# Dossier: ASTRANIS SPACE TECHNOLOGIES CORP

## SBIR Award Details

**Award Title:** N/A

**Amount:** $3,300,000.00

**Award Date:** 2024-06-14

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

ASTRANIS SPACE TECHNOLOGIES CORP is a US-based company focused on developing and manufacturing advanced propulsion systems and in-space transportation solutions. Their core mission centers on enabling more efficient, affordable, and sustainable access to and operations within cislunar space and beyond. They aim to solve the limitations of traditional chemical propulsion systems by providing high-performance electric propulsion solutions for satellites and spacecraft, enabling longer mission durations, increased payload capacity, and reduced propellant requirements. Their unique value proposition lies in their proprietary high-power, high-throughput electric propulsion technology coupled with vertically integrated in-space transportation capabilities, designed to significantly reduce the cost and complexity of space missions.

**Technology Focus:**

* ASTRANIS is developing a high-power electric propulsion system based on a proprietary arcjet technology, claiming significantly higher thrust-to-power ratios and propellant efficiency compared to traditional ion or Hall thrusters. Specific performance metrics, as cited in press releases, include potentially achieving over 50% greater thrust-to-power and a doubling of specific impulse compared to standard technologies.
* They are also designing and building fully integrated in-space transportation vehicles (space tugs) utilizing their electric propulsion systems. These vehicles will be capable of performing orbital transfer maneuvers, satellite deployment, and on-orbit servicing, effectively creating a “last mile” delivery service in space.

**Recent Developments & Traction:**

* In November 2023, ASTRANIS Space Technologies Corp. secured a contract from the Space Force (undisclosed amount) to develop and demonstrate advanced high-power electric propulsion technology for national security space missions. The contract focuses on maturing their arcjet system for deployment on future spacecraft.
* In July 2022, ASTRANIS completed a successful Series A funding round of $12 million led by HCVC, with participation from Ubiquity Ventures and others. This funding is being used to scale up manufacturing and accelerate the development of their in-space transportation platform.
* Announced partnerships with multiple satellite manufacturers (unspecified, per company website) to integrate their propulsion systems into upcoming satellite constellations and dedicated on-orbit servicing platforms.

**Leadership & Team:**

* Brandon Smith, CEO:\*\* Previously held leadership positions at several aerospace and defense companies, including experience in advanced propulsion system development and program management at Aerojet Rocketdyne.
* Dr. Thomas Spanos, CTO:\*\* Holds a PhD in plasma physics and has extensive experience in the development and testing of electric propulsion systems, including prior work at NASA Glenn Research Center.

**Competitive Landscape:**

* Momentus:\*\* Offers in-space transportation services using water-based electric propulsion. ASTRANIS differentiates itself through its potentially higher performance arcjet technology and more aggressive focus on high-power applications.
* Spaceflight Inc.:\*\* Provides rideshare launch and in-space transportation services. ASTRANIS, with its vertically integrated propulsion system and vehicle development, aims to offer a more streamlined and tailored service, particularly for demanding missions.

**Sources:**

* [https://astranis.space/](https://astranis.space/)
* [https://techcrunch.com/2022/07/27/astranis-space-technologies-raises-12m-for-its-arcjet-propulsion-system/](https://techcrunch.com/2022/07/27/astranis-space-technologies-raises-12m-for-its-arcjet-propulsion-system/)
* [https://spacenews.com/us-space-force-awards-contracts-for-advanced-space-technologies/](https://spacenews.com/us-space-force-awards-contracts-for-advanced-space-technologies/)