



MARTZ-KOHL OBSERVATORY

Marshal Martz Memorial Astronomical Association Inc.

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www.martzobservatory.org

Educational Outreach

Students from the **Salamanca High School Book Club** enjoyed a presentation by Tom Traub, Brian Ceci, and John Anderson from the Martz-Kohl Observatory on March 29th, via Zoom, hosted in the virtual classroom.

The presenters spoke about all kinds of things “out of our world” such as black holes, imploding stars (supernovae), UFOs, how we are all made of “star stuff”, and how long it would take us to get to other places in space. The students were also treated to a tour of the Martz-Kohl Observatory via Zoom, and marveled at the two big telescopes, the “outdoor classroom” with the roll-off roof, the planetarium/classroom, and the control room where the images are taken.



“Thank you for giving up your personal time to help some of us become better acquainted with astronomy and the Martz-Kohl Observatory for our Salamanca High School Book Club. You brilliantly used the available technology to take us on an eye-opening tour. We were very impressed with the equipment, varied classrooms, and the images you take. Thank you to the entire Martz-Kohl Observatory for the wonderful work you do and your willingness to share it with everyone. Warmest regards, Polly Hanson, SHS Library Book Club Advisor.”

Space Radiation: Health Risks for the Astronaut Corps

Wednesday, April 20, 2022, at 7:30 p.m.



Radiation exposures at doses relevant to spaceflight increase the risk for developing long-term health outcomes like cardiovascular disease and cancer. Understanding these impacts is critical to adequately inform the crew and NASA about the potential risks of spaceflight. This presentation by Dr. Robin Elgart will provide a brief description of the space radiation environment, as well as a summary of a study assessing excess cardiovascular disease or cancer mortality in early NASA astronauts to highlight the challenges of radiation protection in space. The Space Radiation Element is responsible for characterizing the effects of space radiation exposure and developing tactical mitigation strategies to reduce these risks.

Dr. Robin Elgart is the Space Radiation Element Scientist in NASA's Human Research Program at Johnson Space Center in Houston, TX. Robin's primary objective is to develop and execute a robust applied research strategy to meet the agency's goal to safely put the first woman on the Moon and the first humans on Mars. Her team seeks to learn how space radiation can affect health outcomes. This work not only helps NASA understand what astronauts may face, but also helps her team develop strategies to protect astronauts throughout their careers and into their retirement.

As the daughter of two biologists, she grew up in an environment made for a budding scientist. "As a kid, I learned about pollination and plant biology in our veggie garden, tried to dig up dinosaur bones in the backyard, and practiced how to craft evidence-based arguments over dinner table discussions," Elgart recalled. She took this love of science to college and graduate school, earning her Ph.D. in biomedical physics from the University of California, Los Angeles.

Astronomy: Passion to Profession

Wednesday, May 18, 2022, at 7:30 p.m.



"I have been interested in both astronomy and education for more than 2 decades. I'm fortunate to get to work in the intersection of these two interests," says Rachel Freed. Rachel will describe her trajectory from an informal interest in astronomy to leading double star astronomy research programs, becoming the editor of the Journal of Double Star Observations (JDSO), working on a Ph.D. in astronomy education AND participating in the International Astronomical Union's Education Commission. Rachel will detail the research undertaken by people in her research programs, and the

dissemination of research opportunities with the growth of access to global telescope networks (Las Cumbres Observatory and Skynet).

Rachael Freed, co-founder and President of the Institute for Student Astronomical Research, runs nationwide collaborations with observatories where she trains high school students to do authentic research in astronomy, primarily on double stars.

Both lectures are available online via Zoom. You are encouraged to come to the observatory to view it on our big screen. After the presentations, if the weather cooperates, there may be viewing through the big telescopes. More info: www.martzobservatory.org Admission is free, but donations are welcome.

Doors Open Jamestown



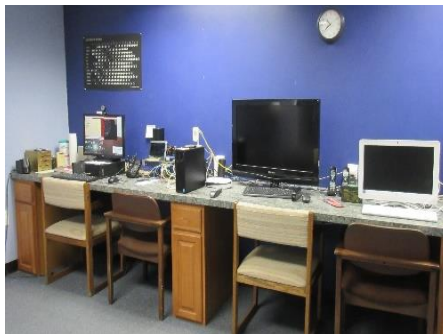
On Saturday, March 5, the observatory opened its doors to “Doors Open Jamestown.” A highlight for everyone was to go on a tour of the facility to discover what can be expected during an evening under the stars.



The tour began in the primary classroom where volunteers were waiting to guide them through the observatory, which appears larger on the inside than it does from the outside. The first stop was the Kohl dome which houses a 20-inch Cassegrain reflecting telescope and a 5-inch Takahashi. The next stop on the tour was the roll-off-roof open air observing deck to find several portable telescopes available for hands-on experiences for observing during clear nights. The deck lends itself as an ideal place for observing the sky for everyone to learn the whereabouts of the constellations and to view meteors and satellites including viewing the International Space Station as it circles the earth. The next area was the secondary classroom that will soon serve as a planetarium where images taken through the telescopes were shown and explained.



The tour continued to the Martz dome, which houses a 24-inch Dall-Kirkham telescope with a 16-inch RC Ritchey-Chretien wide field telescope attached to it. These are fully autonomous scopes that can be remotely controlled from the observatory control room and off site.



The tour groups had an opportunity to view the master control room before returning to the main classroom to talk about astronomy with our members. Hopefully, visitors will return for a visit under favorable skies to view the wonders of space, attend a program, and become members.

President's Update

We are open and lots of folks are noticing. Several Girl Scout Troops have scheduled tours with a program geared toward the girls obtaining their Brownie Space Science Adventurer Badge and/or their Junior Space Science Investigator Badge. Check our calendar for Open Observatory Nights, Lecture Series, presentations, meetings, and more.

<https://martzobservatory.org/observatory-nsn-calendar/>

Other Astronomy Type Events in April

April 23: Head out for a night sky show of meteoric proportions. The year's first major meteor shower in the northern hemisphere, the Lyrids, will peak after dawn on the 23rd, so your best viewing prospects will be in the pre-dawn hours. The Lyrids typically produce a Zenith Hourly Rate (ZHR) around 18 on the night of peak activity.

April 25, 26, 27: The Moon and Mars will share an evening together. After sunset on April 25th, the Moon and Mars will appear just $3^{\circ}54'$ apart, so easy to spot and enjoy with the unaided eye. Venus gets her shot, rising in conjunction with the Moon on April 26th. At their closest, the Moon and Venus will appear $3^{\circ}47'$ apart. This will occur a bit later in the evening than the lunar conjunctions with Mars. Finally, Jupiter and the Moon have their own conjunction, in the early morning (pre-dawn) hours of April 27th. They'll appear just $3^{\circ}38'$ apart as the Moon and planets set and the sky begins to lighten.

Calendar of Events

April 20	Zoom webinar by Dr. Robin Elgart, <i>Space Radiation: Health Risks for the Astronaut Corps</i> , at 7:30 p.m.
May 18	Zoom webinar by Rachael Freed, <i>Astronomy: Passion to Profession</i> , at 7:30 p.m.
June 9	<i>Give Big CHQ</i> Campaign
June 15	Zoom webinar by Steven Flanders, <i>Science at the Palomar Observatory: 1936 to the Present</i> , at 7:30 p.m.
July 20	Presentation by Ray Garner, <i>The 53rd Anniversary of Apollo 11</i> , at 7:30 p.m.
August 17	Presentation by James Keough, <i>Challenger Learning Center of the Twin Tier Region</i> , at 7:30 p.m.
September 21	Presentation by Dave Wilkens, <i>Backyard Astrophotography</i> , at 7:30 p.m.

General membership meetings are the 2nd Wednesday of the month, and the board meetings are the 4th Wednesday of the month.

Did You Know...

There are 88 keys on a piano and there are 88 constellations in the sky. The 88 piano keys make music. The 88 constellations make a zoo.

On **April 8, 2024**, a total solar eclipse, referred to as the Great North American Eclipse, will take place. Totality will be visible in a narrow strip in North America beginning at the Pacific coast, then ascending in a northeasterly direction through Mexico, United States, and Canada, before ending in the Atlantic Ocean.

Board Members: Gary Nelson, **President**; Brian Ceci, **Vice-President**; Corey Swanson, **Secretary**; John Anderson, **Treasurer**; Josh Campbell; Richard Carlson; Lawen Griffin, Jr.; Laurie Livingston; Walt Pickut; Jon Porier; and Tom Traub.