May - June 2023 Newsletter

MARTZ·KOHL OBSERVATORY

Marshal Martz Memorial Astronomical Association Inc.

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www.martzobservatory.org

Library Telescope Program

Thanks to the **Chautauqua Region Community Foundation**, the **Martz-Kohl Observatory** will be offering the Library Telescope Program in the **Falconer Library**, **Kennedy Library, Randolph Library**, and **Myers Memorial Library in Frewsburg**. The Library Telescope Program places telescopes in local librbaries instead of in schools, allowing greater access to the telecope since they can be put into circulation just as a book is. The goals of the program are to help foster scientific literacy, to stimulate interest in astronomy, enable people who have never looked through a telescope the chance to expeirence the excitement that comes from discovery, and to provide a valuable asset for the library. The Orion StarBlast 4.5-inch Astronomical Telescope's table top design makes it easy to use for the young and the young at heart.

Space STEM Camp

Thanks to the **Chautauqua Region Community Foundation** and **Shults Auto Group,** the **Martz-Kohl Observatory** will be offering a **Space STEM Camp** for grades 6 through 9 in partnership with **Falconer Central School District**. Students will learn about the history of space observations and explorations, build their own telescopes, build and launch model rockets, and investigate the spectrometry of stars. Students will have a chance to view the night skies through the lens of the observatory telescopes and become part of a community of star gazers and amateur astronomers with remote access to the 24" telescope. The **Space STEM Camp** will help students improve their life skills and is an excellent way to teach students to work as a team. Students participating in the **Space STEM Camp** are from nine different schools throughout Chautauqua County.

Aurora of April 24, 2023. Image by member, Dave Wilkins of Warren, PA.

Binoculars & Telescopes: Types & Choices

Wednesday, June 21st, at 7:30 p.m. EDT

What are some of the different types of binoculars and telescopes? What is recommended for beginners that doesn't cost a lot? What should you look for when buying? Why do you need different eyepieces? There are many considerations when buying something to learn about astronomy and view the night sky. **Gary Nelson**, licensed optician, former professional telescope dealer, and long-time president at the Martz-Kohl Observatory will answer these questions and more. Gary took astronomy courses in college and learned to grind telescope mirrors from Marshal Martz, the "Martz" in Martz-Kohl Observatory! Gary taught mirror grinding classes, manufactured telescopes for beginners, and repaired telescopes and binoculars for over twenty years. Gary and other observatory members will be available after his talk for hands-on consultation. Visitors are encouraged to bring their telescopes or binoculars to seek help in their use or to learn tips and tricks. For more information go to: www.martzobservatory.org Admission is free, but donations are welcome.

The **Martz-Kohl Observatory Lecture Series** is ongoing. Speakers have included educators, NASA staff, professional astronomers, and observatory members. We now have over 30 lectures online, available to view on-demand. Many topics are available but some of our favorites include the birth and death of stars, blackholes, Mars rovers, space junk, Artemis missions, astrophotography, and there are many more!

Check them out at: https://martzobservatory.org/observatory-lecture-series/

Randolph Scout Pack 103

Warren Scout Pack 26

Brian Ceci, John Anderson, Tom Traub, and Marie Plumb participating in STEM Wars held at Jamestown Community College.

Jill Wiltsie, Frewsburg Lions Club President, presenting a check to Gary Nelson & Tom Traub.

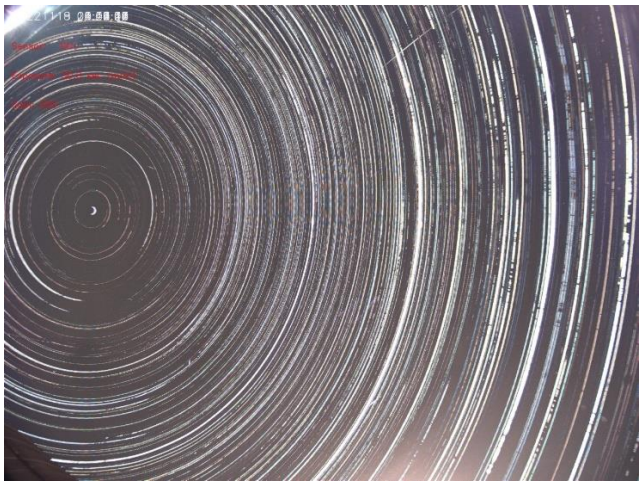
Randolph Elementary School

The Martz-Kohl Observatory's All-Sky Camera

The goal to have an all-sky camera at the observatory has been in the works for many years. First limited runs were with a camera and tripod setup with the thought that a permanent unit would be in place at a future date. Several members did their own setups to achieve good results. Finally in January of 2020 a group of members started looking a creating an All-Sky camera for the observatory. Among those involved were Corey Swanson, John Anderson, Brian Ceci, Andy Felong, and Tom Traub. Corey created the first basic working model of a small self-contained system along with a weather proof housing. Finally in July of 2022 Andy put together a complete unit and started testing using some of Corey's components. We finally installed the unit on November 4th, 2022 and have been imaging ever since. The All-Sky Camera system consists of a ZWO CMOS camera with wide angle lens that captures a field of 126 degrees north to south and 94 degrees east to west controlled by a Raspberry Pi microcomputer running All-Sky software and a solid-state hard drive all contained in a weather proof housing located on the roof of the observatory next to our Boltwood II weather station and La Crosse weather station. The system is connected to our Wi-Fi network and uploads images to our website once every few seconds during daylight and once every 30 seconds at night. Once a day the night images are compiled into a time-lapse movie that can be viewed. Another image is a compilation of the whole night's images, creating a star trail image which highlights meteors, satellites, planes and other phenomena. We have recorded fireballs to the American Meteor Society (AMS) along with the disintegration of an asteroid in our atmosphere shortly after its discovery. To see the images, go to our website at www.martzobservatory.org Under the "Observing" menu, click on "Observatory Control Room." Once there, click on the Observatory All-Sky Camera image. You will open a browser tab and see the latest uploaded image. Look at the icons on the left and click the circle to see star trail images or click the triangle to see time-lapse movies. The direct URL to the live image is https://martzobservatory.org/allsky

All-Sky Camera & Weather Stations

Meteor Fireball Reported to AMS



Star trail image with Asteroid breakup in upper left corner.

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President's Update

I hope all of you that this newsletter reaches are well. We have been busy up here on the hill. In addition to having over 220 people come through our doors to tour the facility during Doors Open Jamestown, which many were first time visitors, we had around 150 people show up on February 1st to view the Green Comet. Even though it didn't appear to be the nice green color people were seeing in the pictures, they were no less impressed that they actually got to see a comet with their own eyes. In addition to these public events, we have been busy with the regular group visits and tours. Several projects are planned for the summer for building maintenance and landscaping, and we could use your help. If you are interested in volunteering, feel free to contact me at coreyswan2@gmail.com I encourage all members to come to the **Martz-Kohl Observatory** to see what has been happening for yourselves. I will see you soon and clear skies!

Astronomy Type Events in May & June

May 19	**New Moon.** No moon light to obstruct your view of the stars.
May 23	**Lunar conjunction with Venus.** Look due East about ½ to the zenith (45 degrees). You can view Venus below the Moon with Pollux and Castor – bright stars in the constellation Gemini (the twins) just above the moon.
June 16	**Lunar conjunction with Mercury.** The Moon and Mercury will appear very close together in the night sky. Just before sunrise, about 5:30 a.m., Mercury will be just below the Moon and slightly above the horizon looking East. Jupiter can be found a bit higher, to the right of the Moon.
June 18	**New Moon.**
June 21	**Summer solstice.** The June solstice occurs on June 21st, at 10:58 a.m. EDT. It occurs when Earth's north pole has its maximum tilt toward the Sun. This is the longest day of the year in the Northern Hemisphere and the shortest day of the year in the Southern Hemisphere.

Calendar of Events

May 17	On-site presentation with **Tom Traub,** "***Getting Ready for Two Upcoming Solar Eclipses,"*** at 7:30 p.m. It will be available online via Zoom.
June 8	**Give Big CHQ -** 24-hour online fundraising event.
June 21	On-site presentation with **Gary Nelson, *"Binoculars & Telescopes: Types & Choices,"*** at 7:30 p.m.
July 19	On-site presentation with **Marcus Warren**, NASA Solar System Ambassador, at 7:30 p.m.

Are you enthusiastic about sharing knowledge? Do you have experience (or are looking to gain experience) maintaining a website and/or being an administrator on Facebook and Instagram? Do you grok WordPress, HTML or Linux? Andy Felong (andy@redwoodhouse.com) is looking for someone to help communicate what's happening at the observatory and to educate and inform people about Astronomy and Space.