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Exhibition: [Futures in Space](#)

Photos: [Futures in Space Photos](#)

Exhibition Fact Sheet “Futures in Space”

Title: “Futures in Space”

Opening: July 28, 2025, National Air and Space Museum, Washington, D.C., Gallery 109

The “Futures in Space” exhibition invites visitors to explore the potential near- and long-term futures that may emerge with advances in space exploration technology and enterprise. The gallery features developing technologies that bring down the cost of going to space, aim to inaugurate the era of commercial and tourist spaceflight, expand robotic planetary exploration and resource extraction, and keep humans alive in new environments.

“Futures in Space” asks visitors to consider the social, political and economic questions that emerge along with these new activities: Who decides who goes to space? Why do we go? What will we do when we get there? What futures in space do visitors imagine for themselves? The exhibition includes a presentation stage and will be a forum in which visitors can engage with the people who are working to shape the future.

Highlights include:

- **SpaceX Merlin Engine (flown):** SpaceX uses its Merlin rocket engines to launch spacecraft and crew for itself, NASA and other customers. Reusable engines, like this one from a Falcon 9 rocket, save costs and help companies compete in the growing global spaceflight market. It first launched in July 2018, and the engine was reused in October 2018 and February 2019.
- **SpaceX Grid Fin (flown):** Moveable grid fins, like this one from a SpaceX Falcon 9, help control a rocket’s upright return on a landing pad, which prevents damage. SpaceX can then recover—and reuse—the rocket, engines and grid fins. Recoverable rockets reduce launch costs, and less expensive rockets make spaceflight possible for more nations and companies.
- **RocketMotorTwo (flown):** The RocketMotorTwo engine propelled SpaceShipTwo VSS Unity into space for the first time in 2018. Virgin Galactic’s reusable spaceplanes like SpaceShipTwo carry paying passengers into space without going into orbit. After a few minutes in microgravity, they glide back to Earth.
- **New Shepard Crew Capsule (mockup):** Blue Origin designed its reusable New Shepard capsule with big windows for tourists to gaze at Earth. Customers can take suborbital flights to

complete commercial missions or just for fun. The New Shepard program is named for Alan Shepard, the first American in space. The spacecraft can hold six people. This mockup is on loan from Blue Origin. The museum plans to collect the flown New Shepard crew capsule RSS First Step once it is decommissioned.

- **Sian “Leo” Proctor’s Inspiration4 Spacesuit (flown):** Sian “Leo” Proctor wore this SpaceX suit in 2021 during launch and re-entry of the Inspiration4 mission. She was mission pilot for this first all-private orbital spaceflight. Inspired by her experience, Proctor made art in space and wrote poetry following her three-day flight. On loan from Inspiration4 and SpaceX.
- **R2-D2:** Adam Savage of Tested built this reproduction of the famous *Star Wars* character R2-D2. Science fiction often portrays robots that work alongside people as having human characteristics. Astromech droids in *Star Wars* movies fix mechanical problems, override computer glitches, navigate and more. On loan from Savage.
- **Yuri Gagarin’s training pressure suit:** Yuri Gagarin, the first person to fly in space, wore this suit to train for space flight on the Vostok 3KA spacecraft in 1961. The letters CCCP on his helmet signify that he flew for the Soviet Union. On loan from Emmet & Toni Stephenson and Tessa Stephenson Brand.
- **Immersive Mars Habitat:** Analog missions—Earth-based simulations that recreate the environment and experiences of space-based missions—allow scientists to learn more about the physical and psychological effects of space travel. Inside this imagined 3D-printed Mars habitat, visitors will experience an audio-video presentation featuring interviews with analog Mars astronauts that explore the human side of deep space exploration.

Sponsor: Diane Williams Murphy

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