

Martz Observatory Update

May 2011
June 2011



Volume 2, 2



Photo taken from the **Martz Observatory 24 inch telescope**

HELIX NEBULA NGC 7293

This is a fine example of a star that has evolved into a planetary nebula and is said to be one of the most beautiful of the planetaries. It has been known since about 1824.

This particular object, located in the constellation of Aquarius is close when compared to other planetaries. It has been estimated to be about 450 to 700 light years distant and is believed to be somewhere between 6,500 to 12,000 years old.

These types of nebula are among some of the most mysterious objects known due of their unexplainable characterizes. The central star is a white highly energetic dwarf that causes the surrounding shell of expelled gases to fluoresce.

The mystery that is least understood are the ansae (meaning handles) or knots of gas shooting along the axis of these types of nebula that are yet to be explained and accepted by a theory of their origin.

FLASH There are opportunities for all those who wish to join in to help during our work parties. Check our web site calendar for work dates and feel free to volunteer a few hours of your time for a worthy cause.

Events for

May

June

At the Observatory

General Meeting

May 11th 7:30 pm

June 8th 7:30 pm

Nominations to be taken for officers

Board Meetings

May 25 7:30 pm

June 22 7:30 pm

Events

Public Nights

May 28 8 pm

OFFICERS:

President:

Gary Nelson

Vice President:

Brian Ceci

Secretary:

Richard Carlson

Treasurer:

John Anderson

Project Manager:

Tom Traub

Board members:

Richard Fuchs

Richard Rose

Tom Traub

STORMY WEATHER PARTY

On Wednesday March 9, 2011 our members would brave the strong winds of the day to gather at a small restaurant in Busti, New York for our traditional year end party. Twice this event had to be cancelled during December due to stormy weather.

Now that March was upon us we found it fitting to rename our festivity an Equinox Party, a fitting name suggested by one of our members. Our belated event was attended by 30 people who braved the day's high winds for an enjoyable evening while dining and having conversation.

President Nelson spoke after diner as master of ceremonies recalling the events that had taken place at the observatory during 2010. It was during this time each person received a ribbon wrapped rolled up record of events that had taken place during the year.

Following Mr. Nelson's opening, he handed out gifts that had been intended for Christmas, now finding them transformed into St. Patrick's Day gifts complete with shamrocks in place of bows. The next event of the evening were presentations of service awards to Wolfgang Dunker and Richard Carlson for their work as of Night Sky Network coordinators for our organization.

To close the evening, we were honored once again to have Phil Evans, a long time member and story teller who has many times captured audience imaginations at the observatory with his extraordinary ability to bring alive people and historical events in astronomy. Mr. Evans is a rare amateur astronomer, in as much as he is less interested in what he can see in a telescope than looking up to see the night sky itself and all it has to offer. Phil's passion is collecting and reading books on astronomy, particularly old books and accounts of discovery. During Phil's talk, he took us back in time before telescopes were invented, a time when great astronomers like Tycho Brahe and Johanas Kepler were among those who laid the foundations of modern astronomy. It was not an easy time to live in those days and there were heavy burdens placed on the shoulders of astronomers, one of which resulted in taking the life of Tycho Brahe, Mr. Evans had spoken about.



PAUL W. HARRIS JR.

5/19/42 – 2/26/11

Paul Harris Jr., was a person whom Martz Observatory members will forever be indebted. Paul owned and operated H & H Metal Specialties in Jamestown, New York. We owe our gratitude to one of the kindest, most generous gentlemen this writer has ever known. Mr. Harris will be remembered for his selfless contribution he made to benefit our community. It was by his generosity the Martz telescope fabricating members were given an opportunity to have been allowed full access to his facility during off hours for a long period of time to complete the present day Marshal Martz Memorial Astronomical Association Inc. 24 inch telescope.

Mr. Harris' contribution to his community was entirely without fanfare. The countless hours utilized at his facility by Martz build members consumed materials, utilities and use of machinery entirely without cost, to complete the final fabrication of one of the largest public observatory telescopes in the State of New York

Fortunately Paul, as he was known by those knew him lived to see the large telescope completed and leave his business and be erected at the observatory located on a hill top outside the town of Frewsburg, New York. Thankfully he was to learn of the remarkable images being captured by the 3,500 pound telescope, an accomplishment that would more than likely never would have happened without his contribution.

It is with great sadness Paul will be no longer part of our lives. We'll miss him greatly, but will never forget him for all he had given to his community. Paul had spent his life as a true family man and had pursued being active in many organizations during his life time.

JULY 2011

							July	
Sun	Mon	Tue	Wed	Thu	Fri	Sat		
					1	2		
3	4	5	6	7	8	9		
10	11	12	13	14	15	16		
17	18	19	20	21	22	23		
24	25	26	27	28	29	30		
31								

This year, July has 5 Fridays, 5 Saturdays and 5 Sundays. This happens once every 823 years

Nominations of officers will be taken for three positions on the board . You must have a regular membership or higher to qualify for the positions. Voting will take place in June at our annual meeting.

SITE OF THE MONTH

The Lunar Reconnaissance Orbiter Camera

http://wms.lroc.asu.edu/lroc_browse/view/orient_100m

<http://lroc.sese.asu.edu/>

OBSERVATORY UPDATE

Up to recently, all work on our 24 inch telescope has been concentrated on its drive system, cooling system and the Finger Lakes imaging camera now being used to bring in an impressive array of celestial images.

The latest addition to the telescope has been to install three small cooling fans to the outside of the mirror cell comprising of the primary 24 inch mirror and its supporting system. The purpose of these fans is to equalize the temperature of the glass with the air surrounding the telescope. When the ambient air temperature and the glass are not equalized, the result will exhibit itself as distortion of the optical images being taken.

To compensate for the Earth's rotation when the telescope is used to take time exposures, the telescope incorporates a means of accurately staying on an image utilizing drive motors and a computerized system. In a relatively short period of time the telescope would move to a position where the dome shutter opening would no longer provide an unobstructed view of the sky since it was stationary relative to the Earth's rotation.

To correct this problem our build team linked up the dome's motor drive's system to the telescope drive's system. This task involved devising an encoder system and mounting it to track the position of the dome in relationship the telescope's position. In addition to the hardware, wiring and electronics a call was made to Dave Harvey on 3/12/11 at Comsoft in Tucson, Arizona, the builder of our computer system. Dave guided our people through a series of inputs and calculations as part of the set up procedure required to initiate the new dome control system and in what was described as a "little bit of magic" the dome and telescope now function in unison with each other. This addition has been another major achievement toward remotely controlling the telescope.

Funding for the telescope drive systems, the dome tracking system and the Finger Lakes imaging camera was obtained through the effort of Senator Kathy Young whom we owe our gratitude.

A MOON FACT

A 95-percent illuminated moon appears half as bright as a full moon

Believe it or not, the moon is half as bright as a full moon about 2.4 days before and after a full moon. Even though about 95 percent of the moon is illuminated at this time, and to most casual observers it might still look like a "full" moon, its brightness is roughly 0.7 magnitudes less than at full phase, making it appear one-half as bright Credit Space.com.

GROW WESTERN NEW YORK

Much can be said about perhaps one of Chautauqua County's best kept secrets. What began as a dream for the late Marshal Martz to build one of the largest telescopes built by one man became an enormous undertaking that few would have attempted. The task took many years of planning and work to grind and polish the optics he was to install into the telescope he had fabricated in 1965.

Mr. Martz had been invited to teach astronomy at the Jamestown Community College where he served for several years until his retirement. Many area residents still recall having been one of Marshal's astronomy students.

During the time Mr. Martz taught astronomy at JCC, he was engaged in constructing an observatory on a hill top outside of Frewsburg, New York to house the instrument he had constructed. Unfortunately, Marshal's health began to fail and his dream began to fade until his untimely death.

Marshal's wife, Mary Martz had a keen interest to continue the legacy her husband left behind by allowing a group of amateur astronomers to use the observatory facility. Mary became instrumental in incorporating the newly formed organization into the present day Marshal Martz Memorial Astronomical Association, Inc. Today the observatory is owned by the association having been a gift by Mrs. Martz.

Many changes have taken place in recent years. The large telescope Mr. Martz worked on 50 years ago did not meet the requirements expected by today's standards and was retired. A modern instrument, having the capability expected of an astroimaging telescope now resides in place of the original 30 inch telescope.

The present day Martz 24 inch telescope is slightly smaller, weighing in at 3,500 pounds, but with its improved optics and a precision tracking system that allows for stunning images are now being taken using the latest CCD imaging technology.

The Marshal Martz Memorial Astronomical Association, Inc. is a non-profit organization

The emphasis of our association is observational astronomy; well rooted in education and enjoyment of the starry skies. We volunteer our time to offer programs to the general public, schools, scouting and church groups. We also provide public nights on a year round basis as noted on our web calendar. Please visit <http://www.martzobservatory.org>

A prerequisite to visiting the observatory is to always dress warmly. There are areas that can not be heated. There is a restroom available at the observatory.

MENTORED STRIDERS VISIT OBSERVATORY

On Saturday 2/26/11 the Martz Observatory was host to a group of mentored Chautauqua Striders. For a number of years we have hosted various scouting groups, church groups, school groups, open house groups, provided programs for challenged people, seniors, special invited people and a host of others, but never a mentored group.

The mentored Strider visit had become an opportunity for our staff members to hone their skills once again to create an interesting interactive visit for middle school students. Together on this day 32 people gathered for a fun filled afternoon.

Alexandra Caldwell, the mentoring match facilitator mentioned while setting up the scheduled visit and tour the kids would most enjoy looking forward to an educational/fun filled experience with possibly some hands on things to do. Many of our hands on materials are obtained from the Night Sky Network, an organization sponsored primarily by NASA and JPL.

The Striders began their day learning briefly about the Sun's family of planets, moons, asteroids including a bit about telescopes. A large showing of hands during this presentation led the way into the next segment of the program, the hands on fun part to enhance their learning experience.

The hands on portion of the program brought out curiosity during the activities connected with the materials being used. Learning how craters were formed on the moon's surface has always been a hit and received much interest even among the adults in the group.

Our next portion of "hands on" was especially well received. It would be a first for everyone to have in their hands a meteorite that had once fallen to Earth as a shooting star. One of our staff members spoke about how shooting stars are not stars at all, but small pieces of debris having been captured by the Earth's gravity.

Upon conclusion of the lecture and hands on program, members of the Strider group were led to the observatory to see and learn about the large telescope under the dome. Many times someone will exclaim "Oh my God, this is what we came for" and this time was no exception. Although it was very cold under the dome, all were impressed by the size of the telescope and endured the non heated part of the facility to listen to our staff members describe how the telescope works and moves to look at different parts of the sky.

The tour group continued to the control room to learn about the telescope's motion controls and to view some selected images taken by the imaging telescope camera. To conclude the visit the Striders were briefly shown several portable telescopes in an annex room that are used during favorable warm weather nights for general viewing.

Upon departure, everyone was encouraged to return when the skies are clear and the weather is warm. Several book marks and a photo taken by the observatory were handed out to each student during their departure.