


*CENTI ASTRO-SPACE ACTIVITIES*

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**As the year 2022 ends I am reflecting on how COSMIC DIMENSIONS has hopefully brought you a better understanding of the importance of Astronomy and Space Exploration. It is my hope that 2023 will continue this endeavor and will inspire those who subscribe to the 2 new publications dealing with STEAM and exoplanets & Astrobiology. As stated in other issues changes are coming to formatting for COSMIC DIMENSIONS and I am still looking for contributors for future issues. Anyone interested in contributing articles, photos, etc. should contact me. The two new newsletters will be offered on a subscription basis and will begin in the Spring. Be on the lookout for an email regarding these. This newsletter will continue to be free. Below is a list of what is covered in this issue. Happy New Year to everyone! Enjoy!**



## *WHAT'S UP IN THE NIGHT SKY FOR JANUARY*

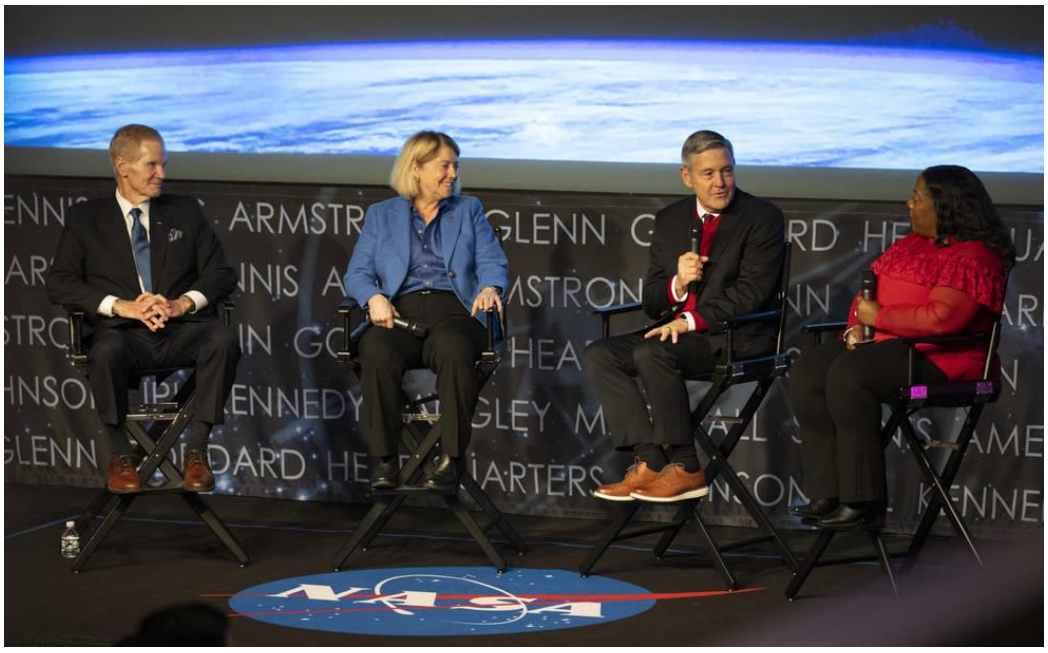
**Presented by Peter Detterline** **https://www.youtube.com/watch?v=o8q8y4CBoeM**

## *DON'T MISS THESE RARE SPACE EVENTS IN 2023*

**Presented by Now Next** **https://www.youtube.com/watch?v=qj6hbxbO9zc**

# *NASA's Big 2022: Historic Moon Mission, Webb Telescope Images, More*

**Dec 13, 2022**



**NASA Administrator Bill Nelson, left, NASA Deputy Administrator Pam Melroy, second from left, NASA Associate Administrator Bob Cabana, second from right, and Michelle Jones of NASA Communications, right, are seen Tuesday, Dec. 13, 2022, during an end-of-the year all hands with senior leadership at the Mary W. Jackson NASA Headquarters building in Washington. Nelson, Melroy, and Cabana highlighted the agency's 2022 accomplishments and looked forward to what is coming in 2023 and beyond.**
***Credits: NASA/Joel Kowsky***

**2022 is one for the history books as NASA caps off another astronomical year.**

**NASA launched its mega Moon rocket for the first time, sending its uncrewed Orion spacecraft around the Moon; kicked off a new era in astronomy with the Webb Space Telescope's record-breaking new imagery from the cosmos; moved an asteroid in humanity's first ever planetary defense demonstration; working with its partners, sent astronauts on regular missions to the International Space Station, tested new technologies, including an inflatable heat shield for Mars; continued development of quieter supersonic aircraft, and much more.**

**"There is no doubt that 2022 was out of this world! From the history-making splashdown of the Artemis I mission, to the groundbreaking images from NASA's James Webb Space Telescope to the innovative LOFTID technology demonstration, the smashing success of the DART mission, incredible progress in our aeronautics programs, and the growth of partnerships with commercial and international partners,**

**2022 will go down in the history books as one of the most accomplished years across all of NASA's missions," said NASA Administrator Bill Nelson. "There's so much to look forward to in 2023 too: To read more from the NASA link Click: https://www.nasa.gov/press-release/nasa-s-big-2022-historic-moon-mission-webb-telescope-images-more**

# *Five Space Exploration Missions to Look Out for in 2023*

**By Gareth Dorrian & Ian Whittaker**

1. **Jupiter Icy Moons Explorer**
2. **SpaceX Starship**
3. **dearMoon**
4. **Asteroid explorer returns to Earth**
5. **India's private space launch**

**To read the full article about these 5 missions click the link: https://www.realclearscience.com/articles/2022/12/28/five_space_exploration_missions_to_look_out_for_in_2023_872565.html**

# *Artemis 1 Mission Highlights: Orion's Journey Around the Moon Video*

**December 23, 2022**


**Artemis 1 launched at 1:47 a.m. EST (06:47 UTC) Nov. 16, 2022. After a 1.4 million mile journey over 25.5 days, the Orion capsule splashed down in the Pacific Ocean at 12:40 p.m. EST (17:40 UTC) Dec. 11. Click this link for the full video: https://www.youtube.com/watch?v=Gk6OrijpePA**

# *SPACE QUOTE of the MONTH*

***"There is No Limit to what Humans Can Do! We Went to the Moon, We Will Go Again, Then Onward to Mars and Beyond, In Our Quest to Reach for the Stars" – Christopher S. Centi***

# *The Universe: Human Life on Mars is Coming Soon Video*

**Mar 22, 2021**


**Space colonization is no longer the fodder of science fiction, it is becoming a reality. Examine the efforts underway to establish a human colony on Mars. Click this link for the full video: https://www.youtube.com/watch?v=jhJTlkxir80**

# *FAMOUS ENGINEERS*

***This month I am listing 2 famous people, Dr. Aprille Ericsson and Wanda M. Austin***

## Aprille Ericsson


**Dr. Aprille Ericsson has had a long and successful career at NASA. NASA GODDARD SPACE FLIGHT CENTER/WIKIMEDIA/CC-BY-2.0**

**Aerospace engineer Dr. Aprille Ericsson has held numerous positions during her near-30-year career with NASA. For more than 10 years she was a senior deputy instrument manager for NASA's Ice, Cloud and Land Elevation Satellite program, where she worked on mapping instruments for future lunar explorations. In other words, Ericsson had one of the coolest jobs in the universe. Currently, she is the new business lead for the NASA Goddard Space Flight Center Instrument Systems and Technology Division, where she fosters government, academic and industry partnerships.**

**Like any good overachiever, Ericsson's accomplishments started way before her work with NASA. She holds a Bachelor of Science in Aeronautical/Astronautical Engineering from MIT. She was the first African-American woman to receive a Ph.D. in mechanical engineering from Howard University and the first American to receive her Ph.D. with an aerospace option in the program. She was also the first African-American woman to receive a Ph.D. at NASA's Goddard Space Flight Center [source: Ericsson].**

## Wanda M. Austin

Wanda Austin (second from left) takes a break from what must be a packed schedule to enjoy an art exhibit with Wade Austin on Jan. 25, 2013.
STEFANIE KEENAN/WIREIMAGE

**In the spirit of fostering a future of pioneers, let's end with a modern — but no less trailblazing — engineer. Dr. Wanda Austin, armed with a doctorate in systems engineering from the University of Southern California, has been instrumental not only in shaping the U.S. aerospace industry, but also in ensuring national security within the space community. Even President Obama thought she was important enough to put her on a board to review and plan future space missions.**

**Austin became a senior vice president of the Aerospace Corporation, an independent research and development center serving national space programs, in 2001. She eventually led a group responsible for supporting the intelligence and security community in space systems and ground stations [source: NASA]. In 2008, Austin vaulted from VP to president and CEO of the corporation. In 2009, she landed her gig on President Obama's Review of Human Spaceflight Plans Committee — no doubt a pretty cool group of people, who have come together to advise the government on the future of space missions [source: NASA].**

**Currently, she is a co-founder of MakingSpace, Inc, a systems engineering and leadership development consultant, and a motivational speaker. She also served as interim president of the University of Southern California during 2018-2019 and was commended for steering the university through a tumultuous period.**

***Source: howstuffworks***

# *SPACE PIC OF THE MONTH*

**M16: A Star Forming Pillar from James Webb Image**
**Credit: NASA, ESA, CSA, STScI, *Processing & Copyright:* Mehmet Hakan Özsaraç**

**Explanation: What's happening inside this interstellar mountain? Stars are forming. The mountain is actually a column of gas and dust in the picturesque Eagle Nebula (M16). A pillar like this is so low in density that you could easily fly though it -- it only appears solid because of its high dust content and great depth. The glowing areas are lit internally by newly formed stars. These areas shine in red and infrared light because blue light is scattered away by intervening interstellar dust. The featured image was captured recently in near-infrared light in unprecedented detail by the James Webb Space Telescope (JWST), launched late last year. Energetic light, abrasive winds, and final supernovas from these young stars will slowly destroy this stellar birth column over the next 100,000 years.**

# *SPACE EXPLORATION BENEFITS*

## IT PROVIDES HUMANITY WITH HOPE FOR THE FUTURE.

**Humans are currently confined to a single planet and facilities that orbit it. Should something happen that changes the environment of the planet, it would have the potential of wiping out the entire human species. A large asteroid, the star going nova, or even a shift in the planetary climate could devastate humanity. Space exploration gives us the chance to begin colonizing other locations, giving us hope that our species can survive.**

## IT INCREASES OUR KNOWLEDGE.

**There are many secrets lying in wait to be discovered in space. Asteroids or planets may have new materials that we don't have on Earth. We can discover more about how the universe was created and why it exists in its current state. These discoveries could then help to improve life on our own planet as we seek out others to explore.**

## IT DRIVES INNOVATIONS IN NUMEROUS FIELDS.

**According to the 100-Year Starship Program, the technologies that were created for and made possible because of space exploration have helped to shape, permeate, and are an integral part of who we are today. To travel the stars, we must be able to store large quantities of energy. We must develop closed-loop support systems. Advances in agriculture, computing, artificial intelligence, and manufacturing must happen as well. The framework needed to explore space improves the socioeconomic frameworks we have at home.**

# *INSPIRATIONAL QUOTE of the MONTH*

***"We define ourselves far too often by our past failures. That's not you. You are this person right now. You're the person who has learned from those failures." -- ELTON JOHN***

# *ASTROSPACE JOKE of the MONTH*

**Q: Why don't aliens eat clowns?** **A: Because they taste funny.**

# ---------- *CONTACT* ----------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