

ORBITER NEWS

News, announcements, and more.

Mission Ready: First All-Aerospace Mars Analog Crew is a Go

November 29, 2022



The six-person MDRS Crew 269 is leading the first all-Aerospace crewed analog mission in the corporation's history and intends to bring back valuable lessons learned to help drive Aerospace's human spaceflight expertise. (First row from left to right: Barbara Braun, Matthew Eby, Ashley Kowalski. Second row: Trevor Jahn, Alli Taylor, Dr. Kristine Ferrone and Dr. Alejandro R. Diaz (alternate and analog mission advisor))

Future human missions to the moon, Mars and beyond will require greater understanding of the space environment to ensure crew members are prepped with the best equipment and practices to sustainably operate and live in space before they embark. Fortunately, analog missions—field tests that mimic space-like conditions—are some of the closest ways to gain critical knowledge of what working in and inhabiting space is like.

To anticipate the needs of future space missions and sustainable operations in cislunar and Martian environments, The Aerospace Corporation is sponsoring a two-week analog mission at The Mars Society's Mars Desert Research Station (MDRS) in remote Hanksville, Utah, beginning Nov. 27.

Ultimately, the six-person Aerospace MDRS Crew (#269) aim to bring back valuable lessons learned on what it takes to carry out a crewed mission in extreme space environments, expanding Aerospace's existing body of technical expertise in this area to better support the nation's goals for the future of human space exploration.



[Watch the MDRS Video on YouTube](#)

“As we’re moving towards longer-term spaceflight missions, it is critical to mitigate as many risks as possible before sending humans into space,” said Ashley Kowalski, MDRS 269 Crew Engineer and a Project Leader in Aerospace’s International Partnerships Division. “Since you can’t test everything in space the first time around, analog missions can provide on-the-ground insight on what went right during the simulation and what can be improved upon.”

A New Chapter of a Continued Story

While MDRS Crew 269 represents the first all-Aerospace crewed analog mission in the corporation’s history, Aerospace’s technical experts are no strangers to analog missions, having previously participated in a number of studies and simulations, including NASA’s Scientific International Research In a Unique terrestrial Station (SIRIUS), Desert Research and Technology Studies (Desert RATS), Flashline Mars Arctic Research Station (FMARS), and Human Exploration Research Analog (HERA) programs.

This institutional experience and the involvement of a number of seasoned analog participants were two proof points that have enabled Aerospace to continue cultivating its crewed space exploration and operations expertise.

Meet the Crew



MDRS 269

Dr. Kristine Ferrone

Lead Technologist for Human Spaceflight, Systems Technology Group, The Aerospace Corporation

MDRS 269 Mission Role: Commander
Hometown: Pittsburgh, Pennsylvania
Studied: Medical Physics, Sports Medicine, Business, Physics and Astrophysics
Schools: University of Texas MD Anderson Cancer Center; University of Houston; University of Florida; Carnegie Mellon University; United States Sports Academy
Favorite thing about Mars: Mt. Olympus, ice caps, and the expanse of landmass to explore.
About Kristine: Lived and worked at the Mars Society's Flashline Mars Arctic Research Station in Nunavut, Canada; served as flight controller for NASA's International Space Station; certified as a volunteer firefighter, pilot, SCUBA diver, and U.S. Coast Guard Auxiliary air crew.

Dr. Kristine Ferrone has studied the effects of space radiation and supports a variety of programs as a radiation physicist, including a joint Air Force/NASA project developing space nuclear power technologies, a radiation-hardened battery project for NASA Innovative Advanced Concepts, and the Active Radiation Dosimeter project for NASA's xEMU spacesuit.

Dr. Kristine L. Ferrone

Dr. Kristine L. Ferrone, Commander.



MDRS 269

Allison Taylor

Senior Project Leader, Human Exploration and Spaceflight Division, The Aerospace Corporation

MDRS 269 Mission Role: Executive Officer
Hometown: Enfield, New Hampshire
Studied: Physics and Space Science, Space Studies
Schools: Florida Institute of Technology; University of North Dakota
Favorite thing about Mars: Our Solar System's largest volcano!
About Alli: Lives in northern Virginia with her husband and three children. As a family they enjoy LEGO, hiking, and training in Tae Kwon Do. Alli loves to do things that bring her joy, like explore new places, roller skate, and play Beat Saber on expert. She is an athlete and volunteer with NOVA Roller Derby. Alli also loves to mentor kids through STEM initiatives and to encourage them to explore and to pursue their passions.

Alli Taylor supports NASA's Artemis missions through NASA's EVA & Human Surface Mobility Program and Lunar Terrain Vehicle Project, developing processes, operational concepts, and requirements for future lunar surface assets.

Allison B. Taylor

Alli B. Taylor, Executive Officer.



MDRS 269

Ashley Kowalski


Project Leader, International Partnerships Department, The Aerospace Corporation

MDRS 269 Mission Role: Crew Engineer
Hometown: Baltimore, Maryland
Studied: Mechanical and Aerospace Engineering
Schools: George Washington University
Favorite thing about Mars: Its potential for signs of ancient life under the Martian surface.
About Ashley: Fluent in Polish, proficient in Russian and German; enjoys performing in musicals and theater productions, stand-up paddleboarding, traveling, learning languages, and playing and watching soccer.

Ashley Kowalski provides technical support to the U.S. Space Force Space Systems Command International Affairs Office, helping to develop a coalition space enterprise through international partnerships with U.S. allies. She recently served as Flight Engineer for SIRIUS-21, an eight-month international ground-based space simulation, or astronaut analog study, held in Moscow, Russia to study the effects of isolation and confinement on human psychology, behavioral health, and physiology, crew dynamics, and crew autonomy.

Ashley A. Kowalski

Ashley A. Kowalski, Crew Engineer.



MDRS 269

Trevor Jahn


Senior Member of the Technical Staff, Space Architecture Department, The Aerospace Corporation

MDRS 269 Mission Role: Technology Officer
Hometown: Orono, Minnesota
Studied: Aeronautical and Astronautical Engineering
Schools: Purdue University
Favorite thing about Mars: Carbon-dioxide snow clouds and snowfall.
About Trevor: Is a competitive cyclist (racing regularly for the past decade all over the Midwest and West Coast), enjoys playing tennis, scuba diving, visiting family and friends, and special summer days by the lakes in Minnesota. He also enjoys 3D printing, tinkering with electronics, and finding ways to study and further his Aerospace knowledge base.

Trevor Jahn directly supports NASA Johnson Space Center as part of the Artemis Lunar Architecture Team and is leading development at Aerospace of an innovative augmented reality/virtual reality (AR/VR) technology for future space use.

Trevor Jahn

Trevor Jahn, Technology Officer.



MDRS 269

Matthew Eby


Engineering Specialist, Engineering and Technology Group, The Aerospace Corporation

MDRS 269 Mission Role: GreenHab Officer
Hometown: Littleton, Colorado
Studied: Mechanical and Aerospace Engineering
Schools: Johns Hopkins University; University of Colorado
Favorite thing about Mars: Reyl (84 km-wide impact crater)
About Matthew: Is an unpaid geology field assistant for his big sister, exploring Martian terrain here on Earth; facilitated STEM high altitude balloon flights for K-12 students; is the current record-holder for Slowest Known Time crossing America by bicycle at an average velocity of 1.24 mph.

Matthew Eby works with mechanisms for Space Force launch vehicle and satellite programs. Recently, he undertook a research project, MARSROP, to adapt Aerospace's REBR vehicle for potential use as an inexpensive Mars entry vehicle. He was a math model keeper for NASA's Space Shuttle and a stage separation analyst for the follow-on ARES-1 vehicle.

Matthew A. Eby

Matthew A. Eby, GreenHab Officer.



MDRS 269

Barbara Braun


Principal Director, Corporate Chief Engineer's Office, The Aerospace Corporation

MDRS 269 Mission Role: Health & Safety Officer
Hometown: Somerville, Massachusetts
Studied: Aeronautics, Astronautics, Physics, Mechanical Engineering
Schools: Massachusetts Institute of Technology; University of New Mexico
Favorite thing about Mars: Its potential for exploration and colonization
About Barbara: Is a licensed Emergency Medical Technician (EMT) with 20+ years of experience in the field; has served in New Mexico as a firefighter, EMT, and volunteer lieutenant with Bernalillo County Fire and Rescue and with the Village of Tijeras Fire and Rescue Department.

Barbara Braun has led Aerospace support to the Space Rapid Capabilities Office and the U.S. Department of Defense Space Test Program. She is also an Aerospace Center for Space Policy and Strategy Partner and has written extensively on policy and mission assurance concerns for small and non-traditional satellites.

Barbara M. Braun

Barbara M. Braun, Health & Safety Officer.



MDRS 269

Dr. Alejandro Diaz

Senior Project Leader, Human Exploration and Spaceflight Div., The Aerospace Corporation

MDRS 269 Mission Role: Crew Alternate
Hometown: Chino Hills, California
Studied: Astronautical Engineering, Space Studies, Latin American Studies, Aerospace Engineering
Schools: University of California, Los Angeles; University of North Dakota; University of Southern California
Favorite thing about Mars: Its likely similarity to Earth billions of years ago
About Alejandro: Fluent in Spanish, proficient in Portuguese; hiked Peru's Inka Trail; favorite pastime is spending time with family; enjoys basketball, soccer, swimming, reading, learning, and trying new foods.

Dr. Alejandro Diaz supports human space programs, including the Human Landing System (HLS) program at NASA's Johnson Space Center, with an emphasis on EVA, spacesuits, crew systems, and landing and recovery systems. NASA selected him as an Astronaut-Finalist in the 2013 astronaut selection cycle. He is currently a Fellow at the MIT System Design & Management Program.

Dr. Alejandro R. Diaz

Dr. Alejandro R. Diaz, Crew Alternate and Mission Advisor.

“The Aerospace Analog Project started several years back [as we looked for] ideas on how Aerospace could better its pursuit of human exploration projects,” said Dr. Kristine Ferrone, MDRS Crew 269 Commander and Senior Engineering Specialist in Aerospace’s Civil Systems Technology Division. “We were able to bring together a lot of human spaceflight experts and other people within Aerospace that have either participated in analog missions or had been part of the engineering crew for them.”

The thorough planning and in-depth discussions on how to best prepare Aerospace for the future of human spaceflight led to an iLab sabbatical and Aerospace’s successful application to MDRS. Awarded a crew assignment for the 2022-2023 field season, the MDRS Crew 269 is completing its final preparation tasks before traveling to Utah.

Read the [full article on Aerospace.org.](#)

Holiday Giving, One Good Thing at a Time

November 28, 2022

Year after year, Aerospace employees have spent the holidays generously giving back to children, families and communities in need across the country. This year, several organizations across the corporation are providing a variety of ways for people to give back and do One Good Thing during this holiday season, together making a great impact.

“All of us are blessed with a roof over our heads, providing security and safety, food when we’re hungry, a warm bed to sleep in and clothes for all occasions,” said Xavier Galindo, a member of procurement staff in Supply Chain. “It’s the season for thanksgiving and the perfect time to donate and to give back.”



As one of many ways to give back this holiday season, Aerospace Military Veteran's letter writing campaign is a great way to say thanks to those serving in the military and their families.

This year, Aerospace is encouraging everyone to do One Good Thing. Giving of any size or amount of time or money makes an impact. Whether you are able to give a lot or a little, every act of giving adds up and makes a difference in the lives of others. There’s power in numbers, and if everyone at Aerospace contributes one act of giving this holiday season, our impact will touch the lives of so many who are truly in need of just One Good Thing.

Making a Difference During the Holidays

Aerospace's annual Holiday Gift Drive is back, providing gifts to hundreds of children in need across the country. Employees can sponsor a child's holiday wishes by purchasing gifts through Amazon via wish lists available on Google Drive. For the Gift Drive, Aerospace partners with select organizations across the country that support children and families in need. Many of the families supported cannot provide gifts for their children on their own, so the generosity of Aerospace employees is instrumental in making their holiday season special. In addition to donating gifts, employees can also donate money to help purchase gifts and make sure all of the participating children have something to open this year.

"There are so many children, teens and families that are in need in our local community, and the Holiday Gift Drive campaign is a way we can give back," said Galindo, who has been involved with the program for nearly 30 years and has chaired the El Segundo gift drive since 1998.

"Every one of these children, teens, moms and families has their own story. We're just letting them know Aerospace cares and we'd like to help provide them with a heartfelt Christmas season for their kids and families."



Aerospace employees Lianne Mcginley, Xavier Galindo and Laura Miramontes shopping at the Mattel tent for the Holiday Gift Drive in 2021.



Aerospace employees volunteered in 2021 for WAA at Arlington National Cemetery and will be participating again in 2022.

In honor of Veteran's Day and the holiday season, Aerospace Cares and Aerospace Military Veterans (AMV) has partnered with Operation Gratitude to host a letter writing campaign. The opportunity is open to all employees and their families throughout the holidays who would like to show support to those serving in the military, their families and veterans.

They are also participating in Wreaths Across America (WAA) on Dec. 17 at the Arlington National Cemetery (ANC) and Los Angeles National Cemetery, and are currently looking for volunteers to fill a variety of positions. There are additional opportunities to donate a wreath or participate at a local wreath laying event across the country to ensure as many veterans as possible are honored this holiday season.

"This event is a great way for AMV and the whole Aerospace team to get involved in WAA, whether at ANC or locations across the country — whether that might be helping unload wreaths at ANC, supporting a wreath ceremony at a nearby cemetery, laying

wreaths or sponsoring or contributing funds," said George Vogen, Senior Project Engineer in the Space Systems Group, retired U.S. Air Force veteran and long-time WAA volunteer. "To simply think that someone who served in the military will be visited and remembered every year on these hallowed grounds is important and moving to me as an American."

The Giving Season Continues

Food insecurity is felt especially hard during the holidays. Employees across the corporation are finding ways to help make a difference, one food item at a time. Aerospace Black Caucus is hosting a food drive across the country during this holiday season and is partnering with Western Fairfax Christian Ministries Food Pantry in Chantilly, Va., L.A. Regional Food Bank in Los Angeles, Calif., and Food Bank of North Alabama in Huntsville, Ala., to help families have a warm holiday meal. Employees across the corporation can participate by donating through AeroCares.

Giving doesn't have to end when the new year begins. Across the corporation, Aerospace employees are dedicated to giving back all year round. In 2022, Aerospace celebrated the first day of service and day off for Martin Luther King Jr. Day (MLK Day). MLK Day is Jan. 16 and Aerospace is encouraging everyone to get involved and make a difference by fighting food insecurity in America. As a part of the One Good Thing campaign, the day of service provides a perfect opportunity to give back and make a difference in the community. More details will be provided on how employees can contribute on this day off for service.

"Volunteering or giving back tends to give the giver more than they feel they have given," said Vogen. "In some way giving back is rewarding to our souls or something inside of us that makes us more sensitive to the human condition in this sometimes-crazy world."

If your location has an agency they typically support, please consider including them in next year's Holiday Gift Drive. If you have any questions or would like to include your favorite organization in next year's Holiday Gift Drive, please contact cares@aero.org.

Artemis I: NASA's Mission Back to the Moon Takes Flight

November 16, 2022

The Apollo 11 Moon landing in 1969 was a watershed moment in human history, not just with regards to space exploration, but as a defining moment that captured the hearts and imaginations of people across the world.

For many, Apollo 11 offered a glimpse into a future of spectacular possibilities, and the decades of technological progress that have transpired since Neil Armstrong's first small step have made a return to the Moon a seemingly predestined and potentially transformative leap for humanity.



The Artemis program aims to return astronauts to the lunar surface by 2025, making way for eventually expanding human space exploration to Mars.

Artemis is an international effort, led by NASA, that aims to return astronauts to the lunar surface by 2025, making way for eventually expanding human space exploration to Mars. The Artemis I mission marks a major milestone for the Artemis mission series, and The Aerospace Corporation is proud to be contributing its unparalleled depth and breadth of technical expertise in support of this ambitious endeavor.

Artemis I is the first in a series of increasingly complex missions and will be a flight test of the Space Launch System (SLS) rocket that will send the uncrewed Orion spacecraft on a flight around the Moon.

“Aerospace has been working closely with NASA since the beginning in support of the development of NASA’s launch, spacecraft and ground systems,” said Martha Hess, Principal Director of the Human Exploration and Spaceflight division. “We are excited and thankful to have played a role in helping our nation achieve human exploration goals and return humans to the lunar surface and on to Mars.”

[Read the full article on Aerospace.org.](#)

A Video Tribute to Our Veterans: Thank You for Your Service

November 09, 2022



[Watch Aerospace's Veterans Day Tribute Video on YouTube](#)

The Aerospace Corporation would like to honor all employees who have served in our nation’s military. We thank you for your service.

Aerospace Targeted Hiring Event Proves Great Success

November 02, 2022

The dynamic shifts in the modern space environments have created a higher need for Aerospace's technical expertise. To ensure we continue to be well positioned to support government customers and partners across the space enterprise, Aerospace remains focused on strategically recruiting and retaining the best and brightest, aligning their talents to capabilities that advance groundbreaking innovation and solutions for the future.

As an example, the People Acquisition team recently hosted a record-breaking hiring event in collaboration with the Engineering and Technology Group's Communications Technology Engineering Division (CTED). The invitation-only event provided a more targeted format for experienced professionals to connect with Aerospace's experts and hiring managers. More than 50 vetted candidates attended the session, and by its end, 10 letters of intent to hire were extended, with additional prospects currently continuing through the interview process. People Acquisition is planning to partner across Aerospace to host similar strategic recruiting opportunities.



Aerospace's recruiting and CTED teams recently partnered on a targeted recruiting event, optimizing time and resources to connect on campus with quality candidates interested in relevant career opportunities at the company.



The People Acquisition team joined CTED leadership and hiring managers to welcome candidates and explore the career opportunities at Aerospace.

"These deliberate, focused recruiting events yield great results and help to support Aerospace's strategic focus on People Excellence, making sure we have the right mix of talent and skills to keep doing the important work our people do," said Diane Dearing, Principal Director in People Acquisition. "This is the most successful focused recruiting event that we've had, with the highest number of conversions of experienced candidates."

Candidates gathered at The Proud Bird Food Bazaar & Events Center in El Segundo, Calif., where they were immediately greeted by the Aerospace team and immersed in all the corporation has to offer. Throughout the day, candidates enjoyed snacks and a taco bar while hearing from many current Aerospace employees, including CTED hiring managers and principal directors who shared about Aerospace and their various subdivision specialties. Candidates and employees enjoyed the opportunity to network, while some even participated in interviews throughout the event.

“There were times when the managers had lines of candidates waiting eagerly to speak to them,” said Adrienne Broughton, Manager in People Acquisitions. “It was great to see so many people excited about the opportunities here at Aerospace and interested in joining our team.”

The People Acquisition team conducted extensive research and vetted each attendee in order to ensure their skills and experience aligned with the needs of hiring managers and the CTED team. This type of intentional, targeted recruiting format allowed Aerospace’s recruiting and technical teams to optimize their time and resources to bring quality candidates interested in relevant opportunities onto campus and meet with hiring managers. Candidates were also able to get a closer look at the teams they might be working with in the future.

“We were very specific about making sure we identified candidates that met the needs of our CTED managers,” said Broughton. “We made sure to invite people who had the particular backgrounds that the CTED managers were looking for and that were excited about the opportunities here at Aerospace.”

People Acquisition intends to host more targeted recruiting events in this format and looks forward to partnering with other Aerospace organizations to ensure strategic alignment for talent.

“We are excited to be hosting more events like this in the future, which will help us meet our hiring goals,” said Dearing. “The event we hosted with CTED is a great example of what we have to offer to candidates and what we really can do as a corporation when we join together for these events and put our best foot forward when reaching out to targeted, experienced candidates.”

If you are interested in collaborating with People Acquisition and hosting a similar recruiting event with your team, reach out to your recruiter for more information.



Candidates invited to the event were vetted by People Acquisition to ensure their skills and qualifications lined up with what CTED hiring managers were looking for.

November 2022 Obituaries

November 01, 2022

Sincere sympathy is extended to the families of:

- ♦ **James Allred**, office of technical support, hired Nov. 23, 1992, retired Oct. 1, 2013, died Oct. 13, 2022
- ♦ **Joan Esposito**, member of administrative staff, hired Aug. 4, 1969, retired Dec. 1, 2004, died Oct. 12, 2022
- ♦ **Ann Fay**, member of administrative staff, hired Oct. 19, 1981, retired May 1, 1995, died July 11, 2022
- ♦ **John Genovese**, member of technical staff, hired March 13, 1978, retired Sept. 1, 2004, died Oct. 22, 2022
- ♦ **Dennis Holstein**, member of technical staff, hired Sept. 6, 1979, retired Nov. 1, 2000, died Oct. 7, 2022
- ♦ **Allen Lee**, member of technical staff, hired Nov. 21, 1977, retired March 1, 2016, died Sept. 23, 2022
- ♦ **Stanley Navickas**, member of technical staff, hired Sept. 14, 1965, retired Oct. 1, 1996, died Oct. 16, 2022
- ♦ **Ava Norman**, office of technical support, hired Aug. 27, 1961, retired Nov. 1, 1991, died Aug. 22, 2022
- ♦ **Margaret Sazani**, member of technical staff, hired Dec. 1, 1986, retired Jan 1, 2018, died Sept. 15, 2022
- ♦ **Roy Shumway**, office of technical support, hired March 17, 1967, retired Nov. 1, 1991, died Oct. 1, 2022
- ♦ **Ralph Smith**, member of technical staff, hired Feb. 4, 1966, retired May 1, 1991, died Aug. 11, 2022
- ♦ **William Smith**, member of technical staff, hired Feb. 8, 1962, retired Nov. 1, 1991, died Aug. 30, 2022

To notify Aerospace of a death and have it included in the Orbiter, please contact People Operations at (310) 336-5107.

These articles are reprinted from The Orbiter, a publication of The Aerospace Corporation 2310 E. El Segundo Blvd., El Segundo, CA 90245-4691 310-336-5000

Visit: Aerospace.org

Contact Orbiter staff: Orbiter@aero.org