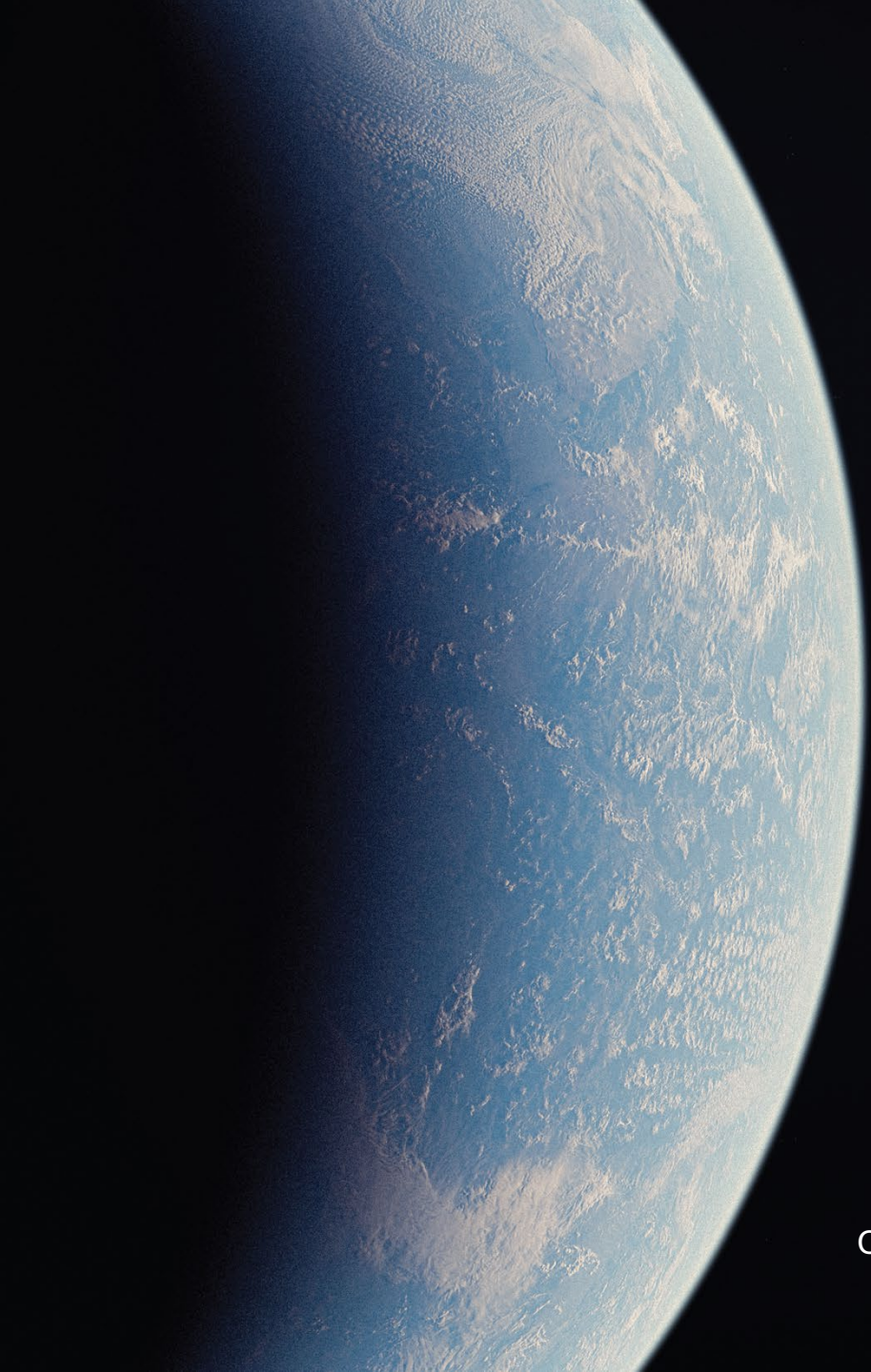
National Aeronautics and Space Administration



STMD Overview

STIGUR Meeting

Clayton Turner | Associate Administrator | NASA's Space Technology Mission Directorate (STMD)

August 13, 2025

nasa.gov/spacetech

SPACE TECHNOLOGY MISSION DIRECTORATE

The work we do today is shaping the missions of the future while delivering the cutting-edge technology that defines American leadership in space exploration for years to come

ADVANCE US space technology innovation and competitiveness in a global context

FOSTER innovation by cultivating breakthrough ideas, embracing risk, and fueling a competitive space economy

INSPIRE a powerful U.S. aerospace technology community to improve life on Earth and in space

Functional Domains Focused on Capabilities

GO
Space Transportation

The Space Transportation Domain advances technologies that will enable rapid, safe, and efficient space transportation.

LAND
Space-to-Surface Access

The Space-to-Surface Access Domain advances technologies that will enable expanded and precision access to diverse surface destinations from in-space transits and orbital operations.

LIVE
Surface Infrastructure and Exploration

The Surface Infrastructure and Exploration Domain develops and demonstrates essential surface infrastructure capabilities to enable sustainable robotic, scientific, and human exploration missions in lunar and Mars environments.

EXPAND
In-Space Infrastructure and Discovery

The In-Space Infrastructure and Discovery Domain advances technologies for resilient in-space infrastructure and agile missions. The Domain seeks to improve capabilities enabling orbital missions and persistent in-space activities across the solar system.

ENABLE
Foundational Capabilities

The Foundational Capabilities Domain advances technologies that are needed to support multiple capabilities.

CATALYSTS
Innovative Mechanisms

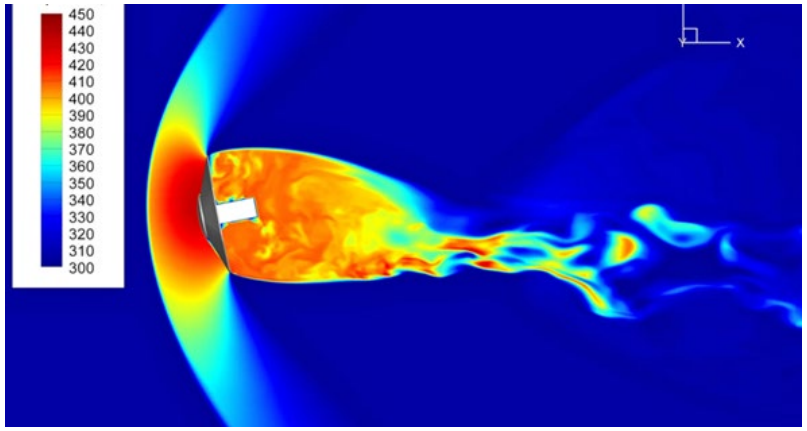
- NIAC/CIF/ECI
- STRG
- PCC
- Tech Transfer
- SBIR/STTR
- Flight Opportunities
- TP/ACO
- IRAD

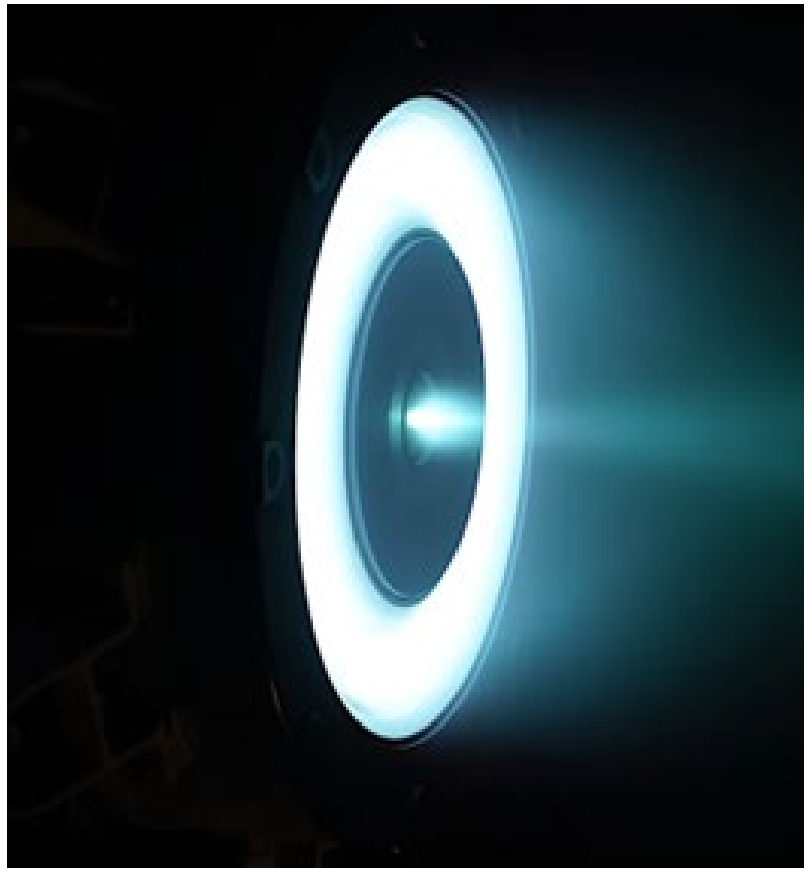
STMD FY 2026 PBR Summary ($M)

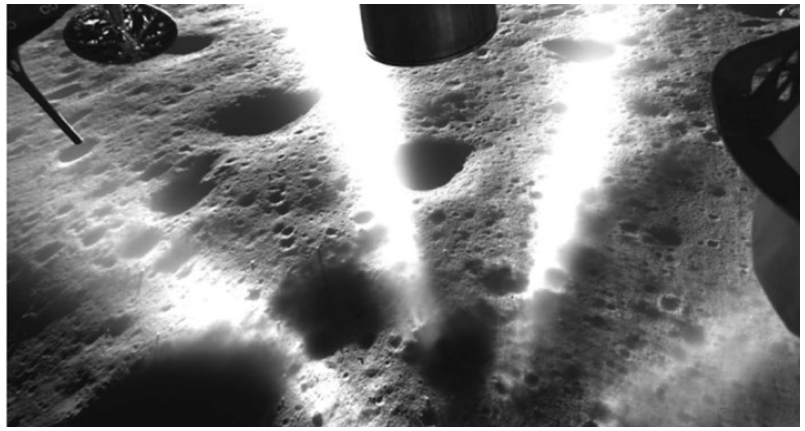
	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
	568.9	568.9	568.9	568.9	568.9
SBIR and STTR	169.0	169.0	169.0	169.0	169.0
Space Transportation (GO)	46.6	53.7	53.7	53.7	53.7
Solar Electric Propulsion (SEP)	7.7	6.6	5.7	1.7	-
Space Transportation Capabilities	38.9	47.1	48.0	52.0	53.7
Space to Surface Operations (LAND)	26.9	26.9	26.9	26.9	26.9
Surface Infrastructure & Exploration (LIVE)	55.7	62.7	62.7	62.7	62.7
In-Space Infrastructure & Discovery (EXPAND)	46.7	46.7	46.7	46.7	46.7
Foundational Capabilities (ENABLE)	49.4	49.4	49.4	49.4	49.4
Catalysts & Innovative Mechanisms (CATALYSTS)	174.6	160.5	160.5	160.5	160.5

Program Descriptions

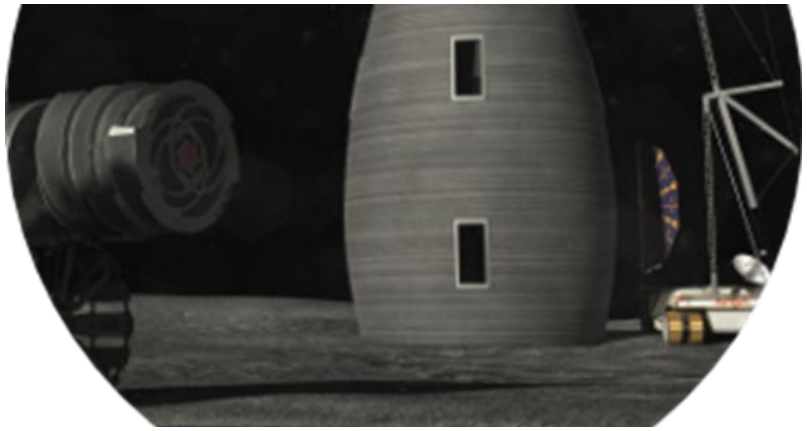
Space Transportation Program (GO + LAND)	Advances technologies that will enable rapid and efficient ascent and in-space transit, as well as expanded and precise access to diverse surface destinations.
Surface Infrastructure Program (LIVE + ENABLE)	Develops and demonstrates essential surface infrastructure capabilities enabling robotic, scientific, and human exploration missions in lunar, Mars, and other planetary environments.
In-Space Infrastructure Program (EXPAND + FLT OPP)	Advances technologies for agile missions and expansion of space commerce. The program seeks to improve capabilities that enable rapid risk-tolerant missions and persistent in-space activities across the solar system.
Catalysts Division	Unique programs and mechanisms that enable NASA to advance breakthrough technologies, forge strategic partnerships, and accelerate innovation to transform future missions and sustain US leadership in space.

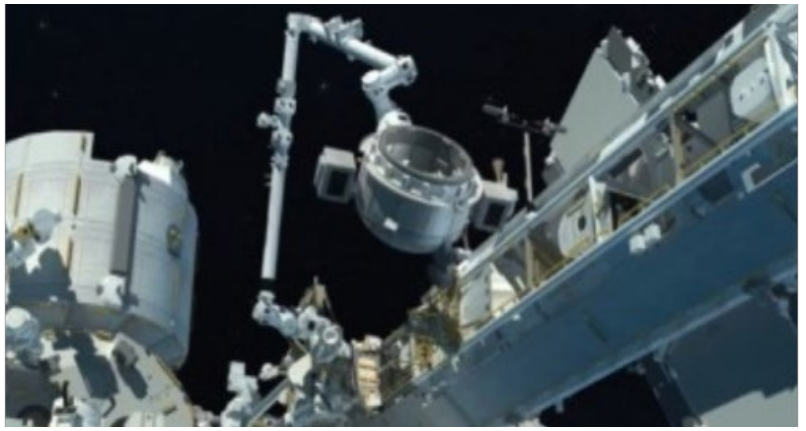


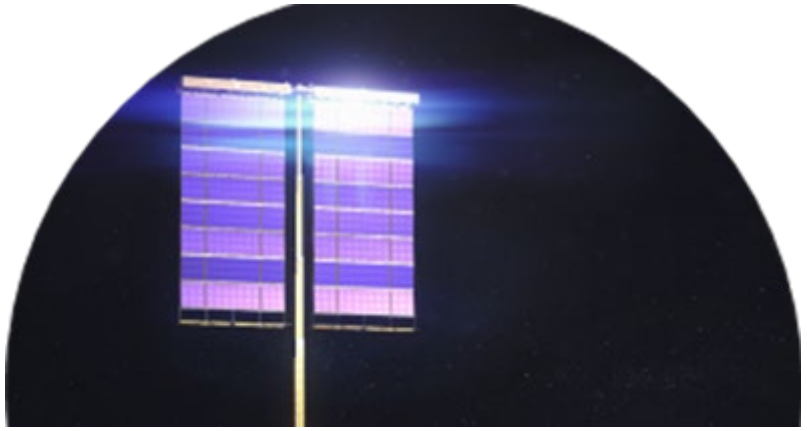




Space Transportation Program
(GO + LAND)







Surface Infrastructure Program

(LIVE + ENABLE)

In-Space Infrastructure Program (EXPAND + FLT Opp)

STMD Manages Agency-Wide Technology and Innovation Activities

Through **contracts, grants, internal awards, public prize competitions and challenges**, **flight tests,** and **Space Act Agreements (SAA),** Catalyst programs execute activities and projects to help address capability roadmaps and nurture the knowledge and talent base for civil space while also supporting agency level functions.

Contracts

Grants and Cooperative Agreements

Internal Awards

Prizes and Challenges

Flight Tests

Funded / Unfunded Space Act Agreements

Catalysts Division

- *NIAC/ECI*
- *STRG*
- *CIF/IRAD*
- *PCC*
- *SBIR/STTR*
- *Tech Transfer*
- *TP/ACO*
- *Crosscutting Services*

STMD Program and Capability Re-Alignment

Space Transportation Program (GO + LAND)	❖ Advanced Propulsion ❖ Deceleration Systems ❖ Guidance & Navigation Systems	❖ Cryogenic Fluid Management ❖ Landing Systems & Environments ❖ Entry Modeling & Instrumentation
Surface Infrastructure Program (LIVE + ENABLE)	❖ Advanced Power &Thermal Systems ❖ Avionics ❖ Advanced Materials, Structures & Manufacturing	❖ Environments & Dust Mitigation ❖ Surface Sustainability & Logistics
In-Space Infrastructure Program (EXPAND + FLT OPP)	❖ Communications, Position, Navigation, & Timing ❖ Small Spacecraft & Distributed Systems	❖ In-Space Servicing, Assembly & Manufacturing • *Flight Opportunities*
Catalysts Division	• *NIAC/ECI* • *STRG*	• *CIF/IRAD* • *PCC* • *SBIR/STTR* • *Tech Transfer* • *TP/ACO* • *Crosscutting Services*

National Aeronautics and Space Administration

- STMD is shaping the missions of the future while delivering the cutting-edge technology that defines American leadership in space exploration
- STMD is pivotal to human exploration of the Moon and Mars and science endeavors fulfilling our commitments to industry, government, and academic partners.

SPACE TECHNOLOGY MISSION DIRECTORATE

TECHNOLOGY DRIVES EXPLORATION

REACH
NEW
HEIGHTS

REVEAL
THE
UNKNOWN

BENEFIT
ALL
HUMANKIND