# Dossier: VENUS AEROSPACE CORP.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,249,286.00

**Award Date:** 2024-06-07

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

Venus Aerospace Corp. is a venture-backed aerospace company focused on developing hypersonic aircraft capable of dramatically reducing travel times between cities. Their primary business revolves around the design, development, and manufacturing of a hypersonic aircraft targeted at high-speed global transportation. The company's core mission is to build the "world's fastest aircraft" to connect the world more efficiently. They aim to solve the problem of slow long-distance travel, offering a solution for rapid point-to-point travel, potentially disrupting the existing airline industry and creating new opportunities in business and logistics. Their unique value proposition lies in their hypersonic technology and the promise of cutting flight times to just a few hours for transcontinental and intercontinental routes, thereby offering a significantly faster and more convenient travel option than conventional aircraft.

**Technology Focus:**

* Stargazer Spaceplane:\*\* Venus Aerospace is developing the Stargazer, a hypersonic spaceplane designed to travel at Mach 9 (over 6,900 mph), significantly reducing long-distance travel times. This involves advanced aerodynamic design, materials science, and propulsion systems.
* Rotating Detonation Rocket Engine (RDRE):\*\* They are also developing a rotating detonation rocket engine (RDRE) considered to be highly efficient, which should provide significantly better fuel efficiency than current rocket engines. They have run tests of their engine, demonstrating that it's capable of functioning at Mach 9.

**Recent Developments & Traction:**

* Series A Funding (February 2023):\*\* Secured a \$33 million Series A funding round led by Prime Movers Lab. This funding is being used to further develop and test their RDRE and continue the design and engineering of the Stargazer spaceplane.
* Contract with Air Force Research Laboratory (AFRL) (2023):\*\* Awarded a contract from the Air Force Research Laboratory (AFRL) to explore rotating detonation rocket engine (RDRE) technology. The partnership seeks to accelerate the development of hypersonic systems.
* Successful Engine Testing (Ongoing):\*\* Venus Aerospace has reported successful testing milestones of their RDRE technology, demonstrating its potential for use in hypersonic aircraft. These tests provide crucial data for engine refinement and integration into the Stargazer design.

**Leadership & Team:**

* Sassie Duggleby (Co-Founder & CEO):\*\* Experienced in entrepreneurship and angel investing.
* Andrew Duggleby (Co-Founder & CTO):\*\* Background in rocket propulsion systems and formerly worked on various aerospace projects.

**Competitive Landscape:**

* Hermeus:\*\* Hermeus is also developing hypersonic aircraft. Venus Aerospace differentiates itself with its spaceplane design, potentially offering greater versatility for different types of missions and routes.
* Reaction Engines:\*\* Reaction Engines is working on the SABRE engine, which is a hybrid air-breathing rocket engine for hypersonic flight. Venus Aerospace's differentiator from Reaction Engines is their focus on building the full spaceplane.

**Sources:**

1. [https://www.venusaerospace.com/](https://www.venusaerospace.com/)

2. [https://primemoverslab.com/portfolio/venus-aerospace/](https://primemoverslab.com/portfolio/venus-aerospace/)

3. [https://techcrunch.com/2023/02/16/venus-aerospace-raises-33m-series-a-for-hypersonic-aircraft/](https://techcrunch.com/2023/02/16/venus-aerospace-raises-33m-series-a-for-hypersonic-aircraft/)

4. [https://www.airforcemag.com/afrl-rocket-engine-rdre-hypersonic/](https://www.airforcemag.com/afrl-rocket-engine-rdre-hypersonic/)

5. [https://simpleflying.com/venus-aerospace-hypersonic-aircraft-q-and-a/](https://simpleflying.com/venus-aerospace-hypersonic-aircraft-q-and-a/)