observatory Director Dan Marcus started an astrophotography group that combined activities with the Instrument Section at Beaver Meadow Observatory. Although a separate astrophotography section was never formed, astrophotography became part of the program of the Instrument Section. A telescope pedestal donated by Bell Aerospace Textron in 1990 is currently being modified under the auspices of the Instrument Section for use as a photographic mount. It will be fitted with a 6-inch guide scope donated by former BAA member Conrad Stolarški.

The Instrument Section is less active today than in the past. Although it no longer meets on a regular basis, it convenes to work on special projects or to test mirrors as they become available. The spirit and technology of hand-crafted instruments is kept alive by Ed Lindberg's incisive articles, "Instrument Notes", which continue to be published in the Spectrum.

NEWSLETTERS

The Buffalo Astronomical Association's first newsletter, the BAA Bulletin, appeared in 1957 with Louis Reinagle as editor. Before then, only meeting notices, prepared by the club's corresponding secretary, James Clements, were sent to members. Clements held the position of corresponding secretary in 1953. The next year this post was eliminated, but Clements was placed in charge of publicity and continued to send out the notices. Thereafter, the BAA had a single secretarial position combining the recording and corresponding duties. Reinagle's newsletter was a single sheet that still announced upcoming meetings, but also included a few brief summaries of other club activities.

The BAA Bulletin was called the Spectrum by the August 1958 issue; at least that is the earliest Spectrum in the club's files. A June BAA Bulletin exists, but no July issue has been found. Interestingly, there are two numbers missing between June 1958 and August 1958, so the exact date when the new publication was first issued is somewhat uncertain.

As before, the newsletter was published monthly and highlighted the coming general meetings and, later, as they came into existence, special section meetings. Occasionally a brief article written by a member, or a summary of activities of the fledgling U.S. space program supplemented the news items. Very few copies survive from the period from 1958 to late 1961 when Paul Redding was editor and, presumably, publisher. Eventually his studies at Canisius College absorbed too much of his time and he had to retire as editor.

Bruce Cook followed Redding as editor and Daryl Knupp became publisher. Meeting news remained dominant, but a "Nuggets Department" containing brief astronomical anecdotes was added in 1962. Paul Redding was credited with one of these "Nuggets" in February 1963 in which he dispelled the idea that stars could be viewed in daytime if observed through a long shaft, like a chimney. No credits were given for "Nuggets" appearing in other issues. Anonymous "Telescope Tips" and "Astro Errors" became regular features in 1963.

By 1964 the Spectrum was published monthly and generally had two pages copied by ditto. Bruce Cook was editor and Richard Zygmunt was publisher. Although the special departments were discontinued, a series of star charts that produced a complete map of the heavens as seen by northern observers was printed over a period of several months in 1965. Edith Geiger wrote biographies of BAA members including Ernst Both, Rudolph Buecking and Edward Lindberg.

In the January 1966 issue Cook asked club members to contribute articles so the Spectrum could expand. Darwin Christy responded by writing on "Oculars and Eyepieces", an article well worth reading today by anyone interested in comparing features of different eyepieces. Another contribution, from Karl Kalweit entitled "Where is Everybody?", dealt with

extraterrestrial intelligence. Because the publication was page limited, these articles were divided and printed in two issues. Other articles appeared but no authors were given for them. Were they written by the editor, or were they contributions from others who wished to remain anonymous? We don't know.

In late 1967 both Cook and Zygmunt gave up their posts and replacements had to be found. In the interim, Ernst Both volunteered to help on a month-to-month basis until a new editor and publisher could take over. Both's temporary assignment lasted exactly ten years! To keep the flow of material steady, he asked all members of the Board to write one article per year and also asked for submissions from the general membership. The response was enthusiastic. Over the next year and a half articles were sent in by Orrin Christy, Ronald Clippinger, Kurt Erland, Dale Hankin, Fred Price and Walter Whyman. Edith Geiger wrote a biography of Walter Semerau, and Kurt Erland, consulting with Edith's husband Carroll, wrote her biography, "The Many Talents of Edith". Other topics included personal astronomical observations, telescope building techniques, astronomical history, and speculative views on life in globular clusters and on the nature of the universe. The Spectrum was now professionally printed and most issues contained four pages.

Monthly features returned to the Spectrum. They included notes on the meetings of the Instrument Section by Warren Steinberg and "Observation of Deep Sky Objects" by John Riggs. An ardent deep sky observer, Riggs wrote about objects currently visible in the evening sky, punctuating his commentary with his own views and personal observations. Kurt Erland wrote on many subjects, using a dry wit and tongue-in-cheek approach to spice his articles. He reported on his interview with Eratosthenes, a philosopher living circa 273 B.C. to 192 B.C, and wrote another paper on "The Moon Is Not Made of Green Cheese". Erland had a certain tang to his writing.

Dr. Frederick West wrote prolifically on diverse subjects. A professor at Buffalo State College, he brought the professional astronomer's approach to the Spectrum. He wrote well-researched articles on pulsars, Saturn and the transits of Mercury. Excellent lunar articles written by selenographers Ernst Both and Dr. Fred Price also appeared frequently from 1969 to 1971.

To reduce production costs the Spectrum became bi-monthly starting with the September-October 1971 issue, but was enlarged to six pages. Edith Geiger turned from biographies to a monthly feature called "Spy and Tell", a column of BAA personal news and gossip. If one were building a telescope, taking a trip or having a baby, Edith knew about it and wrote about it. Fred West continued to be a prime contributor to the Spectrum. In 1974 he wrote interestingly about his research over eight years into the star ADS14893, "A Triple Star is Gradually Discovered", in which he showed the star was not just double as previously

thought, but had a high mass, degenerate third component. William Chambers, Edward Lindberg, and William Parker wrote for the Spectrum in the early 1970s.

Darwin Christy, always a frequent contributor to the Spectrum, started a bi-monthly series of notes on meteor showers in 1974. An expert in the field, he predicted showers, gave their radiant, described their appearance, and added notes and anecdotes about their past occurrences. His column continued for nearly three years.

Robert Kirchgessner expressed his views on intelligent life in space in "Where is Everybody? One Man's View of Space Intelligence." How reminiscent of Kalweit's similarly titled article over a decade earlier.

Several editorials and reports on activities during the planning and building phase of Beaver Meadow Observatory appeared in the middle 1970s. Some were signed, some were anonymous.

Throughout his tenure as editor, Ernst Both wrote many interesting and enjoyable articles on a broad range of astronomical subjects. He wrote skillfully about his favorite topics--the moon, Mars and astronomical history. He tried to keep up a six-page paper and generally did so, although sometimes when articles from members were few he could muster only four pages. Occasionally he wrote all four of them himself, using his own work or extracting NASA news releases as a supplement. In general, however, the Spectrum, from its beginning to the present, has relied on the original writings of members of the BAA and has grown and prospered through their efforts.

Lawrence Carlino became editor and Elaine Deazley became publisher in late 1977. Thanks to an influx of material the newsletter was enlarged to eight and, sometimes, ten and twelve pages. Edith Geiger resumed writing biographical sketches of club members and continued her "Spy and Tell" column as well. Several evaluations of commercial telescopes were run in 1977 and 1978 that provide useful guidance for people in the market for a telescope. Not all reports were favorable. Rowland Rupp wrote a continuing series called "BAA Annals" in which he researched past issues of the Spectrum and summarized club activities five, ten, up to twenty-five years in the past.

Reports on personal observations of Jupiter by Larry Carlino and Fred Price appeared following each apparition of that planet. Darwin Christy wrote not only on his favorite subject--meteors, but also on "Constellations of the Ancients" and "Skies from Honey-House 1977". Honey-House is the name of Christy's private observatory, and his report is on the number of clear nights seen from that site. Good viewing, meaning at least fourth magnitude stars could be seen, occurred only ninety-one nights during the year--twenty-five percent of

the time. Nothing could be seen, except clouds, on 158 nights--a sad commentary on viewing conditions in Western New York.

Technical topics were written by Orrin Christy, Phillip Cizdziel and Carl Milazzo in the late 1970s. Orrin Christy, like his father Darwin, long supported the Spectrum with fine material. Several anonymous articles dealing with Mars, Ceres, and variable stars appeared sporadically starting in 1975. Another mystery--who wrote them?

With more pages the cost of publishing the Spectrum increased. To offset this expense, issues starting in 1978 were mimeographed rather than printed. Elaine Deazley not only typed the stencils, but also ran the mimeograph, collated the pages and mailed out the publication.

Printing was still necessary when astrophotographs were published. Tom Dessert, long an expert astrophotographer, learned to prepare pictures for printing and many of his excellent deep sky photographs were included in the newsletter.

Darwin Christy became editor of the Spectrum with the September-October 1979 number. He also took over typing, publishing and distribution. Under his management the Spectrum evolved into the eight-page newsletter that today is received not only by BAA members but also by many other astronomy clubs across the country and in Japan. They are permitted to use material from the Spectrum, provided they acknowledge the source. Through the years of his editorship Christy has received many letters congratulating him and the BAA on the consistently high standards of the articles, many of which are Christy's own, and the fine quality of the publication itself. Compliments from *Sky & Telescope* and *Astronomy* magazines, who are on the mailing list, have been received as well.

The publication contains news--meeting notices, editorials from the president and reports on actions of the board. Regular features appear in each issue. Edith Geiger's "Spy and Tell" column, noting personal activities of members, has run for decades. Her profiles of club members have appeared since 1965. She also draws the masthead, a different one every issue. Christy regularly wrote on meteor showers through the 1970s and on "Astronomical Happenings" since. He applies his extensive background in astronomical lore to writing brief articles on "Ancient Constellations" and "Astronomers of the Past". "BAA Annals", started by Rowland Rupp in the late 1970s, was taken over by Ken Kimble in 1981. When Kimble discontinued writing them they disappeared for two years until Rupp resumed the feature in 1988. Ed Lindberg's "Instrument Notes" is a regular article covering many facets of instrument making, instrument testing and technical aspects of astronomy and its related equipment. Occasionally activities of the Instrument Section also appear in this column. Poems, under the title "Sorry About That", written by Esther Goetz, were seen from time-to-time, as are astronomical cartoons from several contributors, particularly Luann Szucs.

The Spectrum continues to contain original articles, mostly by BAA members, as it has since the 1960s. They can be far-ranging. They cover technical aspects of astronomy, instruments and observing. Some are biographical, summarizing work done by astronomers and instrument makers of the past. Others are fanciful, transporting the reader to the surface of a different planet or to a different star system. Some are humorous, some are tongue-in-cheek and some gently poke fun at quaint ideas or established paradigms.

Occasionally articles of mysterious origin appear--like those of Leslie Martin and, before that, Kurt Erland. They, along with Anonymous, form a band of unknown contributors whose identities provide readers with a point to ponder.

Observation reports from a variety of members sometimes tell about unusual events; at other times they chronicle an evening's observing session. Michael Idem and Darwin Christy have written on observing conditions in Western New York. Larry Carlino has written on telescopes, eyepieces, filters and observing techniques in general. Book reports irregularly appear; some are complimentary, some are not. Ernst Both, Jack Mack, Fred Price and Rowland Rupp have reviewed books (even posters on occasion), as have others. Inevitably, obituaries of BAA members are found in the Spectrum too.

OBSERVATORIES

NEWSTEAD - The matter of a club-owned observatory and telescope had been suggested a number of times in the past, with no action taken and only moderate interest by the membership, until mid-1959, when it was decided to carry out this undertaking. With the decision made, a number of possible sites were considered and rejected; one was finally selected on property owned by Cornell Aeronautical Laboratories on Route 5 east of Clarence in the Town of Newstead. With the assistance of Dr. Seville Chapman, a long-time BAA member and official of C.A.L., negotiations were successfully concluded with that organization for use of their land as a site for the proposed observatory. Plans were made that summer and, when meetings resumed in September, funding methods were considered and put into execution. The gathering of materials was started. To meet legal requirements in connection with ownership of an observatory, the BAA was incorporated in early 1960.

Work on the observatory and telescope proceeded during the summer and fall of 1960. While C.A.L. was erecting the building, a group of BAA members undertook construction of a fifteen-foot diameter rotating dome, at first at Ron Clippinger's home, later in a warehouse on Northland Street in Buffalo. During the summer of 1961 the dome was installed on the observatory building, and details of interior construction were started.

A Pyrex blank for the 12½-inch reflector was purchased, and Ed Lindberg took charge of grinding, polishing and testing its final figure. Alan Gee, although not a member of the BAA, donated five orthoscopic eyepieces and a differential drive for the new telescope. Lou Reinagle formed a committee to design and build the equatorial mount.

Work on the observatory and telescope continued throughout 1962-1965, with the building essentially completed in 1964. The instrument was finally installed during a star party at the site in September 1965, when those present looked through it for the first time. This observatory was named the "Newstead Observatory".

Often the Instrument Section was the forum where projects for Newstead Observatory were discussed. Problems with maintenance occurred and work sorties were occasionally organized to effect repairs. Ed Lindberg, Warren Steinberg and Richard Janas painted the building in the fall of 1970, making it an eye-catching red and white checkerboard. Later, Lindberg and Steinberg were joined by Thad Toporczyk in repairing a leak in the roof.

Nonetheless, problems continued at Newstead. In March 1971 members attending the Instrument Section decided to make use of a clear night and went out to the observatory. The group noted that work was needed and supplies were required to keep the observatory in working condition. Among those items needing attention were: repairing the slow motion controls, improving the dome's shutter movement, improving the mounting alignment,

improving the dome drive and, even after the work of a few months before, making the dome more watertight.

BEAVER MEADOW - By 1972 the Newstead Observatory seriously needed repair. At its October meeting, the Board considered refurbishing the building, but concluded that a new observatory at a different site would be a better alternative. Several factors besides the poor condition of the Newstead facility influenced the Board's decision. Light pollution from the expanding eastern suburbs of Buffalo had been steadily worsening and aircraft landing lights interfered with astrophotography. Also, the controlled access to the site because of the limited number of keys discouraged widespread use of the observatory by the general membership.

The idea of moving the telescope was discussed further at an Instrument Section meeting later in the month. Obtaining a site free from light polluted skies, yet in a relatively protected location, was the primary concern. Fortunately, the Buffalo Audubon Society was, at that time, planning to develop a nature center at Beaver Meadow, not far from the excellent observing site the BAA had used for star parties at Camp Sprucelands.

Working through the Audubon Society's affiliation with the Museum, Ernst Both reported their interest in adding an observatory at the new nature site. The BAA could provide the 12 1/2-inch Newstead telescope for the observatory and be responsible for maintaining it. The two societies could undertake a joint fund raising program to obtain the money needed to build the observatory, a nature center building and a home for a resident naturalist. The Board decided to present the plan to the general membership at the meeting of December 8, 1972, where it was unanimously accepted.

A committee to design the new observatory was formed at the March 2, 1973, Board meeting. Its membership was selected from people who were interested in the technical aspects of astronomy and observation and included William Deazley, Thomas Dessert, Irving Goetz, Edward Lindberg, and Warren Steinberg. A finance committee was also set up to cooperate with the Audubon Society in gathering funds. Dessert, Edith Geiger, Goetz, and Steinberg were selected for this committee, while John Riggs was appointed chairman.

By the April meeting, the technical committee had completed preliminary plans for the new observatory building. The telescope would be housed in a purchased rotating dome. While the cost of the dome would be high, the committee felt the fund raising powers of the BAA and BAS would be adequate to cover the expense. A heated room was included in the observatory as a place to warm up on cold nights and also as a small meeting area. The design of the 16' x 24' structure was unanimously accepted by the general membership.

Cooperation between the Buffalo Audubon Society and the BAA increased. David Rote, President of the BAS, presented a slide show to the BAA highlighting his organization's plans and objectives for the nature center. A tentative legal agreement between the two clubs was read and received our acceptance.

This agreement, dated March 9, 1973, stated that the two clubs would promote a joint campaign to raise funds for the observatory and cooperate in architectural planning and construction. Its estimated cost was \$10,000. The BAS would own the building and the land, while the BAA would own the telescope and related equipment. The BAA would develop a policy of observatory use that would include programs for the public. Either party could terminate the agreement with ninety days notice.

The clubs continued to exchange speakers. In the fall of 1973, David Bigelow, later to be the first director of Beaver Meadow Environmental Education Center, spoke on the goals of the center and the progress being made in its construction. John Riggs gave a talk to the BAS on our plans for the new observatory and on the activities of amateur astronomers in general.

Fund raising began in earnest in 1974 with club members urged to contribute by Tom Dessert, John Riggs, and BAA President Darwin Christy. The BAS agreed to keep all contributions designated for the observatory separate from the general building fund for the remainder of the environmental center.

The BAS and BAA jointly sponsored a Buffalo Philharmonic Pops Concert in March. Edith Geiger took charge of the All-Gershwin concert that netted over \$500 for the two clubs. An additional \$1127 was raised in the summer when the BAA sponsored a horse show at Camp Sprucelands at the suggestion of Mrs. Octavia Black, a long-time member of the BAA and owner of the camp. More than 100 letters requesting funds from local businesses were sent out to help bolster our building campaign.

By January 1975 we had raised \$1420 toward constructing the observatory. Clearly, if construction were to start any time soon, we would have to reduce the projected \$10,000 cost. The first objective in cutting the cost was the dome, the single most expensive item in the project. William Deazley and Robert Mayer began designing a metal dome we could construct ourselves that would cost \$1,000 or less. Eventually the rotating dome was abandoned completely in favor of a motor driven roll-off roof. Tom Dessert, with Deazley's help, redesigned the observatory around this latter concept and the projected cost was lowered to \$5,000.

The BAS had expected to augment the observatory fund from a surplus of money following construction of the Fred T. Hall Building and the Mabel James House for the resident naturalist. Unfortunately, these construction costs ran higher than expected and the surplus

never materialized. The BAS felt the money used for the Fred T. Hall Building and residence had been contributed specifically for that purpose and that the agreement to start construction of all buildings, including the observatory, simultaneously did not apply.

At this point John Riggs met with Ray Regone, who was in charge of the BAS finances, to work out a new arrangement. We contributed \$1,000 from our treasury to the BAS building fund. The BAS added a matching amount specifically for the observatory and Mr. Regone provided literature and other materials to help obtain additional funds from industry.

Membership and corporate contributions plus the BAS commitment brought the observatory fund to \$2625 by the end of March 1975 and the BAA could look forward to starting construction in the summer. A \$1000 contribution from the Buffalo Foundation was later obtained after the BAA was granted tax-exempt status. Elaine Deazley handled the paperwork and other details necessary to obtain this exemption. In all, construction of Beaver Meadow Observatory eventually cost approximately \$6000.

When construction was planned, we hoped all the work, with the exception of the foundation, would be done by club members. Tom Dessert took charge of the building project and, with Gretchen Schork and John Riggs, selected and staked out the site for the building. Dave Bigelow helped find a local contractor who poured the concrete footer and built the cement block foundation. It became clear to Dessert that if the building was to be finished promptly, skilled full-time workers were needed. The club contracted the construction of the building to Timothy Biggie who had previously worked with a general contractor and had considerable experience in the building trade. Tim's brother Kenneth was a member of the BAA and, together, they spent several weeks during the summer of 1975 building the basic structure of the observatory. They did the framing, siding, interior woodwork and the roof.

Since both lived near Buffalo, they decided to stay overnight at the site and avoid the long drives between home and the observatory. Ken's van became a temporary home for the brothers. Dave Bigelow provided them with an empty oil drum that served as a cookstove and construction scraps provided fuel for hotdog and hamburger cookouts after the day's work.

Building problems had to be solved. An important one was noted early by Ken--the telescope pier was too high for the floor. An observer would have a long climb to get to the eyepiece, especially if the object to be viewed was overhead. It was easier to raise the floor than to lower the concrete pier. Thus, the observatory has two floors, the original one plus an added one separated from the first by about eighteen inches. That's why there are steps up to the observing floor from the warming room and from the outside. Even so, a scaffold is needed to observe with the approximately 7-foot focal length instrument. The space between the two floors is accessible and is used for storage.

Another problem was sealing the ends where the rolloff roof comes to rest at the wall. A strip of rubber attached to the roof was finally used to keep the building weather-tight.

Although the concrete and framing were done professionally, club members did many other chores. Bill Deazley designed the wiring and he and Tom Dessert installed it. Marty Dessert made the window draperies and, with help from Tom and the Biggies, she installed them. That same team also put down the wall-to-wall carpeting.

Finally, the structure was finished. The roof rolled off to the north at the push of a button, the south wall could be folded down to allow a view of the horizon, red lights were installed to protect acclimated eyes and Dave Steinagle's specially illuminated clock was in place. The final job of staining the outside of the structure to match the Fred T. Hall Building and Mabel James House was carried out by a crew of BAA members. Each worker staked out his patch; everything was stained, including the workers. But eventually the Beaver Meadow Observatory was completed and the time when the 12½-inch telescope could be moved to its new home was at hand.

Before the telescope was brought to the observatory, the mount was rebuilt and a 4 3/8-inch, f/10 guide telescope was assembled and mounted on the main instrument. Bob Mayer, an expert machinist, did the design and machine work. Electronics skills were needed too. Bill Deazley designed and built a variable speed clock drive for the telescope's right ascension motor. When the output transformer proved to be a problem, Deazley and Darwin Christy got together to build one specifically for the application.

The final job of getting the telescope ready for use was the alignment of its axis with respect to the pole. A superbly clear December night found Carl Milazzo, Tom Dessert and others laboring over this chilling task. For eight hours they meticulously adjusted the mount and checked the pole star for drift until they achieved the polar alignment they wanted. How good is it? When asked that question, Tom Dessert replied that a 200 millimeter focal length lens can expose film for ten minutes without any guiding of the telescope at all.

With construction finished and the telescope operating, the observatory project was complete. It was dedicated at the May 1976 general meeting held at the Center's Fred T. Hall Building. We felt that the installation offered the best skies with the largest instrument available in Western New York at that time.

The BAA appointed Tom Dessert as Observatory Director shortly after, a post he held for several years. In addition to keeping the observatory in running order, the director is responsible for checking out club members on the telescope, adding to the equipment as necessary and overseeing special programs.

The BAA had more than a dozen eyepieces, including a zoom eyepiece, several Barlows, and an illuminated eyepiece for photographic guiding. We also had a camera (donated by Dessert) that eventually disappeared, a supply of film suited for astrophotography and several star charts. Bob Mayer constructed an illuminated viewing stand for astronomical charts.

A second telescope, an 8-inch f/8 reflector, was given to the club in memory of the late Robert Kartyas by his parents. Kartyas, who had been Treasurer of the BAA at the time of his premature death, ground the mirror and built the telescope's mount himself. The instrument supplemented the larger one when a sizeable crowd gathered at the observatory, such as on public night or during star parties.

Part of the agreement with the Buffalo Audubon Society was that the BAA would set aside regular observing time for the public. This was scheduled for clear Saturday nights, except when winter snows made the observatory inaccessible or, because of icing on the sliding roof rails, unusable. The Observatory Director would be responsible for having one or more club members at the observatory to show the skies to the public.

Even with a brand new observatory, maintenance was frequently needed for the building and the equipment. By 1982 Allan Mohn and John Riggs, who had jointly replaced Tom Dessert as Observatory Director, were organizing work parties. Individual members repaired or added to the facility according to their skills and availability. Bob Mayer reworked the motor drive and clutch assembly and added teflon pads to the rings in which the telescope tube rotates. Rowland Rupp built a dew resistor ring for the eyepiece and repaired the frequency controller when it malfunctioned. When the horizontal support beams for the rolloff roof needed replacement, the BAA contracted out the work.

The policy of holding public nights was changed to limit them to April through October. Riggs and Michael Idem often teamed to present the stars to the public on a schedule of the first and third Saturdays of the month. Scout troops, school classes and other civic organizations attended group sessions at Beaver Meadow Observatory.

When Riggs resigned as Observatory Director in 1985, a succession of members held the post for brief periods until Dan Marcus took over in late 1988. Carl Milazzo was the first. He changed the public night from Saturday to Sunday, with the intention of reserving Saturday night observing for BAA members. He also sought greater media exposure and continued the policy of loaning out the Kartyas eight-inch reflector.

In 1986 Milazzo was succeeded by John Yerger, who reestablished Saturday as public night. He also conducted group observing sessions. During Yerger's tenure, Gene Witkowski donated an off-axis guider to enhance astrophotography and Dan Marcus held

astrophotography workshops at the observatory. Bob Hughes held the director's position in 1988 after Yerger resigned.

Dan Marcus established new policies when he became director. He determined to have two astronomers present to share the work load and to provide variety in the presentations to the public. They were to be at the observatory even when weather conditions appeared to preclude observing. He reasoned that observing conditions were fickle--clouds at the astronomer's home did not necessarily mean that Beaver Meadow was clouded out, and often clouds dissipated by the time the observers arrived at the site. He also eliminated the long standing mileage reimbursement used as an inducement to get volunteers to hold observing sessions.

Marcus conducted many public nights with the assistance first of Conrad Stolarski and later of David Fliss. The BAA supported public events at the environmental center by opening the observatory and allowing visitors to view the sun in the 12½-inch telescope through a mylar filter. Lynn and Wade Sigurdson, Dave Sepulveda, Gene Witkowski, Marcus and others ran astronomical computer programs at these sessions. Marcus continued to maintain the site, getting help from Hugh Pettit in repairing the sliding roof and from Ed Czapla in the ongoing effort to keep the right ascension clutch serviceable.

BEAVER MEADOW EXPANSION - Perhaps the first stirring of what became a concerted effort to expand the club's observatory was seen in an article in the November-December 1988 Spectrum, in which Marcus noted that the observatory had relatively few users. He asked if the problem was that the telescope was too small or if the site was unsatisfactory. Carl Milazzo noted that many members had telescopes as large or larger than the club's and that dew, ground fog and increasing foliage made the present site inadequate. The board asked Milazzo to accept the task of determining the consensus within the club in this matter, and to devise a practical plan for implementing changes.

Milazzo surveyed the club's membership, but no clear consensus emerged; the members favored a new telescope but were ambivalent about its format. Everything from a five-inch refractor to a 29-inch Dobsonian was suggested in the survey, and all were overwhelmingly approved. Sensing that no clear direction was obtained, and not having formed a committee to aid in developing a plan, Milazzo resigned his post in late 1989.

President Doris Koestler and Dan Marcus organized several well attended meetings in the winter of 1989-1990 to find out what, if anything, should be done. With Jack Mack's guidance, the group concluded that a quality 20-inch telescope of Dobsonian design would provide a significant upgrade in visual observation. It would supplement the equatorially mounted 12½-inch and be portable so it could be used at star parties. The committee also determined that, while viewing limitations existed at Beaver Meadow, the advantages of a

protected site with utilities more than offset the problems for the majority of BAA members. Besides, a portable telescope could be moved to a better viewing site if necessary. Implementing this program was another matter. No one was prepared to accept leadership, and few funds were available for this large task.

In the fall of 1991 newly elected board member Tom Nigrelli vowed to conduct a fund raising campaign with the intention of obtaining the \$5000 projected to be the cost of the new telescope. He, and other observers, selected a 20-inch telescope manufactured by Obsession as the instrument of choice. Large as it was, the telescope could be broken down, transported to another site and quickly reassembled for viewing. Nigrelli enthusiastically solicited cash and pledges from the membership; he had raised \$1685 by April 1992, when the club assigned \$350 from its treasury to cross the \$2000 mark.

Where to store the telescope and how to raise funds for that purpose were left to others. Rowland Rupp and Dan Marcus spearheaded this effort. With the help of Ken Kimble, Rupp developed a basic design for the expansion of Beaver Meadow Observatory. A storage room for the new telescope and a large, heated room serving as a combined library and computer center would be added to the east side of the existing building. The addition would be at a slightly lower elevation than the original structure to avoid interference with the sliding roof. Following the approval of a forum of BAA members, Rupp presented this plan at a general meeting of the Buffalo Audubon Society in October 1992. The following January he, Marcus and President Bill Smith formally requested a \$6000 building grant at a BAS board meeting.

Club member Tristan DiLapo, a general contractor by profession, offered to act in that capacity on behalf of the BAA. He revised the preliminary sketches into a set of architectural drawings and set up a plan to secure the services of reliable contractors.

In the meantime, Nigrelli, Bruce Newman, Smith and Carol Lorenc prepared a request for a grant from the Buffalo Foundation for the funds to purchase the telescope itself. Both requests were granted--\$5000 from the Buffalo Foundation and \$6000 from the BAS. Coupled with over \$3000 raised from the membership by Nigrelli and a detailed set of plans, the club was positioned to succeed in its quest for a larger telescope and an expanded observatory.

SUPPLEMENTAL MATERIAL:

1. Newstead Observatory - Ed Lindberg, Spectrum, November-December 1989, pp. 1-3.
2. Beaver Meadow Observatory - Ken Biggie, Spectrum, January-February 1990, pp. 7-8.
3. Beaver Meadow Observatory - Ken Biggie, Spectrum, March-April 1990, pp. 1-3.
4. Status of Newstead Observatory - Editorial, Spectrum, July-August 1972, pp. 5-6.
5. Our New Observatory at Beaver Meadow - Tom Dessert, Spectrum, January-February 1976, pp. 1-2.
6. Building the Beaver Meadow Observatory - Ken Biggie, Spectrum, May-June 1981, pp. 5-7.
7. Building the Beaver Meadow Observatory - Ken Biggie, Spectrum, July-August 1981, pp. 4-5.

OFFICERS, EDITORS

COLLEGE OF FELLOWS AND OBSERVATORY DIRECTORS

The following tables are lists of club officers and chairmen of special posts such as Observatory Director and Editor of the newsletter. Since the club year starts in September the years listed do not precisely correspond to calendar years. Also, new officials occasionally took their offices in the middle of the year; consequently more than one person may have held a particular post during the course of a calendar year. The member listed is believed to be the principal office-holder during the given year. In those instances where two names appear, they shared the office or the office was held only briefly by one of them.

BAA OFFICERS

<u>YEAR</u>	<u>PRESIDENT</u>	<u>VICE-PRESIDENT</u>	<u>SECRETARY</u>	<u>TREASURER</u>
1947	James McArtney	?	Clifford Stockman	Raymond F. Missert
1948	James McArtney	Raymond F. Missert	Clifford Stockman	Richard Nigro
1949	James McArtney	Rudolph Buecking	Gary Sagar	Richard Nigro
1950	James McArtney (d. 1/11/50) Rudolph Buecking	Rudolph Buecking (until 1/11/50)	Dr. F. Shirley Jones	Richard Nigro
1951	Rudolph Buecking	Raymond Missert	Gary Sagar	Eugene Wallmeyer
1952	Rev. George Walker	Eugene Wallmeyer	Joseph Grieco	Edward Kish
1953	Dr. F. Shirley Jones	Joseph Mackowiak	Lillian von Gerichten (James Clements, Corr.)	Kay Gros
1954	Jack Ballantyne	Ed Lindberg	Fred Brown	Kay Gros
1955	Ed Lindberg	Walter Semerau	George Gibson	Kay Gros
1956	Eugene Wallmeyer	George Gibson	Gerry Rote (James Clements, Corr.)	?
1957	George Gibson	?	Lou Reinagle	Mrs. George Gibson

1958	Herman Elson	Anthony Zaino	Lou Reinagle (Paul Redding, Corr.)	Marjorie Meyer
58-62	Herman Elson	Ron Clippinger	Louis Reinagle	Marjorie Meyer
62-63	Ron Clippinger	Edith Geiger	Louis Reinagle	Marjorie Meyer
63-64	Ron Clippinger	Edith Geiger	Louis Reinagle	Paul Redding
64-68	Ron Clippinger	Edith Geiger	Richard Zygmunt	Paul Redding
68-70	Fred Price	Orrin Christy	Marjorie Meyer	Edith Geiger
70-72	Richard Zygmunt	Les Stoklosa	Larry Hazel	Edith Geiger
72-74	Darwin Christy	Tom Dessert	John Riggs	Bob Kartyas
74-76	Darwin Christy	Tom Dessert	Mary Beth Gauthier	Warren Steinberg
76-77	Fred Price	Ken Biggie	Rowland Rupp	Tom Dessert
77-80	Fred Price	Ken Biggie	Rowland Rupp	Joe Provato
80-81	Al Kolodziejczak	Ken Biggie	Ken Kimble	Joe Provato
81-82	Al Kolodziejczak	Ken Biggie	Ken Kimble	Edith Geiger
82-84	Rowland Rupp	Ken Biggie	Ken Kimble	Edith Geiger
84-86	Ken Biggie	Doris Koestler	Ken Kimble	John Raymonda
86-88	Ken Biggie	Doris Koestler	David Sepulveda	Jack Empson
88-90	Doris Koestler	Rowland Rupp	Ken Biggie	Jack Empson
90-92	Rowland Rupp	Bob Hughes	Lynn Sigurdson	Steve Kramer
92-	Bill Smith	Bruce Newman	Luann Szucs	Steve Kramer

OBSERVATORY DIRECTORS

1976-1980 Tom Dessert
1981 Allan Mohn/Jim Russell (Co-Dirs)
1982 Allan Mohn/John Riggs (Co-Dirs)
1983-1984 John Riggs
1985 Carl Milazzo
1986 John Yerger
1987 Dave Williams, John Yerger
1988 Bob Titran, Dan Marcus
1989- Dan Marcus

EDITORS

1957 Lou Reinagle
1958-1961 Paul Redding
1962-1967 Bruce Cook
1967-1977 Ernst Both
1977-1979 Larry Carlino
1979- Darwin Christy

COLLEGE OF FELLOWS

1964 Ernst Both
Rudolph Buecking
Edward Lindberg
Walter Semerau

1970 Ronald Clippinger
Walter Whyman
Richard Zygmunt

1977 Thomas Dessert
Edith Geiger
Robert Mayer
Frederick Price

1985 Kenneth Biggie
Lawrence Carlino
Darwin Christy
Kenneth Kimble
Jack Mack
Rowland Rupp

1990 Daniel Marcus

COLLEGE OF FELLOWS AWARDS

1986 Daniel Marcus - Halley Comet Photography
1987 Darwin Christy - Micrometeorite Studies
1988 Robert Mayer (posthumous) - Design and
Machine Work
1989 Frederick Price - Book Publication:
The Moon Observer's Handbook
1992 Stephen Kramer - Antikythera Device Studies

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- 1986 Dan Marcus - Comet Halley Photography
- 1987 Darwin Christy - Micrometeorite Studies
- 1888 Bob Mayer (posthumous) - Design and Machine Work
- 1989 Fred Price - Book Publication - "The Moon Observer's Handbook"
- 1992 Steve Kramer - Antikythera Device Studies
- 1994 Fred Price - Book Publication - "The Planetary Observer's Handbook"
- 1997 Gene Witkowski - Lunar and Planetary Imaging
Tom Bemus - Promotion of Astronomy
- 2000 Rowland Rupp - Astronomy Education in WNY
- 2001 Bill Aquino, Tom Bakowski, Frank Chalupka, Dennis Hohman - Gamma Ray Burster
Observations
- 2004 Marilou Bebak - Community Education in Astronomy
- 2005 Alan Friedman - Contributions to Public Astronomy
- 2006 Mike O'Connor - Co-discoverer of a Supernova
- 2008 Larry Carlino - Telescope Evaluation Reporting
Alan Friedman - Prize Winning Astrophotos
- 2010 Mike Anzalone - Bringing Astronomy to WNY
- 2011 Thom Bemus - Establishing Deep-Sky Programs at Cedar Key and Cherry Springs
- 2012 Anthony Davoli - Innovative Components for Astronomers and Astrophotographers
- 2013 Mark Percy - Ambassador of Astronomy and Leader of Venus Transit Observation
- 2014 Stephen Smith - Establishing Wilson Star Party