Miami Valley Astronomical Society

History, Charter & Membership

The Dayton Amateur Telescope Makers

The Miami Valley Astronomical Society (MVAS) began in 1918 as the Dayton Astronomical Society (DAS), and was the first formally organized group of amateur astronomers in the Dayton area. Founded around the time of the first world war, one of its founding members was Colonel Edward Deeds, then president of the National Cash Register Company. His home, now known as the Moraine Farm, is located in southwest Kettering. It includes an observatory that houses a 7" refractor dating from Deed's time of residence.

Through the 1920's and early 30's, membership and activity in the society declined. About 1935, a new organization called the Dayton Amateur Telescope Makers was organized, offering an alternative to the DAS. As the name suggests, this new organization focused on telescope construction rather than astronomy in general. As a loosely organized group, they met weekly in members' homes. One of the better known members, Cash Durst, fabricated several hundred mirrors, grinding and polishing each one by hand. Young people unable to buy a finished telescope would often grind a mirror and take it to Durst for polishing. These mirrors were usually superior to commercial mirrors. (Such is often *still* the case.)

Activity of the Telescope Makers effectively stopped in 1941 when the second world war broke out. No meetings were held for the duration of the war.

Following WWII, interest in astronomy increased. The last President of the Telescope Makers, Frank Sutter, began to receive phone calls and letters from former club members and others interested in astronomy. Meetings started and participation rapidly outgrew the space available in members' homes, which were still being used as meeting locations. Mr Sutter, who had been teaching basic astronomy at the Dayton Public Library Museum, forerunner of the Dayton Museum of Natural History, arranged for the use of the Library Museum as a meeting place.

In the mid 1950s, the city of Dayton decided that the corner of Second and Jefferson would better serve the city as a parking lot, thereby forcing the Library Museum to move. The Dayton-Montgomery County Library relocated to the corner of Third and St Clair. The Museum launched a funding drive to build an independent facility on Ridge Avenue, near Triangle Park and its current location. The Telescope Makers moved along with the Museum.

The Miami Valley Astronomical Society

In 1957, the Dayton Amateur Telescope Makers decided to incorporate as a non-profit organization and renamed themselves the Miami Valley Astronomical Society (MVAS), thereby reflecting the broad interests in astronomy reflected in the membership. With the completion of the Dayton Museum of Natural History in 1958, the MVAS also found a permanent meeting place.

With the opening of the Museum, Mr Sutter and the new MVAS continued to offer classes in beginning astronomy. One aspect of this effort was a homemade planetarium constructed by the MVAS. Sewn from fabric, the "planetarium" was used in many Museum programs. Recognizing the value of a "real" planetarium, the Museum and the MVAS combined efforts and successfully attracted funding from the Junior League of Dayton for construction of a real planetarium at the Museum.

Through the early and mid 1960's, the primary goal of the MVAS was to establish an observatory. Initially, a small building was erected at the Englewood Reserve which housed a 12" Schmidt-Newtonian telescope made by a local Dayton firm, Optron, Inc. Finally, in the late 1960's, the Museum received a large grant and chose to build a major observatory on Museum grounds.

The Apollo & Junior Observatories

Named after NASA’s Apollo Program, the Apollo Observatory was dedicated in 1969. The first major task was to equip the new observatory. Because of its unique location in the vicinity of a major Air Force research and development arm at Wright-Patterson Air Force Base (WPAFB), the MVAS has long benefited from an infusion of top-notch technical talent. With funds raised by both the Museum and the MVAS, a design by Richard

Buchroeder was selected and built by members of the Society, many of whom worked in optics and engineering disciplines for the Air Force. Due to the selected design, the optical train was complex and turned out to be problematic to maintain. It was therefore later modified to a simpler Dall-Kirkham Cassegrainian design.

In 1971, a "Junior" Observatory was built behind the Apollo Observatory. This facility was designed for training people in the use of telescopes of various types. Young members of the MVAS provided the majority of the labor necessary for the construction of the observatory.

John Bryan Observatory

In the late 1960's the Air Force constructed a top-secret facility at what is now John Bryan State Park (JBSP), a few miles northeast of Yellow Springs, OH. The observatory housed two telescopes, one on a modified Baker-Nunn four-axis mount, for tracking and taking photometric measurements of Soviet satellites.

By the mid-1970's the site was abandoned, its defense function being replaced by a new facility on Maui. The Air Force telescopes and instrumentation were removed and the property reverted to the State of Ohio park system. The building lay dormant until 1977, when the MVAS obtained a lease in order to use the building as its primary dark sky site.

Although the light pollution has increased significantly during the last three years, the JBSP facility is still a premier amateur facility that sees regular, year-round use.

The MVAS Today

Today, the MVAS is one of the larger astronomical societies in the Great Lakes area. We offer our members a variety of services and facilities, as well as education and social fellowship. The MVAS hopes you will enjoy and participate in the use of these facilities, and that you will share our pride in them.

MVAS Facilities

Members of the MVAS have access to an impressive array of facilities. The combination of the Apollo Observatory, the Junior Observing and Training Station, the John Bryan State Park Observatory (JBO), and the Dayton Museum of Natural History's Planetarium and astronomical library present a unique combination of opportunities for our members.

Apollo Observatory

The Apollo Observatory is located immediately to the northwest of the Dayton Museum of Natural History, now named the Boonshoft Museum of Discovery (BMD), and is accessible through the lobby of the Museum. The original building and the 50cm (20-inch) telescope located in the dome were designed under the advice and guidance of MVAS members. The Observatory was built by the Museum using grant money from local foundations.

The original building contained an optical laboratory complete with a shock-isolated optical test bench. It also contained space on the first floor where mirror grinding and polishing was performed.

The remodeling of the Museum in 1991 resulted in the addition of a Digistar Planetarium, but partly at the expense of the MVAS optical shop areas. There is still sufficient space and facilities, however, for telescope making, and the optical bench is superb.

The second floor of the Apollo Observatory contains a large meeting room where monthly meetings and social gatherings are held. Adjacent to the meeting room is the MVAS library where members may check out most of the holdings for their use. The 50cm telescope is also located on the second floor, just to the south of the meeting room.

A glass wall permits casual inspection of the telescope by visitors, although the entire observatory is open for public viewing every Friday of the month (weather permitting).

The 50cm telescope is one of the largest telescopes available to the amateur astronomer in southwest Ohio, although increased light pollution combined with the thermal effects of the building limit its usefulness for serious amateur study. Nevertheless, the telescope's optics are excellent. Many members of the public get their first telescopic view of the heavens through the Apollo instrument, and when the conditions are favorable, it can produce stunning results.

The Junior Observing & Training Station

Directly north of the Apollo Observatory is the Junior Observing and Training Station, more commonly referred to as the Junior Observatory. Built in 1971, primarily by young members volunteering their labor, this medium sized unheated building with its roll-off roof shelters five permanently mounted telescopes. They include:

-- A long focus 8" Newtonian reflector

-- A short focus 8" Schmidt-Newtonian

-- A short focus 12" Schmidt-Newtonian

-- A 10" Cassegrainian telescope

-- A 5 1/2" refractor.

These telescopes are used for public observing sessions conducted by the Museum. Demonstrations of various types of telescope are facilitated by the selection of instruments in the Junior Observatory, and individuals contemplating the purchase of a telescope are welcome to visit the Junior Observatory to inspect and experiment with the various telescopes.

John Bryan State Park Observatory

In 1977, the MVAS was fortunate to be able to secure a lease with the state of Ohio for the abandoned Air Force satellite tracking facility at John Bryan State Park. Located just northeast of Yellow Springs, the John Bryan State Park Observatory is about 20 miles from the Apollo Observatory. The facility includes a 16-foot dome as well as a 20x20 foot roll-off roof room. It is located in a fenced-in compound providing significant security for the equipment.

MVAS equipment available at the John Bryan Observatory includes:

-- A 16" f/5.3 Newtonian with an Ed Jones mirror

-- A 12" f/11 Newtonian reflector

-- A 9" f/13.3 refractor

-- A 10" Classical Cassegranian reflector

-- A 10” Newtonian reflector

-- A motor driven camera tracker

-- A 4” refractor

-- A 5.7” refractor in a “merry-go-round” observatory

The merry-go-round observatory is a labor of love. It was built by MVAS members to the specifications of the original merry-go-round observatory built by the well-known Ohio amateur astronomer, Leslie Peltier. The Peltier family donated the original observatory to the MVAS, and although it was in a state of disrepair, many of the parts were salvageable and were used in the current merry-go-round. Anyone interested in historical amateur astronomy should definitely “give it spin.”

The facility includes a dark room and a meeting/chart room. The 12" “French Reflector” has been completely rebuilt and now includes a dual-axis drive corrector.

In addition, the roll-off roof room was completely refurbished in the spring of 1995. MVAS members donated the money and labor to elevate the central, shock-isolated pier by 12.5 inches and build a large central platform, filling most of the room, and providing an outstandingly attractive and comfortable viewing area. The 16-inch reflector, with its absolutely superb optics by MVAS member Ed Jones, is the current centerpiece.

John Bryan Observatory Access

All MVAS members are welcome and encouraged to use the John Bryan Observatory facilities whenever they like. The park closes and usually locks its gates 30 minutes after sunset because of the dangers associated with a deep gorge which traverses the park. However, unrestricted access is available to all MVAS members by obtaining a key to the complex. Keys can be obtained after six months of membership and upon qualification. (MVAS members may request a qualification package at any general or board meeting). Members who do not have keys can still use the facility regularly by making arrangements with those who have keys.

As a favor to the park for the use of the facility, the MVAS provides biweekly star-gazes for the public at John Bryan State Park during the summer months. The star gazes generally wrap up by 11pm, and the Observatory is generally open after that for use by MVAS members who have not yet qualified for key-holder status. (Procedures for qualifying for all MVAS observatories are available upon written request.)

Boonshoft Museum of Discovery, Planetarium and Library

The recent remodeling of the Museum brought the addition of a new planetarium sporting a Digistar projector. One of only 15 in the United States, the Digistar is run entirely by computer and is capable of displaying anything that can be portrayed on a computer video display. Although the Planetarium is not an asset of the MVAS, our direct association with the Museum makes the Planetarium available for MVAS events such as the annual Apollo Rendezvous, the MVAS Christmas Party, and others.

The Museum's recently remodeled library houses over 10,000 volumes in its collection, including the complete run of Sky and Telescope (dating to the early 1940's) and most of Astronomy magazine's production. This library offers the MVAS member an impressive research capability.

The above facilities provide an ideal balance for the MVAS member. Within the city of Dayton, five quality telescopes and one large telescope are easily and routinely available. When darker skies are desired, the John Bryan State Park Observatory is only about 30 minutes away with instruments of a size and optical quality not often available to the average amateur. A world class planetarium is available, as well as a newly remodeled Museum library, the MVAS's own meeting room, and other excellent meeting facilities.

The MVAS Mission

The MVAS serves two functions. The first and primary function is public education in astronomy and science**.** We promote education by bringing astronomy to the public through regular star-gazes at John Bryan State Park, special stargazes at the Museum, and by opening the Apollo Observatory every Friday night.

MVAS members support a number of functions at local schools each year, and MVAS members work with young people on special projects including optical design and telescope making. We also provide information to the local media through newspaper articles and radio/TV announcements.

Our second function is to promote amateur astronomy. The MVAS provides a forum where amateurs can get together, share ideas on astronomy subjects, learn from more experienced members, assist new or less experienced members, and simply enjoy the fellowship of a group of individuals sharing a common interest.

A "Year in the Life" of the MVAS

The year kicks off with the Annual Meeting of the Society on the second Friday in January. At this meeting, the Society elects members to the Board of Trustees, the governing body of the Society. The Board then elects the officers of the Society.

In February, the MVAS sponsors the Frost Bite marathon. Originally billed as a "practice" for the next month's Messier Marathon, the Frost Bite marathon is held at the John Bryan Observatory. It has evolved into a semi-formal observing party for the diehards willing to brave the cold of Ohio's February nights.

In March, on the weekend nearest the new moon, we traditionally host the Messier Marathon. On that night, members of the MVAS converge on John Bryan State Park Observatory to compete (in a friendly and helpful fashion) to find as many of the famous Messier objects as possible. It is theoretically possible to find all 110 objects in a single night at this time of the year.

In June, the MVAS hosts its annual convention, Apollo Rendezvous. Amateurs and a few professionals from around the country and nearby parts of Canada attend this day and a half affair. Held in lieu of the June monthly meeting, Apollo Rendezvous hosts a telescope fair, a computer software fair, a flea market, and photography and research displays, all catering to amateur astronomy. Major vendors of astronomical equipment, supplies and literature are on hand, often with special prices. Technical and educational talks are presented, and an informal slide show on Friday evening usually spreads the word on new developments of interest to local amateurs such as telescope making, observatory design, etc. One or more main speakers of noteworthy fame make presentations on Saturday afternoon. Door prizes and a raffle prize round out the formal part of Apollo Rendezvous.

Afterwards, there is an "open" dinner for attendees at a location such as Young's Dairy, followed by an open house at the John Bryan State Park Observatory. A clear night can keep the festivities going until the wee hours of Sunday morning. Apollo Rendezvous has become a "must see" event for many amateurs throughout the Midwest, and attendance in recent years has grown to over 300.

From Memorial Day through Labor Day, the club conducts public stargazes at John Bryan State Park. The star gazes are held the first and third (and fifth if the calendar permits) Saturdays of each month. Activities include an informal slide show usually by the museum's Curator of Astronomy, a question and answer period, and several hours of viewing through member-provided and operated telescopes (weather permitting). A special star gaze, in conjunction with the park's Fall Campout, is held in October. During this particular event, John Bryan State Park campers are brought to the Observatory via hay wagons for a special open house.

October sees the MVAS in force at John Bryan State Park Observatory for the annual picnic. The menu is pot luck, the program regularly ends up with informal slide shows or quizzes, and with luck, an all night star gaze follows.

December hosts the annual Christmas Party. This is also a potluck affair, held in the Apollo Observatory. A planetarium and laser show is generally on the agenda, as well as astronomical related games such as "name that constellation."

As mentioned before, each Friday night finds the Apollo Observatory open to the public (weather permitting). In addition, classes by MVAS members are generally offered each winter through local Adult Education systems.

It is a busy calendar, but it's a lot of fun, and participation in the various activities end up a rewarding experience. We would be delighted to host your attendance at any or all of these events!

The MVAS and the Boonshoft Museum of Discovery

Since its incorporation in 1957, the MVAS has been associated with the Museum. This arrangement has successfully provided for the enhancement of the operation of both the MVAS and the Museum for many years.

The opening of the Apollo Observatory in 1969 allowed the MVAS to move its headquarters and take up permanent residence at the Museum. The Apollo Observatory, along with the Junior Observing and Training Station, are owned by the Museum, as are the 50cm and two of the five telescopes in the Junior building. The Museum, therefore, maintains responsibility for the facilities and these three instruments, although maintenance is usually performed by the MVAS.

The MVAS and the Museum maintain a written agreement to ensure each organization is mutually beneficial to the other. The MVAS supports the Museum in public education in astronomy and the Museum publicizes and supports the operation of the MVAS, in addition to providing facilities support. Access to the Apollo Observatory by MVAS members is governed by the MVAS Qualification Committee, with final approval of key and alarm code issue being granted by the Museum.

MVAS Committees

Three standing committees ensure the successful continued operation of the MVAS by providing the labor resources necessary for operational support. These committees include the Qualifications Committee, the Observatories Committee, and the Apollo Rendezvous Committee. Each of these committees is chaired by an MVAS member appointed by the MVAS president with membership made up of volunteer members. Other short duration ad hoc committees are formed from time to time to provide short notice, quick responses to unique problems or opportunities. These committees often consist of a single member studying a particular problem or area, with results reported to the Board of Trustees within a month or so of formation.

Qualifications Committee - The MVAS oversees three buildings containing equipment worth thousands of dollars. In order to assure proper use and safety of the equipment and facilities, qualification procedures have been established for each of these facilities. Upon the satisfactory completion of qualification training on MVAS equipment and facilities, members are granted unsupervised and unlimited usage of equipment for which qualification training has been received. All MVAS members are encouraged to become familiar with the equipment and facilities of the MVAS through qualification and to use that equipment for their education and enjoyment.

The Qualification Committee receives and acts on written requests for qualification, records all qualification training performed, updates qualification procedures to account for new equipment and facility upgrades, and appoints qualifiers.

Complete written procedures for receiving qualification training are available upon request. Feel free to ask any MVAS officer.

Observatories Committee - This committee oversees the upkeep and trouble-free operation of the three MVAS observatories. Recommendations for improvements and reports of needed repairs are received and acted on by this committee. Activities receiving approval by the Board of Trustees are carried out under the auspices of this committee, often through the formation of volunteer work parties.

Participation in this committee offers MVAS members an excellent opportunity to gain first-hand experience in the repair and upkeep of astronomical instruments and observational facilities.

Apollo Rendezvous Committee - This committee is responsible for successfully managing the annual Apollo Rendezvous event. Apollo Rendezvous is an important source of income for maintaining MVAS equipment and facilities. This committee is charged with the planning and execution of the annual Apollo Rendezvous and reaches a peak of activity in the April - June time-frame. Activities of this committee include arranging for major speakers, publicizing the event, printing and mailing invitations, organizing the various displays, inviting vendors, soliciting door prizes, and handling advance registrations. Coordination with the Dayton Museum of Natural History plays a key role and obtaining a rounded out cast of guest speakers is also a critical activity.

MVAS Organization

The MVAS is governed by a set of by-laws, a copy of which is included in the New Member package. A brief synopsis is presented here:

The MVAS is a non-profit organization dedicated to furthering the knowledge and enjoyment of astronomy. The organization is governed by a Board of Trustees whose members are elected to three year terms by the general membership. All members eighteen years and older may vote in elections.

Immediately following the annual election of Board members, the Board elects, from its own membership, the officers of the MVAS, which include the President, Vice-President, Secretary, and Treasurer. The newly elected President then appoints members to the chairmanships of the three standing committees and solicits volunteers for the general membership of each committee. All committee meetings, usually held just before either the regular monthly or board meetings, as well as the monthly board meetings themselves, are open to the general membership, and participation by members at large is encouraged.

Regular monthly meetings are held the second Friday of each month at the Apollo Observatory, at 7:30 pm, and the Board of Trustees meet the third Friday of each month, also at the Apollo Observatory at 7:30 pm. The regular monthly meetings consist of a short business segment followed by refreshments and a special program. The primary business issues are reserved for discussion in the Board meetings. The 50cm telescope is pressed into service if weather permits, and the public is invited to use the telescope, even during MVAS programs.

How Can You Participate in the MVAS?

Every member of the MVAS is encouraged to actively participate in both the operation and the activities of their Society. Participation in committee functions and board meetings is encouraged and is by far the best way to keep current with activities of the MVAS. Often, members would like to help out but they don't know what to do or where to begin. You can start by talking to the committee chairpersons, especially Apollo Rendezvous and Observatories, and by attending the Board meetings where the business of the Society is discussed. You may have special interests such as photography or telescope making. Again, the place to start is with the General and Board meetings.

If you are just beginning your experience in astronomy you may have many questions, including "How do I get started?" If so, feel free to contact one of the officers of the Society. You will find their names and phone numbers listed in each issue of the Amateur Astronomer, the MVAS's newsletter. These people can often answer most of your questions and at the same time, direct you to the best resources available.

The Amateur Astronomer Newsletter

The *Amateur Astronomer* is the newsletter of the MVAS. It contains results of Board meetings, notices of upcoming events, articles by MVAS members,

and in general keeps members current on MVAS activities.

Benefits of MVAS Membership

As a member of the Miami Valley Astronomical Society, you will immediately receive many benefits and privileges. They include:

- Access to all MVAS resources, including the Apollo Observatory (AO) at the Boonshoft Museum Discovery (BMD), the Junior Observatory, also at the BMD, and the MVAS dark sky observatory at John Bryan State Park (JB) near Yellow Springs, OH. These observatory facilities support numerous telescopes, including the 20" Cassegrainian at the AO, 16", 12.5" and 10" reflectors at JB, 9", 5.7" and 4" refractors at JB, and others.
- New Member Package including tips on observing as well as purchasing a telescope
- Use of the MVAS astronomy library at the BMD
- Participation in astronomy activities including Star Parties, educational programs and group trips
- A subscription to the *Amateur Astronomer*, the newsletter publication of the MVAS
- Special club subscription rates to *Sky & Telescope*, *Astronomy* and *CCD Astronomy* magazines
- Membership in the Astronomical League and a subscription to the League's newsletter, *The Reflector*

Welcome!

If you are not yet a member of the MVAS, we invite you to consider the many benefits of becoming a part of this great group. If you recently joined, we hope you will enjoy your MVAS membership and we look forward to seeing you at our many activities. The key point to remember about the MVAS is that it is YOUR organization, and you can get out of it what you want. We offer a lot a talent and resources for enhancing and augmenting your astronomical interests and experiences. You need only ask!