March 2025 - Issue 149

ORBIT

Astro Space Stamp Society

In this issue

ASSS member travels into space

STS-mission and ISS-related Earth images

Astro Space Stamp Society

Catalogue of Astronomy and Space Stamps

Countries T to Z

A mission to the far side of the Moon

The Journal of the Astro Space Stamp Society

ISSN 2755-0605 No: 149 March 2025

Editorial

Welcome to the March issue of Orbit magazine. As usual we have a packed issue for you. Be sure to check out ASSS member David Saunders' trip to the International Space Station, while Don Hillger and Garry Toth take a look at the STS mission and ISS-related Earth images.

We have the final part of U.S. Mail on the Moon and Umberto Cavallaro tells us the story of Sirisha Bandla who went from Guntur to the edge of space.

We look at the Nascom network and Chang'e 6 - a mission to the far side of the Moon. We also find out what is next for China's lunar exploration and look at the tragedy of Soyuz 1.

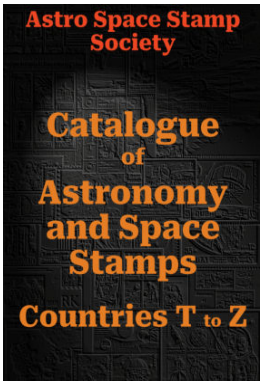
I have now finished the last part of the Astronomy and Space Stamps Catalogue covering countries T to Z and you can find the link to all sections of the catalogue on the right.

If you know of any stamps that we have forgotten to include in the catalogues (not the latest issues for 2023 and 2024) and any stamps that you think should also be included, please let us know by email.

Next I hope to update the Female Astronauts, Star Trek and Star Wars catalogues. One question is how you would like to see the catalogue progress. I would like to know if you would like to see the catalogue as it is, but with catalogue numbers, or each country as a separate catalogue with catalogue numbers.

Please let me know your thoughts.

Derek



For the Catalogues of Astronomy and Space Stamps - Female Astronauts - Star Trek and Star Wars

Link one (Playbook): **Click Here**

or

Link two (Google Drive): **Click Here**

Coming soon

Halley's Comet Catalogue

By Edmund Poscher

All Back issues of Orbit

Link one (Playbook): **Click Here**

or

Link two (Google Drive): **Click Here**

All Back issues of Newsletter

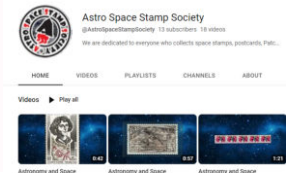
Link one (Playbook): **Click Here**

or

Link two (Google Drive): **Click Here**

For the Astro Space Stamp Society YouTube channel

Click Here



For the Astro Space Stamp Society website

Click Here

Copy Deadline for the May 2025 issue is April 10th by which time all material intended for publication should be with the Editor. Please send your articles to

astrospacestampsociety@gmail.com

This article first appeared in AD*ASTRA # 50 (October 2021)

Sirisha Bandla - From Guntur to the edge of space

by Umberto Cavallaro

Sirisha Bandla became an instant celebrity among the wider public when on July 11, 2021 she was one of Virgin's employees who flew to the edge of space on Virgin Galactic's SpaceShipTwo Unity #22. She accompanied British billionaire Sir Richard Branson (the first person to reach space aboard his own spaceship) together with VG's Lead Flight Operations Engineer Colin Bennett, VG's Chief Astronaut Instructor Beth Moses, and pilots Dave Mackay and Michael Masucci. C.J. Sturckow and Kelly Latimer piloted the carrier ship, VMS Eve.

This was the twenty-second flight test for Virgin Galactic's and fourth crewed suborbital spaceflight of VSS Unity. It was the first fully-crewed successful suborbital test flight.

"Congratulations to Indian American astronaut Sirisha Bandla on becoming the third Indian-origin woman after Kalpana Chawla and Sunita Williams to fly into space (See Note 1). You are an inspiration to all, Sirisha!" tweeted on its official account the US Embassy in India, with the hashtag #WomeninSTEM.

India's Vice President Venkaiah Naidu added, *"Bandla's achievement will motivate many more young girls in India and abroad to take up challenging careers."*

"From Guntur to the edge of space, Sirisha Bandla's feat will inspire young girls across the globe to break the glass ceiling and define new possibilities," echoed on twitter the Indian Minister of Education Dharmendra Pradhan, referring to the aeronautical engineer's Indian roots.

Indian roots

Sirisha Bandla was born in India on 22 January 1988, in Tenali – in Andhra Pradesh, a southern state in Guntur district – into a Teluguspeaking Hindu family. At the age of four she moved to Houston, United States, where her father Dr. Muralidhar Bandla, a scientist in agriculture, migrated in search of better opportunities. He is currently working in India with the US Embassy. Although has lived in the United States since then, she is still deeply connected to her Indian roots and constantly makes trips to meet her relatives and friends there.

Virgin Galactic's SpaceShipTwo - Photo credit : Virgin Galactic

Sirisha visited NASA on a school field trip, and since childhood she liked to know about people related to space: *"I grew up in Houston, Texas*, – Sirisha says – *so we had Johnson Space Center right down the street. I started seeing how people become astronauts. After that I decided to make my career in this field."*

After completing her basic education in a local high school in Texas, she planned to enroll in the U.S. Air Force, and eventually become a NASA astronaut, but she could not fulfill pilot qualifications due to her eyesight.

Ansari X-Prize

The Ansari X-Prize winning entry by SpaceShipOne, the first private vehicle to travel into space multiple times, showed her that NASA was not the only way to follow her passion. From then on she decided to become an aerospace engineer, looking at the growing commercial space sector.

In 2006 she was admitted to Purdue University where she graduated in 2011 with a B.S. (Bachelor of Science) in Aerospace, Aeronautical and Astronautical Engineering.

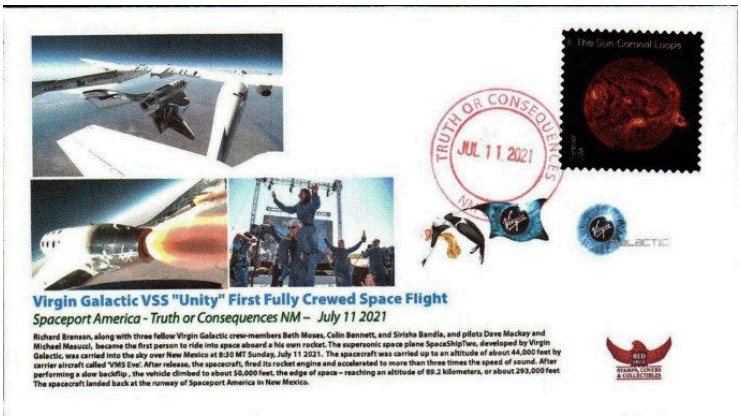
After attending school for one full year, she participated in the co-op programme and every semester from August 2007 to August 2010 she interned at ATA Engineering, headquartered in San Diego, California, providing test and analysis-driven design for aerospace and defence.

Sirisha Bandla looking out the window on Virgin Galactic's SpaceShipTwo Unity #22.

After graduating she joined as an aerospace engineer the L-3 Communications Integrated Systems in Greenville, Texas, specialising in aircraft modernisation and maintenance services, where she worked for two years designing components for advanced aircraft.

"As I started working – Sirisha says – *I realised that the one thing I didn't get from my education at Purdue was a business aspect. I had the opportunity to continue my education while I was working"*. In 2012 she was admitted to George Washington University's Business Administration program from which she obtained a Masters degree (M.B.A.) in 2015.

Commemorative cover for the Virgin Galactic VSS. Unity 22 mission First fully crewed Space Flight.



Commemorative cover for the Virgin Galactic VSS. Unity 22 mission First fully crewed Space Flight (by Gus Kathmann)

Commercial Spaceflight Federation

During this period, from January 2012 to June 2015, she served as Associate Director of the Commercial Spaceflight Federation (CSF), an industry association of commercial spaceflight companies. There she worked on various policies with the aim to promote the commercial space industry and make commercial spaceflight a reality.

Sirisha's talents were recognised quite early by the USA Telugu community. At its 2014 convention, they honoured her with the TANA Youth Star Award (see note 2) for achieving great milestones in space.

Sirisha Bandla on a souvenir sheet from Central African Republic.

The following year, in July 2015, Sirisha joined Virgin Galactic starting her career in the Government Affairs department. She progressed through the company's ranks, becoming Business Development & Government Affairs Manager at Virgin Galactic in October 2017, and then the Director of Washington Operations at Virgin Orbit from January 2020 to January 2021, when she was promoted Vice President of Government Affairs and Business Development of the Virgin Group, supporting both Virgin Orbit's LauncherOne and Virgin Galactic's SpaceShipTwo programmes.

Sirisha also serves on the Board of Directors for the American Astronautical Society, Future Space Leaders Foundation, and is a member of the Young Professional Advisory Council at Purdue University, in addition to helping to coordinate the Matthew Isakowitz Fellowship Programmes (see note 3).

The news that Sirisha would fly into space broke on July 1st 2021, when the crew of VSS

Sirisha Bandla on a stamp from Mali.

Unity #22 was announced. This was the same day Jeff Bezos disclosed that the first crewed flight of his company Blue Origin would include aviation pioneer Wally Funk, his brother Mark and the yet-to be named winner of an on-line auction for the fourth seat.

"I am so incredibly honoured to be a part of the amazing crew of Unity #22, and to be a part of a company whose mission is to make space available to all." Sirisha said, sharing the news on her Twitter.

Ten days later, on 11 July, SpaceShipTwo, the winged plane with a single rocket motor and carried aloft by VMS Eve mothership, named after Branson's mother, was drop-launched from an altitude of more than 13 kilometres.

After separation the vehicle roared into space over the New Mexico desert, reaching an apogee of 86 kilometres. This is beyond the boundary of space set by the United States, allowing all six passengers to admire the Earth's curvature and experience a few minutes of weightlessness, and thereby qualifying them, including Sirisha, as FAA commercial astronauts.

Earth's gravitational force

During the flight, Sirisha conducted a NASA-supported experiment from the University of Florida and evaluated the human-tended research experiment by activating aboard Unity, several handheld fixation tubes at critical data-collection stages, at different phases of the flight: this included at standard Earth's gravitational force (at 1 g) before the rocket boost, just before entering microgravity, and after the conclusion of microgravity.

Sirisha Bandla on Richard Branson's shoulders celebrating after the flight.

University researchers investigators Robert Ferl and Anna-Lisa Paul have flown similar experiments on suborbital flights in the past. They began studying how plants respond to microgravity on the molecular level with space shuttle experiments in the late 1990s and found that plants behave quite differently in space compared to on the ground.

They applied the findings to longer-term observations with nine experiments on the International Space Station. The data collected during the Unity 22 flight will provide a "first look at human-tended payloads on SpaceShipTwo" that will complement the previous data.

After four minutes they started a descent back to Earth, and about 14 minutes after launch, Unity#22 safely landed back, gliding to the same Spaceport America runway (Runway 34) where takeoff had occurred in New Mexico 90 minutes before.

"I was trying to think about a better word than incredible – Sirisha shared during a postflight interview – *but that is the only word that can come to my mind... Seeing the view of Earth is so life changing but also the boost the rocket motor kicking in. The whole trip to space and back is just amazing".*

(Note 1) The first Indian ever to go into space was the former Air Force pilot Rakesh Sharma who flew aboard Soyuz T-11 on 3 April 1984, part of the Soviet Interkosmos programme. Kalpana Chawla was the first woman of Indian origin to go to space, when in 1997 she was a mission specialist and primary robotic arm operator on Space Shuttle Columbia STS-87. She was one of the seven crew members who died in the Space Shuttle Columbia STS-107 disaster in 2003. The second woman of Indian descent to fly into space was American-Indian Navy Officer Sunita Lyn Williams (born Pandya). During her two long-term stays on the International Space Station she broke several records, including for longest continuous spaceflight by a woman (192 days), most spacewalks by a woman (seven), and longest spacewalk time for a woman (50 hours, 40 minutes). In 2012 she became the second woman to command the International Space Station.

(Note 2) TANA (Telugu Association of North America) is the oldest and largest Indian-American organisation in the States.

(Note 3) The Matthew Isakowitz Fellowship is a programme that helps college students enter the commercial spaceflight industry. It was created in memory of Matthew Isakowitz, *"whose passion for commercial space exploration inspired all who knew him"*, Sirisha says. Matthew Isakowitz had helped Bandla in understanding space policy, at a crucial time in her career when she joined the CSF. He was her predecessor. Before leaving – Sirisha recalls – *"he basically gave me a crash course on what space policy is. Matthew was the first person to really bring me into the space policy community. Prior to that, I didn't have a real appreciation for the role policy plays in a lot of our decisions and programmes. (...) He always had a rare, great understanding of policy, business, and engineering."* Unfortunately, Matthew passed away in 2017. Sirisha has been part of the MIFP's leadership team since the program was founded after his death, to help inspire the next generation of commercial spaceflight leaders.