

TRAJECTORIES

Official Newsletter of the Cape Canaveral Space Force Museum

Quote of the Month:

"It's not the remembered past, it's the forgotten past that enslaves us." C.S. Lewis



Alan Shepard Day

Sixty-five years after Alan Shepard launched from Cape Canaveral aboard *Freedom 7* and became the first American in space, the Cape Canaveral Space Force Museum gathered to celebrate the mission that helped open the Space Age.

On 5 May 2026, more than 75 guests joined the Museum Volunteer Association's Alan Shepard Day event in historic Hangar C. Planned, coordinated, and presented entirely by volunteers, the special program highlighted the enduring legacy of Project Mercury and the remarkable people who made it possible.

The event opened with remarks from Col. Brian Chatman, Commander of Space Launch Delta 45. Historical presentations followed, including discussions of military support for Project Mercury, Shepard's role among the Mercury Seven, and the significance of the Mercury-Redstone 3 mission.

Guests also enjoyed the famous steak-and-eggs breakfast Shepard ate before his historic flight on 5 May 1961.

A highlight of the day was a special message from Laura Shepard Churchley, who shared personal reflections on her father's legacy. In a fitting connection between generations of exploration, she later experienced spaceflight herself aboard a Blue Origin New Shepard mission.

Special thanks to **Randy Coppola** for coordinating the memorable event and to all the museum volunteers who supported it.

DID YOU KNOW?



On 7 June 1951, Cape Canaveral made history when two Lark missiles launched on the same day, the first double-launch day in the Cape's history. Developed by the U.S. Navy during World War II to counter kamikaze attacks, the Lark became one of America's earliest guided missile programs. Between 1950 and 1953, forty Lark missiles flew from Cape Canaveral for training and testing, helping engineers gain valuable experience that paved the way for more advanced missile and space programs.



Message from the Director

James W. Draper



One of the most enjoyable parts of museum work is that there is always something new to discover. After more than twenty-five years working in museums and seven years directing the Cape Canaveral Space Force Museum, I still occasionally stumble upon a story that surprises me. Recently, while researching the history of Launch Complex 20, I encountered one of those surprises: the Titan IIIA.

I was certainly familiar with the Titan family. Most space enthusiasts know the mighty Titan IIIC with its massive solid rocket boosters, the Titan IIIE that launched the Viking and Voyager spacecraft, and the Titan IV that carried critical national security payloads into orbit for decades. Yet somehow the Titan IIIA had escaped my attention.

Only four Titan IIIA vehicles ever launched, all from Launch Complex 20 between September 1964 and May 1965. In terms of launch numbers, it was a brief chapter in Cape Canaveral history. In terms of significance, however, it was anything but minor.

The Titan IIIA served as the bridge between the Titan missile program and the heavy-lift space launch vehicles that would follow. It introduced the new Transtage upper stage and validated the architecture that became the foundation of the entire Titan III family. Without the Titan IIIA, there would have been no Titan IIIC, no Titan IIIE, and no Titan IV.

What fascinated me most was where the vehicle fit into the broader history of the Cape. The early 1960s were a period of tremendous transition. The missile test range of the 1950s was evolving into a world-class spaceport. Programs such as Dyna-Soar,

military space initiatives, and increasingly sophisticated satellite systems were driving the need for larger and more capable launch vehicles. Titan IIIA stood at that crossroads.

Its four launches demonstrated technologies that paved the way for the Integrate-Transfer-Launch complex, the activation of Launch Complexes 40 and 41, and decades of national security space operations from Cape Canaveral. In many respects, Titan IIIA represented the moment when the Titan program ceased being merely a missile and became a true space launch family.

Stories like this remind me why preserving and studying history matters. The famous milestones and headline-making achievements are important, but so are the lesser-known stepping stones that made those accomplishments possible. Sometimes the most interesting discoveries are found in the gaps between the better-known stories.

The next time you drive past Launch Complex 20, remember the Titan IIIA. It may have flown only four times, but it helped shape the future of space launch on the Cape and beyond.

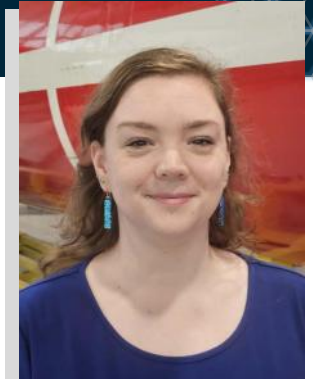
A handwritten signature of James W. Draper in black ink.

James W. Draper, Museum Director



The Curator's Corner

with Sabra Gossett



For more than six decades, Cape Canaveral Air (now Space) Force Station has served as America's gateway to the solar system. From the first attempts to reach the Moon to rovers exploring Mars and probes venturing beyond Pluto, many of humanity's greatest journeys of discovery began from launch pads on the Cape.

While planetary landers often capture the public's imagination, flyby missions have been equally important. By passing close to distant worlds, these spacecrafts have provided humanity's first detailed views of planets, moons, asteroids, and Kuiper Belt objects that would otherwise remain largely unknown.

Launch Complex 5 marked America's first steps into deep space. Pioneer 3 (1958) became the first U.S. spacecraft to reach deep space, discovering part of the Van Allen Radiation Belts, while Pioneer 4 (1959) became the first American spacecraft to escape Earth's gravity and fly past the Moon before entering orbit around the Sun.

Launch Complex 12 helped usher in planetary exploration during the 1960s. Mariner spacecraft conducted pioneering flybys of Venus and Mars, returning humanity's first close-up views of those planets. The complex also supported Ranger lunar missions, which photographed the Moon in remarkable detail before impact.

Launch Complexes 17A and 17B continued the Cape's exploration legacy. Pioneer 0, 1, 2, and 5 launched from LC-17, with Pioneer 5 becoming America's first successful interplanetary mission. Decades later, LC-17A launched Mars Pathfinder, Spirit, and Phoenix to the Red Planet, while LC-17B launched NEAR Shoemaker—the first spacecraft to land on an asteroid—and MESSENGER, the first to orbit Mercury.

Launch Complexes 36A and 36B opened the outer solar system. Pioneer 10 (LC-36A) became the first spacecraft to fly past Jupiter, while Pioneer 11 (LC-36B) became the first to visit Saturn. In 1978, the same pads launched Pioneer Venus Orbiter and Pioneer Venus Multiprobe, beginning the first comprehensive exploration of Venus from orbit and within its atmosphere. LC-36B also launched Surveyor lunar landers, which demonstrated that the Moon's surface could support future crewed exploration.

Launch Complex 40 launched Cassini-Huygens in 1997. After reaching Saturn, Cassini transformed our understanding of the ringed planet and its moons, while the Huygens probe became the first spacecraft to land on Titan.

Launch Complex 41 possesses one of the Cape's richest planetary legacies. Viking 1 and Viking 2 launched in 1975 before becoming the first American spacecraft to successfully land on Mars. Voyager 1 followed in 1977, conducting historic flybys of Jupiter and Saturn before continuing into interstellar space. In 2006, New Horizons launched from LC-41, completing humanity's first flyby of Pluto in 2015 before continuing into the Kuiper Belt. More recently, the complex launched the Curiosity and Perseverance rovers, continuing the Cape's long tradition of Mars exploration.

From the Moon and Mars to Venus, Mercury, Jupiter, Saturn, Titan, Pluto, and even the asteroid Eros, Cape Canaveral Air (now Space) Force Station has served as the launching point for many of humanity's greatest voyages of discovery, extending the Cape's legacy far beyond Earth's shores.

Museum Updates and News

Lessons on Parachute Systems

The final Volunteer Meeting of the season took place on 4 May at the Sands Space History Center. Along with regular business items, committee reports, and a director's update, volunteers enjoyed a fascinating presentation by Fredrich (Dave) Hillebrandt Healey on parachute systems used throughout the history of human spaceflight. The program provided a unique look at an often-overlooked aspect of space missions and concluded another successful season of volunteer engagement and education. *(To the right Mr. Hillebrandt gives his presentation at the volunteer meeting.)*



Water, Water Everywhere

On 26 June, an unexpected "water feature" appeared outside the Launch Complex 26 Blockhouse when a water main ruptured near the historic site. Museum staff quickly reported the issue, and Cape contractors stopped the flow before any damage occurred. Thankfully, the break was outside, not inside. Just another reminder that preserving history on the Space Coast comes with a steady stream of unique facility challenges. *(To the left is a view of the grass outside the Blockhouse receiving a nice drink on a hot summer day.)*

Heard Around the World

To commemorate the 65th anniversary of Alan Shepard's historic *Freedom 7* mission, the KSC Amateur Radio Club operated a special event station from Launch Complex 26 on 9 May. During the all-day event, operators made contact with more than 400 individuals around the world. Participants shared memories of Shepard's flight, discussed space history, and helped celebrate the anniversary of America's first astronaut reaching space from Cape Canaveral. *(To the right club members erect the antenna for the event.)*



Museum Updates and News



Road to Recovery

Museum Director Jamie Draper suffered a serious bicycle accident in late May, resulting in multiple fractures to his lower right leg. After several surgeries and a collection of new metal hardware, he is now recovering at home and teleworking throughout the summer. Jamie extends his sincere thanks to the staff, volunteers, and many friends who have offered support, encouragement, meals, cards, and well wishes during his recovery. He looks forward to returning to the office later this year. *(On the left is an image of Jamie keeping spirits high in the hospital.)*

Weathering a Blast

The New Glenn static-fire explosion at Launch Complex 36 on 28 May caused significant damage to Hangar C, blowing out windows, damaging interior walls, and scattering debris throughout the facility. Fortunately, the damage was cosmetic rather than structural, and no historic artifacts were harmed. Cleanup and repairs began immediately. Work continues toward reopening the facility while teams assess additional protective measures for the future. *(To the right is a view of the iconic "C" from the rear of the building damaged from the blast.)*



Journey of Remembrance

As a thank you for their dedication and service, a group of Museum volunteers toured the Columbia Learning Center at Kennedy Space Center. The facility preserves and interprets recovered elements of Space Shuttle Columbia following the 2003 tragedy. Special thanks to Sabra Gossett and Zach Mahoney for coordinating the visit and Pat Adkins for assisting with a meaningful and memorable experience for our volunteers. *(To the left is a group photo of the tour participants.)*



Museum Updates and News

Beyond the Buildings

Several new outdoor interpretive panels recently completed production and are now being installed across Cape Canaveral Space Force Station. Volunteer Scott Zamorski assisted with the installation of the latest panel highlighting the historic Stile near the Museum parking area. These durable exhibits expand the Museum's ability to share the Cape's remarkable history beyond traditional exhibit spaces. Additional outdoor panels are already in development and will be appearing at more locations soon. *(To the right is the freshly installed panel for the Stile.)*



Restorations in Progress

Earlier this year, Blast Off Inc. removed the Subroc, Arcas Launcher, and Big Shot Shroud from the Museum grounds for restoration. Thanks to Foundation support made possible through the Jared Isaacman donation, remarkable progress has been made. The artifacts are expected to return later this year and will be displayed inside Hangar C, ensuring greater protection and long-term preservation for future generations. *(To the left is a view of contractors working on the surface of the Big Shot Shroud.)*

A Cleaner Mission Support Area

A major reorganization effort is transforming the "kitchen" and storage areas at the Sands Space History Center. Led by Sabra Gossett and a dedicated team of volunteers, the project relocated custodial supplies, installed new folding chair storage racks, and redistributed event materials throughout the facility. The result is a cleaner, safer, and far more functional workspace that will better support Museum operations, volunteers, and special events for years to come. *(To the right is a rare photo of the water main unblocked and a note reminding all to keep it clear.)*



Museum Updates and News

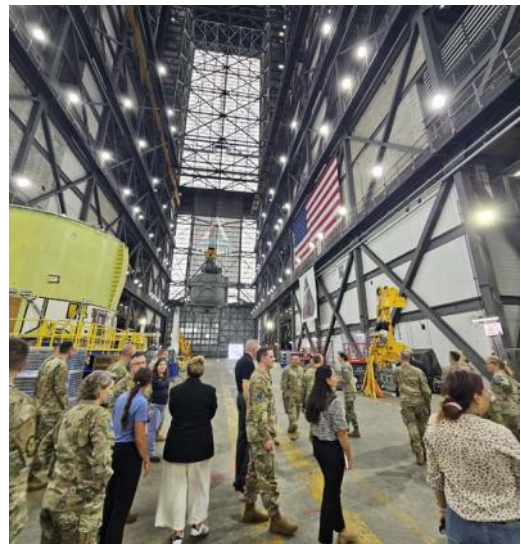


Ceremonies Bringing Change

Summer is one of the busiest seasons for military ceremonies at Museum facilities. On 12 June, the 1st Range Operations Squadron held its Change of Command ceremony at the Sands Space History Center. Later, on 24 June, the 1st Space Launch Squadron officially reactivated during its Assumption of Command ceremony. The Museum was honored to support both events and help preserve the connection between today's Guardians and the Cape's rich heritage. *(On the left is an image of the crowd at the 1st SLS ceremony with standing room only.)*

STARCOM Leaders Explore

On 13 May, Jamie Draper and Carl Claunch led a distinguished visitor tour for senior leaders from Space Training and Readiness Command (STARCOM), including Lt. Gen. James W. Smith. The group toured Cape Canaveral Space Force Station, visited Hangar C, and received an exclusive tour of Kennedy Space Center's Vehicle Assembly Building. The visitors departed with a greater appreciation for the Cape's unmatched contributions to national security and space exploration. *(To the right is a view of the group exploring the VAB at Kennedy Space Center.)*



Refreshing the LC-40 Story

The Launch Complex 40 exhibit at the Sands Space History Center recently received a welcome update thanks to the advocacy of volunteer Tony Barnini and generosity of United Launch Alliance. Two older Atlas V models were replaced with detailed models representing the Atlas V Starliner configuration and the company's new Vulcan rocket. The additions better reflect the launch complex's continuing role in America's space program and help keep the exhibit current for visitors. *(To the left is a photo of the new models on display—the two to the right.)*



Rupert's Launch Pad

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9...

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**LIFT
OFF!**



CAPE CANAVERAL
SPACE FORCE
MUSEUM

Safety Comes First

Thanks to the U.S. Space Force's strict rules about safety, no one was hurt from the New Glenn rocket explosion. Accidents like that have happened throughout the history of the Cape, especially during the early days. One of the most infamous was this failure in 1957 of a Viking rocket. No one was hurt then, either. Safety is always first!



Word of the Month

"ignition"

[ig'niSHən]

In spaceflight this is when a rocket engine is started by setting fire to its propellants — most commonly a liquid fuel of some type and liquid oxygen. But there are many other rocket engine designs, each with their own way to ignite.



Rupert Remembers

Here at Cape Canaveral, 1966 was a very busy year, which means there are lots of 60th anniversary events to remember and celebrate. One of my favorites is the Gemini 10 mission, which launched on 18 July. Astronauts John Young and Michael Collins flew a busy four-day trip in Earth orbit practicing skills that would be needed for Project Apollo's lunar landing flights. But one of the coolest things to come from the mission was the image below — a multiple exposure of Complex 19 and the Gemini-Titan 2 rocket getting ready to fly and then launching. Through the years it has been used in so many places that the image has become an iconic representation of the entire Gemini program.



My Favorite Things

I love everything about rocket engines. When they ignite to send a launch vehicle toward space, there's nothing like it. The sound. The light. The power that shakes your leathery armor shell (or whatever covers your body) to the core. They are both the most complicated machinery ever invented and the simplest thing to understand when it comes to describing how they work. You can learn how a rocket engine works, like I did, by getting up close and personal with a real engine and having someone explain it to you. You can do that at the Sands Space History Center, where a real rocket engine like this Atlas booster engine is on display. Come see it soon!



Do You Know Your Rockets and Launch Pads?

Draw a line from the rocket to the launch pad where it flies from.

Hint: One of the rockets can take off from two different pads! One line is drawn for you.

For help and more information about each pad go online to <https://ccspacemuseum.org/>



New Glenn



Space Launch System



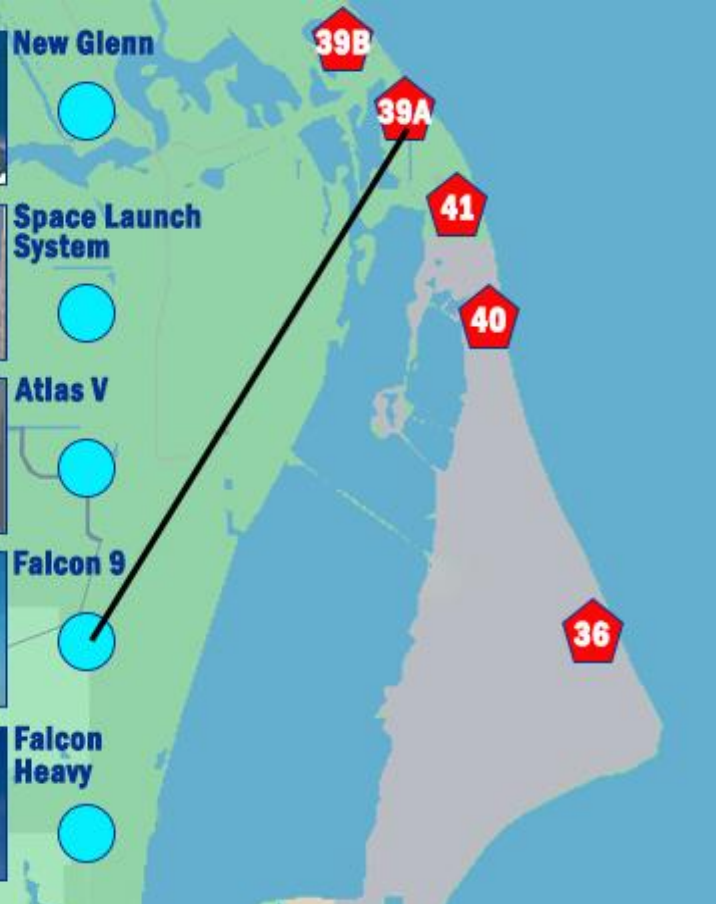
Atlas V



Falcon 9



Falcon Heavy



To the Moon

FREE ADMISSION

9am-3pm

2026 SPACE COLLECTIBLES

**SATURDAY
AUGUST 8**

Sands Space History Center

Near the SOUTH GATE of
Cape Canaveral Space Force Station

**All kinds of
Space Related Collectibles,
and Gifts**

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For More Information or Directions Call:
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SPACE FORCE
MUSEUM

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Sabra Gossett, Museum Curator
Rupert the Space Armadillo, Mascot

Museum Volunteer Association:

Bill Jelen, Chairperson
Susan Dabrowski, Vice Chairperson
Jack Kennedy, Secretary



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