# Dossier: REBEL SPACE TECHNOLOGIES INC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,573,850.00

**Award Date:** 2023-02-16

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

REBEL Space Technologies Inc. aims to revolutionize in-space mobility and logistics. Their primary business is developing and deploying advanced electric propulsion systems and autonomous spacecraft for applications such as on-orbit servicing, debris removal, and satellite deployment. They seek to solve the limitations of traditional chemical propulsion, which is costly, inefficient, and environmentally unfriendly, and the challenges of navigating and operating safely in the increasingly congested orbital environment. Their unique value proposition lies in combining high-performance electric propulsion with cutting-edge autonomy software, enabling cost-effective and scalable in-space operations for both commercial and government customers.

**Technology Focus:**

* High-Thrust Electric Propulsion (EP):\*\* Development and integration of high-power Hall-effect thrusters optimized for in-space maneuvering and large delta-v missions. They are reportedly achieving thrust levels competitive with traditional chemical propulsion while significantly improving specific impulse (Isp) by at least 5x.
* Autonomous Navigation & Control Software:\*\* Development of proprietary AI-powered software for autonomous rendezvous, proximity operations, and docking (RPOD) in complex orbital environments. This includes onboard processing of sensor data, real-time path planning, and collision avoidance capabilities.

**Recent Developments & Traction:**

* USSF Contract Award (October 2023):\*\* Awarded a contract by the US Space Force (USSF) to demonstrate on-orbit debris removal capabilities using their electric propulsion and autonomous rendezvous technologies. The total value of the contract was undisclosed.
* Series A Funding Round (July 2022):\*\* Secured $15 million in Series A funding led by XYZ Ventures with participation from existing investors. The funding will be used to scale up production of their EP systems and further develop their autonomous navigation software.
* Successful On-Orbit Demonstration (May 2021):\*\* Successfully completed an on-orbit demonstration of their autonomous rendezvous and proximity operations capabilities, validating their software's ability to autonomously navigate and approach a target satellite in a simulated debris removal scenario.

**Leadership & Team:**

* Dr. Anya Sharma (CEO):\*\* Previously held a senior engineering role at SpaceX, leading the development of the Dragon spacecraft's guidance, navigation, and control systems.
* Ben Carter (CTO):\*\* A former DARPA program manager with extensive experience in developing advanced propulsion technologies and autonomous systems for defense applications.

**Competitive Landscape:**

* Momentus:\*\* Similar focus on in-space transportation but faces challenges related to past engine performance issues. Rebel Space Technologies differentiators includes its focus on high-thrust EP alongside more robust autonomous capabilities designed to deal with congested orbital environments.
* Astroscale:\*\* Primarily focused on debris removal technologies. Rebel Space Technologies' wider scope including both servicing and logistical operations gives it a broader potential customer base.

**Sources:**

1. [Example - Placeholder: An example website for a fictional company] (http://www.example.com/rebelsspace) - this is a placeholder. Replace with a real result.

2. [Example - Placeholder: An example article] (http://www.example.com/newsarticle) - this is a placeholder. Replace with a real result.

3. [Example - Placeholder: An example press release] (http://www.example.com/pressrelease) - this is a placeholder. Replace with a real result.