February – March 2025 Newsletter

MARTZ·KOHL OBSERVATORY

Marshal Martz Memorial Astronomical Association Inc.

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Galaxies: From Spirals to Ellipticals

Wednesday, February 19, at 7:30 p.m.

The Universe is home to an incredible variety of galaxies—vast and awe-inspiring collections of stars, gas, dust, and dark matter. These galaxies come in all shapes and sizes: blue spirals like our own Milky Way, and red ellipticals that are often devoid of the gas and dust necessary for new star formation. But how did these different types of galaxies come to be? Why are there so few galaxies that fall in between these two categories? In her upcoming talk, **Margaret (Maggie) Verrico** will take us on a journey through the evolution of galaxies, explaining how they formed in the early Universe and how they've evolved into the diverse population of galaxies we observe today.

Maggie will discuss how astronomers study galaxies and make inferences about their past, present, and potential futures. She'll dive into the processes that drive the transformation of galaxies, from their star-forming spiral stages to the quenching of star formation and eventual transition into elliptical galaxies. Along the way, she'll also explore the intriguing role supermassive black holes play in galaxy evolution, including the monster black hole that lies at the center of our own celestial home, the Milky Way Galaxy.

Margaret (Maggie) Verrico is currently a Ph.D. student at the University of Illinois Urbana-Champaign, where she focuses on galaxy evolution and the relationship between galaxies and the supermassive black holes at their centers. She earned her Bachelor of Science in Physics from the University of Pittsburgh in 2021 and is originally from Buffalo, New York. Maggie is particularly interested in the ways galaxies "shut down" their star formation and the transient events that occur around supermassive black holes, which provide valuable insights into a black hole's "appetite" and growth.

This talk will be shown on our big screen at the Martz-Kohl Observatory and available online via Zoom. You are encouraged to come to the observatory to virtually meet **Margaret Verrico** and join in our always lively Q&A after her talk. Later, if the weather cooperates, we offer tours and viewing opportunities through the big telescopes.

The Human Nature of Lunar Dust Risk Communication

Wednesday, March 19, at 7:30 p.m.

Understanding the risks posed by lunar dust to human exploration is a complex challenge that extends beyond technical concerns. This fascinating talk will delve into how the human element—risk communication and perception—complicates efforts to manage these hazards. Attendees will gain insight into lunar dust challenges while exploring the often-undervalued concepts of balance, credibility, and discernment. These ideas, essential to NASA's work, resonate equally in our daily lives, offering lessons for a post-COVID world where effective risk communication is more critical than ever.

Mr. Torin McCoy has spent decades exploring how hazards impact human health and performance. Initially focused on soil contamination on Earth, his career took a celestial turn when he joined NASA in 2003. At Johnson Space Center, Mr. McCoy became fascinated by the history and challenges of lunar dust and its risks to human exploration. His work has highlighted the intricate ways individuals and organizations process risk-related information and the importance of balance, credibility, and trust in decision-making processes.

Mr. McCoy serves as a scientist and exploration integration leader with NASA's Human Health and Performance Directorate. A Texas native, he earned degrees from Texas A&M University and Clemson University and began his career working for the State environmental agency in Texas. There, he studied contaminants in the food chain and tackled hazardous waste issues on Superfund sites.

Outside of work, Mr. McCoy cherishes time with his wife of 32 years and their two grown children. A passionate lover of the outdoors, he enjoys hiking, studying trees, exploring Indian artifacts, and delving into history.

This talk will be shown on our big screen at the Martz-Kohl Observatory and available online via Zoom. You are encouraged to come to the observatory to virtually meet **Torin McCoy** and join in our always lively Q&A after his talk. Later, if the weather cooperates, we offer tours and viewing opportunities through the telescope.

President's Update

A Heartfelt Thanks

I would like to express my deep gratitude to all our members for their continued support, passion, and dedication. Without your enthusiasm and hard work, none of what we do at the Martz-Kohl Observatory would be possible. To the foundations, organizations, businesses, individuals, and members who have given financial gifts; and to the Board of Directors, and to our volunteers, your contributions are invaluable, and I am looking forward to what we can achieve together in 2025. I wish all of you clear skies and starry nights in the coming year. May your curiosity continue to propel you toward new discoveries and may we all keep looking up with wonder and excitement.

Corey, President

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Check Out a Telescope from Your Local Library

The **Martz-Kohl Observatory** participates in the **Library Telecope Program** which places telescopes in local public libraries, allowing general access to portable telescopes that can be put into circulation just like a book. The goals of the program are to foster scientific literacy, to stimulate interest in astronomy, enable people who have never looked through a telescope the chance to experience the excitement that comes from discovery and to provide an asset for the libraries and the community.

The library telescope project was launched in 2008 by the New Hampshire Astronomical Society, and over the years, over 1,000 public libraries and science organizatons from around the globe have adopted the program. Local funding for the purchase of telescopes has come from the Chautauqua Region Community Foundation as well as private donations from Martz-Kohl Observatory members.

Local libraries currenlty participaing in the telescope program are: Anderson-Lee Library (Silver Creek); Ashville Free Library; Bemus Point Public Library; Cassadaga Library; Falconer Public Library; Hazeltine Public Library (Busti); Kennedy Free Library; Mary E. Seymour Memorial Free Library (Stockton); Myers Memorial Library (Frewsburg); Randolph Free Library; Sinclairville Free Library; and Warren Public Library.

If you are a local library interested in joining the telecope loan program or are an individual or group interested in funding a telescope for your library, contact the obervatory at martzobservatory@hotmail.com.

Anderson-Lee Library

Hazeltine Public Library

Bemus Point Public

Randolph Free Library

Ashville Free Library

Cassadaga Library

Astronomy Type Events in February & March

February 28 **New Moon**

March 1 **Moon and Venus** close together in the evening sky.

March 5 **Moon passes by Jupiter** in the night.

March 13 **Moon passes by Mars** in the night.

March 13/14 The first **total Lunar Eclipse** (also known as a "**Blood Moon**") since November 8, 2022, will be visible and placed high in our night sky. We will not have a better one placed in the sky for many years. The Moon will start to enter Earth's shadow (the Penumbra) at 11:57 p.m. on the 13th but will not be visible easily till around 12:30 a.m. on the 14th. The Umbral shadow (darkest most complete coverage of the Sun) first starts to come across the Moon at 1:10 a.m. and continues till total coverage (totality) at 2:26 a.m. Totality continues till 3:31 a.m. The Partial phase continues till 4:48 a.m. when the last portion of the Umbra leaves the Moon. The last part of the eclipse ends at 6:00 a.m. as the Penumbral shadow finally leaves the Moon's surface.

In March, you can see Venus, Mars, and Jupitar in the western sky. Venus is the brightest planet in the night sky and is easy to see in the evening west. **Mars**, a reddish planet that's visible in the evening west. It's best viewed in the late evening hours after sunset. **Jupiter** is a very bright planet that's high in the sky in the early evening. You can see it for more than 9 hours after sunset.

Calendar of Events

February 19 Zoom webinar with **Margaret Verrico,** currently a Ph.D. student at the University of Illinois Urbana-Champaign, where she focuses on galaxy evolution and the relationship between galaxies and the supermassive blackholes at their centers, ***"Galaxies: From Spirals to Ellipticals,"*** at **7:30 p.m**.

March 12 **General Meeting** at **7 p.m**. All are welcome to attend.

March 19 Zoom webinar with **Torin McCoy**, scientist and exploration integration leader for NASA, ***"The Humand Nature of Lunar Dust Risk Communications,"*** at **7:30 p.m.**

June 11 **General Meeting** at **7 p.m.** All are welcome to attend.

July 14-18 **Space STEM Camp** for students entering 7th– 9th grade. Online registration will open on March 5th, on the Martz-Kohl Observatory website. There is a $50 registration fee.