

COSMIC DIMENSIONS

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CENTI ASTRO-SPACE ACTIVITIES

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Welcome to the eleventh issue of Cosmic Dimensions. Still looking for contributors who will add their perspectives to this newsletter. Please contact me. Changes on the drawing board will hopefully be implemented after the first of the year. Below you will find what's included this month. Enjoy!

- WHAT'S UP IN THE NIGHT SKY FOR NOVEMBER
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WHAT'S UP IN THE NIGHT SKY FOR NOVEMBER

Presented by Peter Detterline <https://www.youtube.com/watch?v=4IPyLNGEeU>

Presented by Alyn Wallace <https://www.youtube.com/watch?v=ZvWoy9KT0Co>

ASTROSPACE JOKE of the MONTH

Why is the sun thought to be wise? **Because it has a million degrees.**

SPACE QUOTE of the MONTH

"Earth is a small town with many neighborhoods in a very big universe." -- **Ron Garan.**

NASA STUDY CALLS FOR APOLLO SITE PROTECTION AMONG LUNAR SURFACE OPS POLICIES

By [Robert Z. Pearlman](#)

October 29, 2022

Due to the potential close proximity of operations on the moon, NASA and other operators will face challenges never faced before.



For the first time, NASA is having to consider policies for operating missions on the moon in proximity to other actors, including the need to protect and preserve past and future heritage sites. (Image credit: NASA)

With more than 20 missions aiming to land on the moon by 2026, a new NASA study has found that the protection and preservation of the historic Apollo landing sites remains a concern. The report, however, recommends that "extreme restraint" be taken in seeking protection for future human heritage sites on the lunar surface. To read more click this link: <https://www.space.com/nasa-lunar-landing-policy-analysis-apollo-protect>

VENUS-BOUND NASA INSTRUMENT TO BRAVE THE HARSH ATMOSPHERE

By [Robert Lea](#)

October 28, 2022



An illustration of the DAVINCI mission's probe dropping through the atmosphere of Venus. (Image credit: NASA's Goddard Space Flight Center)

NASA scientists are preparing to paint the most detailed picture to date of the atmosphere of Venus when the aptly named DAVINCI — or Deep Atmosphere Venus Investigation of Noble Gases, Chemistry, and Imaging — mission drops a probe to the planet's surface. To read more click this link: <https://www.space.com/venus-davinci-atmospheric-probe-instrument>

FAMOUS ASTRONOMER

Harvey Washington Banks

Born: Harvey Washington Banks; place: Atlantic City, New Jersey; raised in Washington, DC

Died: 1979

Pre-Doctoral education: BS (1946) Physics Howard University; MS (1948) Physics Howard University

Doctoral Institution: Georgetown University (1961)

thesis: *The First Spectrum of Titanium From 6000 to 3000 Angstroms*

In 1961, Harvey Washington Banks became the first African American to earn the doctorate specifically in astronomy. His dissertation, at Georgetown University, was titled. Dr. Banks chose to teach and enjoyed a fulfilling career at Delaware State College and Howard University. His research interests included determination of orbits, celestial mechanics, high dispersion spectroscopy, and the geodetic determinations from the observations of solar eclipse and satellites.

Banks was born on February 7, 1923, in Atlantic City, New Jersey, but when he was still young his parents, Nettie Lee Jackson and Harvey Banks, Sr., moved to Washington, D.C. Later, Harvey attended Dunbar High School.

Banks remained in Washington, D.C., for his undergraduate work at Howard University, where he earned a bachelor of science degree in physics in 1946 and added a master of science degree, also in physics, in 1948. He stayed on at Howard as a research associate in physics until 1952, when he got a job in the private sector as an electronic engineer at National Electronics, Inc. Two years later he left the industry for a job in education, teaching physics and mathematics in the public school system of Washington, D.C. After two years of teaching Banks returned to academia, where he was a research assistant in astronomy at the Georgetown College Observatory while pursuing his doctorate at Georgetown University. In 1961 he became the first African American to receive a Ph.D. in astronomy from Georgetown. His dissertation involved the properties of light originating from distant sources, a concentration known as planetary spectroscopy.

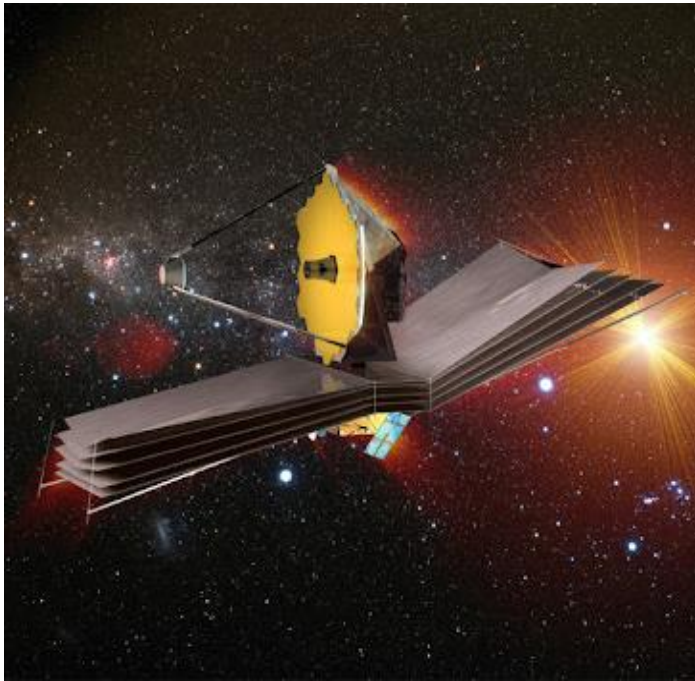
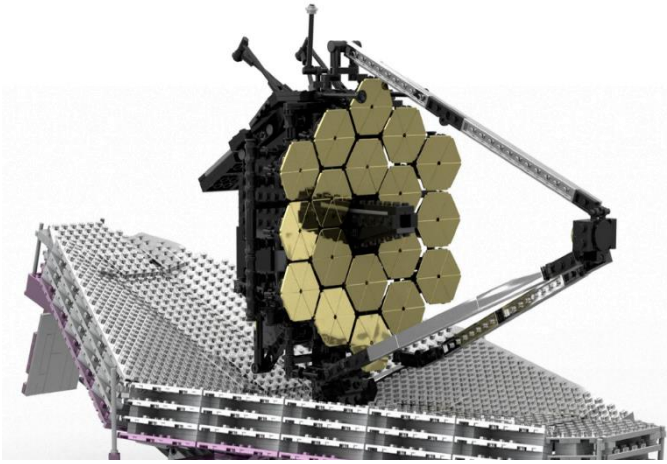
Banks remained as a fellow at Georgetown for the year after he earned his doctorate. He then became a lecturer and research associate at Georgetown from 1963 through 1967. During this period he also taught at American University, also in Washington, D.C., and at Delaware State College. Then in 1967 Delaware State appointed him as a professor of astronomy and mathematics with a concurrent appointment as the director of the college's observatory. On September 1, 1969, Banks returned to his alma mater, Howard, as an associate professor of astronomy, and two years later the university added an appointment as an associate professor of physics, a position he maintained until his death.

Besides spectroscopy, Banks concerned himself with geodetic measurements, or determinations of distances between two points based on objects orbiting the Earth. He was thus interested in orbits and celestial mechanisms. In the 1970s Banks supervised the construction of an observatory outside Washington, D.C., as a member of the Beltsville Project. Banks also coordinated the Astronomy and Space Seminar for the National Science Teachers' Association. Banks died in 1979.

Banks married Ernestine Boykin, and together the couple had four children-Harvey III, Deborah, Dwann, and Darryle.

SOURCE: Astronomers of the African Diaspora

SPACE PIC OF THE MONTH



Our James Webb Space Telescope has [captured a new image of the famous Pillars of Creation](#)—first imaged [by the Hubble Space Telescope in 1995](#)—that reveals new details about the region. The three-dimensional pillars look like majestic rock formations but are far more permeable. These columns are made up of cool interstellar gas and dust that sometimes appear semi-transparent in near-infrared light.

Webb's new view of the Pillars of Creation will help researchers revamp their models of star formation by identifying far more precise counts of newly formed stars, along with the quantities of gas and dust in the region. Over time, they will begin to build a clearer understanding of how stars form and burst out of these dusty clouds over millions of years. [Download the full-resolution, uncompressed version and supporting visuals from the Space Telescope Science Institute.](#)

Image Credits: NASA, ESA, CSA, STScI; Joseph DePasquale (STScI), Anton M. Koekemoer (STScI), Alyssa Pagan (STScI).

SPACE SPINOFFS

Space exploration has provided many benefits that people aren't aware of, but here are some things worth noting.

Cleaning up Silicon

Originally published in 2000

Ultra-high purity silicon is ideal for the production of computer chips. For this reason, a space-based manufacturing technique, developed in the 1970s, has found a coveted place in the semiconductor industry. Thanks to the help of NASA's Jet Propulsion Laboratory (JPL), Advanced Silicon Materials, LLC--formerly Advanced Silicon Materials, Inc. (ASiMI) is producing silane gas and ultra-high purity polycrystalline silicon (polysilicon) at very high volume. To read more click on the link:

<https://spinoff.nasa.gov/spinoff2000/ip8.htm>

Innovations in Aircraft Design

Originally published in 1997

When the Boeing 777 first took wing, it carried with it basic and applied research, technology, and aerodynamic knowledge honed at several NASA field centers.

The precedent-setting 777 was built to handle medium- to long-range passenger flights and is the largest twin-engine jet to be manufactured today. First passenger-carrying flights began in May 1995. According to Boeing Company estimates, the 777 fleet has captured three-quarters of new orders for airplanes in its class since the program was launched. To read more click on the link:

<https://spinoff.nasa.gov/spinoff1997/t1.html>

INSPIRATIONAL QUOTE of the MONTH

"There is no greater agony than bearing an untold story inside you."

-- *Maya Angelou, [I Know Why the Caged Bird Sings](#)*

----- CONTACT -----



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