

# TRAJECTORIES

*Official Newsletter of the Cape Canaveral Space Force Museum*

## Quote of the Month:

"Boy, it's great to be back in orbit again!"  
NASA Astronaut Mike Fincke

## Rupert in Space!



On 1 August 2025, the Cape Canaveral Space Force Museum made history. The Museum's official mascot and space ambassador, Rupert the Space Armadillo, launched into space! He became the first armadillo and the first official museum mascot launched into orbit!

Rupert joined Crew-11 on their journey to the International Space Station (ISS). They launched in a SpaceX Crew Dragon spacecraft atop a Falcon 9 space launch vehicle from NASA's Kennedy Space Center. Astronaut Mike Fincke, the pilot for Crew-11, took Rupert in his personal stowage.

Fincke is legendary! This is his fourth journey into space. He has been certified for both Boeing Starliner and SpaceX Crew Dragon. He co-piloted on Soyuz and flew on the Space Shuttle. Fincke is also a retired colonel in the U.S. Air Force with four degrees in higher education. The rest of the international crew includes NASA astronaut Zena Cardman, JAXA astronaut Kimiya Yui, and Roscosmos cosmonaut Oleg Platonov. Their mission motto is "Together, we rise."

They docked with the ISS on 2 August 2025 for a minimum stay of six months. During that

time, Rupert will represent the Cape Canaveral Space Force Museum and the 75-year history of launch from the World's Premier Gateway to Space. He will assist with experiments and inspire many of us on terra firma to look to the skies with inspiration and curiosity. It took a while but Rupert is finally a true space armadillo! Semper Supra!

## DID YOU KNOW?



Helium – it's not just for party balloons and funny voices! Helium is the hidden hero of spaceflight. This light, non-reactive gas keeps rocket fuel tanks pressurized, engines safe, and lines clean – ensuring missions launch smoothly and crews stay protected. Without helium, history-making flights from the Cape wouldn't have left the pad. On your next visit to Hangar C, check out those spheres on the rear of the Agena A. They contained helium to support space missions.



CAPE CANAVERAL  
SPACE FORCE  
MUSEUM

# Message from the Director

*James W. Draper*



It looks like we are keeping the pace for space for 2025! If you thought the first half of 2025 was exciting, the second half launched us into an even higher orbit. July and August ushered in some momentous 75-year anniversaries.

The big one was 24 July 2025 – the diamond anniversary of Bumper 8. That launch started it all. Bumper 8, a modified German V-2 with a WAC Corporal upper stage, was the inaugural launch for the Joint Long Range Proving Grounds, or Cape Canaveral Space Force Station today. Seventy-five years and over 8,000 launches later, it's the World's Premier Gateway to Space!

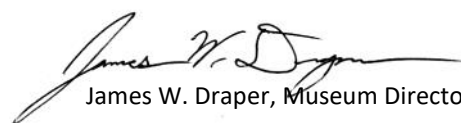
The U.S. Space Force Historical Foundation celebrated with a [gala event](#) at the Kennedy Space Center Visitor Complex as part of their Legacy of Launch Campaign. Guest speakers included our very own Ray Sands (Chairman of the Board) and Jamie Draper (Museum Director), among former astronauts, NASA administrators, scholars, space enthusiasts, and Maj Gen Stephen Purdy, USSF. The evening's extravaganza included a special display of proclamations from Brevard County and all the communities within declaring 24 July 2025 "Space Coast Day." The Foundation also commissioned a 3D-printed, 1/7 scale model of Bumper 8 for the gala. It has been incorporated into the core exhibits of the Sands Space History Center.

The celebrations continued with a CAPE (Creative Activities Promoting Education) Series event at the Sands Space History Center dubbed "Bumper Bash." Held two days later, on 26 August, this festival included scores of activities for kids and families. Visitors enjoyed activity stations that included Rupert-

themed coloring pages, mazes, word searches, and more. A photo-op station featured tons of fun props for instant memories. A slide show included scores of historic photos and video clips of the Bumper 8 launch. Exhibit scavenger hunts with fun prizes kept everyone exploring the displays.

These anniversary events bring perspective and inspiration. As Col Brian Chatman, Commander of SLD-45, recently stated, "These occasions offer a valuable opportunity to reflect on our heritage and reaffirm our commitment to maintaining U.S. space superiority." They allow us to celebrate the dedication of thousands of military service members, civilian civil servants, federal contractors, and others who made our space aspirations a reality.

From the first missile tests to the newest missions, the arc of history passes through Cape Canaveral.

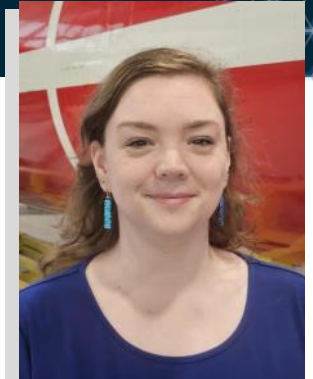


James W. Draper, Museum Director



# *The Curator's Corner*

*with Sabra Gossett*



## **RUPERT. IN. SPACE.**

### **- Cue the Muppets!**

As you've already heard or read, as of August, Rupert is the first armadillo in space! While he's not a real armadillo (sorry to tell you, he's a plush), real animals of many types have gone before him – some even launched from our backyard.

The United States began "bioflights" in 1947 with the launch of fruit flies from White Sands, New Mexico. After success with fruit flies, the U.S. moved onto primates with the Albert series of monkeys. Unfortunately, the monkeys did not survive these trials, but the U.S. pressed on. In 1958, at Cape Canaveral, we began by launching mice and then moved on to primates. Gordo, a squirrel monkey, was up first. His mission was a success, despite the inability to recover his capsule.

The following year, Able and Baker made their famous flight aboard a Jupiter. Their survival buoyed the entire program and led a chimpanzee named Ham to launch as the trial flight to Mercury-Redstone 3, which would make Alan Shephard the first American in space. That same year, another chimpanzee, Enos, made an orbital flight before John Glenn's famous 1962 voyage. Scatback, Bonny, and Goliath followed with mixed results. The US continued to send rodents, as well as leeches, fish, insects, arachnids, and even possibly a \*chicken\* (\*this needs verification and if you have any information, contact me!)

Other nations around the world utilized bioflights. The USSR was keen to use dogs for their flight trails. Laika, a dog, became the first living creature to orbit the earth aboard Sputnik 2 in 1957. Later, dogs Belka and Strelka became the first to survive orbit and return safely. The Soviets sent around 80 dogs to space, some more than once, and with mixed success. They also sent monkeys, rabbits, turtles, rats, insects, and invertebrates.

The French employed cats and were successful with the 1963 flight of Felicette. Argentina used Cai monkeys, a type of capuchin. China sent two dogs up, though their fates are unknown. More recently, Iran has possibly launched two monkeys, but details are hazy.

Over 189 confirmed bioflights have been conducted world-wide, and as we discover new research, that number grows. Plus, we are still utilizing bioflights in this new age of space commerce and travel.

So, until the day a real armadillo ventures to the ISS, Rupert is holding the fort as the first armadillo in space, but not the first animal by far.



# 2025 Space Force Heritage Award

It's official. The Cape Canaveral Space Force Museum won the Space Force Heritage Award for the second year in a row! This Department of the Air Force-level honor was awarded for innovative educational outreach programming and special events. Space Launch Delta 45's Historian, Wade Scroggum (pictured below with Museum Director Jamie Draper), also won the Space Force Heritage Award. Lt Gen Philip Garrant, Commander of Space Systems Command, offered his congratulations to our outstanding museum team!



# Museum Updates and News

## Change of Command Ceremonies

The Sands Space History Center hosted several military ceremonies over recent weeks. Two of the most recent include the Change of Command Ceremonies for the 5<sup>th</sup> Space Launch Squadron and the 45<sup>th</sup> Weather Squadron of Space Launch Delta 45. Both groups have been active mission supporters for the Cape Canaveral Space Force Museum. It's been an honor to reciprocate by offering our facilities for their ceremonies. *(To the right is a view of from the 45th Weather Squadron's Change of Command Ceremony with Col Chatman officiating.)*



## Fincke Launch Party

On 30 July, the Fincke Launch Party was held at the Sands Space History Center. We were honored to host 150 family and friends of NASA astronaut Mike Fincke prior to the epic launch of Crew-11. Food, photo-ops, and fun greeted all the attendees. Mike joined the party remotely because of quarantine. Everyone wished him well on his fourth journey into orbit. He was honored to take Rupert the Space Armadillo with him. *(To the left is Mike Fincke joining the festivities remotely and everyone wishing him luck on his flight.)*



## New Activity Station

Many of the activities created for the Bumper Bash were so popular we decided to make them more permanent. Visitor to the Sands Space History Center will find a new family-friendly activity station. It consists of Rupert and space-themed coloring pages, mazes, word searches, and crayons to complete them. It's part of our efforts to make the History Center a more family and kids-friendly destination for people of all walks of life. *(To the right is an image of some of the activities people can now enjoy at the History Center.)*



# Museum Updates and News



## Space Coast Day

Celebrating 75 years of launch from Florida's Space Coast came with official recognition. Museum Curator Sabra Gossett secured official proclamations from Brevard County and 17 communities within to recognize 24 July 2025 as "Space Coast Day!" A display of all the proclamations greeted visitors to the Legacy of Launch Gala on 24 July and the Bumper Bash two days later. Launch has made the Space Coast the amazing place it is today! *(On the left is a photo of the proclamations prominently displayed during the Bumper Bash celebration.)*

## Bumper Bash—CAPE Series

We helped celebrate the 75<sup>th</sup> anniversary of the first launch from Florida's Space Coast with an incredible event at the Sands Space History Center. Hundreds of visitors enjoyed "Bumper Bash" on 26 July, a unique CAPE Series event. The festivities included scavenger hunts, coloring stations, slide shows, special displays, and unique photo ops with Rupert the Space Armadillo before his big journey into orbit. What better way to celebrate 75 years of launch from Florida's Space Coast? *(To the right participants take advantage of the photo-op station with all the props.)*



## Bumper 8 Model

The 75<sup>th</sup> anniversary celebrations included many spectacular surprises. One included a unique investment from the U.S. Space Force Historical Foundation. They had a 3D-printed, 1/7 scale model of Bumper 8 made for the Legacy of Launch Gala. It then found a permanent home in the Sands Space History Center at the Launch Complex 3 section. Visitors will find inspiration in this creation for many years to come! *(To the left some of the MassiveMAKE team deliver the Bumper model to the History Center and assemble it for display inside.)*





# Museum Updates and News

## Space Force Kiosk

In conjunction with the Sands Space History Center enhancements and the 75<sup>th</sup> anniversary celebrations, the U.S. Space Force Historical Foundation funded a fantastic addition to our exhibitions. An interactive U.S. Space Force kiosk is now in place at the History Center. It includes two interactive touch screens that delve into the basics of the Space Force and connect the Space Force with your everyday life. A third static panel connects 75 years of Florida launch history with the Space Force today. *(To the right is an image of visitors to the History Center interacting with the new kiosk.)*



## History Center Turns 15

August 2025 marks 15 years of the Sands Space History Center. It opened in 2010 as the Air Force Space & Missile History Center. The facility changed names to the Sands Space History Center in 2016 in honor of Maj Gen Harry "Bud" Sands, Jr. He helped create the museum operation during the 1960s. Since 2010, the History Center has embarked upon many considerable upgrades. It introduces thousands of visitors every year to the rich history of the World's Premier Gateway to Space. *(To the left is a before and after view of recent History Center renovations.)*

## National Space Club

On 12 August, the National Space Club Florida Chapter held a luncheon at the Radisson Hotel in Cape Canaveral. Jim Thomas of the U.S. Space Force Historical Foundation was the guest speaker. He introduced the large crowd of community leaders and space enthusiasts to the Foundation's [Legacy of Launch](#) Campaign. He emphasized the mission of the Cape Canaveral Space Force Museum and its ambitions to expand considerably in the near future. *(To the right is a view of Museum staff and volunteers commandeering a table at the luncheon thanks to Jack Kennedy.)*





# Museum Updates and News



## Space Collectibles Show

The U.S. Space Force Historical Foundation held its annual Space Collectibles Show on 16 August at the Sands Space History Center. Over 400 visitors came through and expanded their collections of space memorabilia. Some came as far as Miami, Tampa, and Jacksonville to participate in the experience. Those who came left with treasures and a better appreciation of Florida's Space Coast and America's explorations in space. *(On the left shows a view of crowds viewing all the treasures at the show.)*



## Patrick at 75

The 75<sup>th</sup> anniversary celebrations will continue throughout the year. The Museum is marking one of the more significant milestones with a special exhibit recently opened at the Sands Space History Center. The official naming of the Patrick Air Force Base took place on 26 August 1950. It was named after legendary Maj Gen Mason Patrick. The exhibit uses original artifacts, photos, and documents to share the rich history of what we now know as Patrick Space Force Base. *(To the right is an image of the new special exhibit on display at the History Center.)*



## Community Outreach

A huge part of the Museum's mission includes educational and community outreach. Museum Director Jamie Draper gave a luncheon presentation about the Museum on 20 August. The audience included over 80 L3 Harris retirees in Eau Gallie. Mr. Draper shared the purpose, mission, and scope of the Museum, along with all the recent activities and updates. The presentation was well received. *(To the left is a view of Mr. Draper and the crowd right before the presentation began.)*





## Rupert's Launch Pad

10...  
9...  
8...  
7...  
6...  
5...  
4...  
3...  
2...  
1...  
0...  
**LIFT  
OFF!**



### Hello from Earth Orbit

As you know by now, I'm a real space armadillo! Since I was launched with my astronaut and cosmonaut friends on Aug. 1, we have travelled many millions of miles and I've seen more sunrises and sunsets than you could possibly imagine. It's really amazing and Earth looks so beautiful. You can stay up to date with my mission by going online and search #FollowRupert.



### Word of the Month

*"module"*

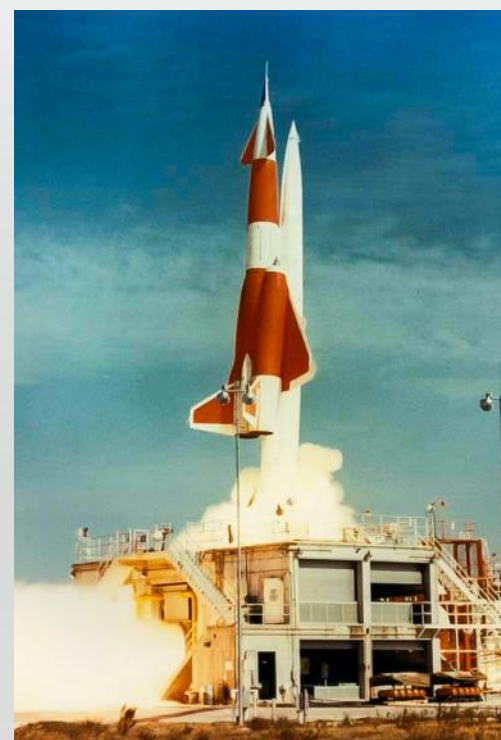
[moj-ool]

In spaceflight, a module is a self-contained section of a spacecraft. The space station is a collection of many modules connected together.



### Rupert Remembers

If you have visited the Sands Space History Center near the south gate of Cape Canaveral Space Station — we hope to see you soon if you haven't — you probably saw a Navaho missile on display by the entrance to the parking lot. It's one of my favorite exhibits and one of the more interesting missiles tested at the Cape between 1955 and 1959. The picture below shows one of them launching. It was a great vehicle but sometimes the launch team would have troubles during the countdown or just after liftoff, giving it the nickname "No Go Navaho." :)



## My Favorite Things

Can there be any doubt that this space armadillo now counts the Falcon 9 rocket and Dragon spacecraft among my favorite things? Especially the one seen here. This was the view my armadillo family and friends had as I rocketed into space from the Kennedy Space Center. You can't see me but I'm inside the Dragon at the top of the rocket. The quick trip to orbit is something I'll never forget. Definitely a favorite!



## Getting Around the International Space Station



One of the first things Rupert had to do when he arrived at the space station was to learn the names and locations of the orbital outpost's modules. You can help Rupert find the names of the modules in this puzzle. Remember, there is no up or down in space, so words here can be forward, backward, up, down, and diagonal.

COLUMBUS	KIBO	PRICHAL
CUPOLA	LEONARDO	QUEST
DESTINY	NAUKA	RASSVET
HARMONY	POISK	TRANQUILITY

T	D	S	F	U	U	A	A	K	C	K	B	I	W	P
R	K	U	T	O	L	N	M	D	R	Y	S	S	T	G
A	I	B	F	O	C	A	G	P	Z	P	B	I	C	Q
N	Z	M	P	U	L	U	T	L	U	E	B	Y	O	Y
Q	J	U	P	U	H	S	E	N	X	W	V	D	L	P
U	C	L	Q	N	E	O	I	H	L	K	H	Z	V	O
I	E	O	O	U	N	T	Y	L	A	B	E	L	X	J
L	I	C	Q	A	Y	I	T	A	O	R	Y	M	R	E
I	A	Y	R	A	Z	X	D	H	R	Q	M	G	R	Y
T	K	D	A	K	U	A	N	C	C	T	S	O	O	R
Y	O	U	R	H	A	V	D	I	H	O	O	B	N	B
D	E	S	T	I	N	Y	C	R	K	W	Y	G	Y	Y
R	A	S	S	V	E	T	O	P	I	S	T	E	T	I
S	R	Q	O	I	U	T	M	K	B	A	Q	H	A	S
T	X	M	X	B	S	J	N	U	O	L	E	J	Q	Q



# *Our Museum Family*



CAPE CANAVERAL  
**SPACE FORCE**  
MUSEUM

## **Museum Staff:**

James Draper, Museum Director  
Sabra Gossett, Museum Curator  
Rupert the Space Armadillo, Mascot

## **Museum Volunteer Association:**

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



UNITED STATES  
**SPACE FORCE**  
HISTORICAL FOUNDATION

## **Executive Committee Members:**

Raymond Sands, Chairman  
Steven Lepper, Major General, USAF (ret.)  
Vice Chairman  
Rob Quigg, Treasurer  
Roger McCormick, Secretary

## **Board Members:**

Robert VanVonderen  
Stephen Houser  
Therrin Protze  
Victor Latavish  
Tim Oliver  
Jim Banke (*Honorary Member*)

## **Foundation Employees:**

Deborah Allison, Foundation Services Manager  
Sharon Rodriguez, Executive Assistant



***Cape Canaveral Space Force Museum***

***191 Museum Circle***

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