



NASA Small Business Innovation Research Small Business Technology Transfer

Bethany McClave | Launch Your Innovation – Collaborating with NASA's
SBIR/STTR Programs | April 23, 2019

SBIR / STTR Programs Vision and Mission

VISION

Empower small businesses to deliver technological innovation that contributes to NASA's missions, provides societal benefit, and grows the US economy.

MISSION

Create opportunities through SBIR/STTR awards to leverage small business knowledge and technology development for maximum impact and contribution

NASA's SBIR and STTR programs have awarded **more than \$3.75 billion** to research-intensive American small businesses.

Engineers and scientists from more than 3,100 Firms in all 50 States, DC, and Puerto Rico have participated across the two programs.

Approximately 15,000 total awards have been made to-date.

SBIR/STTR Program Structure

NASA SBIR/STTR PROCESS



Go to sbir.nasa.gov/guide for details

Learning about NASA's Needs

Focus Areas

NASA's research subtopics are organized by "Focus Areas" that group interests and related technologies.

- **Identify** the Area(s) closest to your innovation/idea
- **Go** to our website to research
- **Prepare to write** a proposal tailored to NASA's needs

<https://sbir.nasa.gov/solicitations>

2019 Focus Areas (FA)	
FA 1: In-Space Propulsion Technologies	FA 13: Information Technologies for Science Data
FA 2: Power Energy and Storage	FA 14: In-Space and Advanced Manufacturing
FA 3: Autonomous Systems for Space Exploration	FA 15: Materials, Materials Research, Structures, and Assembly
FA 4: Robotic Systems for Space Exploration	FA 16: Ground and Launch Processing
FA 5: Communications and Navigation	FA 17: Thermal Management Systems
FA 6: Life Support and Habitation Systems	FA 18: Air Vehicle Technology
FA 7: Human Research and Health Maintenance	FA 19: Integrated Flight Systems
FA 8: In-Situ Resource Utilization	FA 20: Airspace Operations and Safety
FA 9: Sensors, Detectors and Instruments	FA 21: Small Spacecraft Technologies
FA 10: Advanced Telescope Technologies	FA 22: Low Earth Orbit Platform Utilization and Microgravity Research
FA 11: Spacecraft and Platform Subsystems	FA 23: Digital Transformation for Aerospace
FA 12: Entry, Descent and Landing Systems	

2019 Solicitation, FA 21: Small Spacecraft Technologies

Small distributed spacecraft acting in cooperation can execute science and exploration missions that would be impossible by traditional large spacecraft operating alone and offer the potential for new concepts in mission design. The goal of this topic is to develop enabling technologies for small spacecraft distributed spacecraft missions (DSM) configurations operating over large distances beyond low Earth orbit (LEO).

2019 FA 21 Subtopics:

- Z8.01, Chemical Propulsion Systems for Small Satellite Missions
- Z8.03, Low Cost Radiation Hardened Integrated Circuit Technology
- Z8.06, DragSails for Spacecraft Deorbit
- Z8.07, Spacecraft Model-Based Systems Engineering
- Z9.01, Small Launch Vehicle Technologies and Demonstrations

SBIR/STTR Success

PHASE III SUCCESS

\$2.2 million in contracts from NASA and Millennium Space Systems to test the HYDROS system prototype.

SNAPSHOT

Tethers Unlimited created a CubeSat Thruster using a sustainable and renewable propellant created from water-electrolysis for NASA space research and commercial ventures.

CUBESAT THRUSTERS POWERED BY GREEN PROPELLANT

Tethers Unlimited, Bothell, Washington

Innovation

While Tethers Unlimited, Inc.'s (TUI) green propulsion system called HYDROS is used to power CubeSats, a type of miniaturized satellite, which play a valuable role in NASA's science, technology, and educational investigations. These mini-satellites provide a low-cost platform for NASA science missions, including planetary exploration.

This safer and renewable propulsion system helps provide additional cost savings for government and commercial ventures by extending the CubeSat operational life and improving performance.



Contact us and let's innovate together

Website

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NASA Help Desk

301.937.0888