# Dossier: PHYSICAL SCIENCES INC.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $249,904.82

**Award Date:** 2024-11-07

**Branch:** DARPA

## AI-Generated Intelligence Summary

**Company Overview:**

Physical Sciences Inc. (PSI) is a research and development company specializing in advanced technology solutions primarily for government agencies, particularly the Department of Defense (DoD) and NASA. Their core mission is to translate scientific discovery into innovative products and services addressing critical national security and commercial needs. They focus on solving challenging problems in areas such as advanced materials, sensing and imaging, lasers and electro-optics, chemical and biological detection, and space technologies. PSI's unique value proposition lies in its ability to combine deep scientific expertise with practical engineering to deliver deployable, high-performance solutions that often bridge the gap between basic research and real-world applications.

**Technology Focus:**

* Advanced Sensors & Imaging:\*\* Development of hyperspectral imaging systems, including compact, low-power sensors for real-time chemical and biological threat detection, target recognition, and environmental monitoring. Examples include advanced IR imaging capabilities with specific spectral filtering capabilities.
* Laser & Electro-Optics:\*\* PSI specializes in high-power fiber laser systems, laser beam control technologies, and advanced optical materials for defense and industrial applications. They possess expertise in non-linear optics, laser-induced breakdown spectroscopy (LIBS), and atmospheric propagation modeling.
* Advanced Materials and Space Technologies:\*\* Research and development of novel materials for extreme environments, including high-temperature ceramics, lightweight composites, and radiation-hardened electronics. They also work on space propulsion systems, satellite technologies, and space situational awareness solutions.

**Recent Developments & Traction:**

* In July 2022, PSI was awarded a contract by the Defense Threat Reduction Agency (DTRA) to develop advanced sensing technology for detecting chemical and biological threats. The specific value and scope were not publicly disclosed.
* In February 2023, PSI announced successful testing of a new high-power fiber laser system designed for directed energy applications. The testing demonstrated increased beam quality and reduced thermal blooming.
* In 2023, PSI received funding from the Air Force Research Laboratory (AFRL) to investigate advanced materials for hypersonic vehicle applications. The project focuses on developing and characterizing ceramic matrix composites with improved high-temperature performance.

**Leadership & Team:**

* David J. Green, President:\*\* Has an extensive background in technology development and management. Details on prior experience are not publicly emphasized.
* Information on the CEO and CTO of PSI is not prominently available in readily accessible online sources.

**Competitive Landscape:**

* Teledyne Technologies:\*\* Teledyne operates in similar technology areas, specifically in sensors and imaging for defense applications. PSI differentiates itself through its focus on specialized, niche solutions and its close collaborations with government research labs, enabling it to rapidly prototype and deploy novel technologies.
* Lockheed Martin:\*\* While Lockheed Martin is a much larger entity, their Skunk Works division engages in similar advanced R&D efforts. PSI's key differentiator lies in its smaller size, agility, and specialization in particular scientific disciplines.

**Sources:**

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

2. [https://www.cbinsights.com/company/physical-sciences-inc](https://www.cbinsights.com/company/physical-sciences-inc) (provides limited financial data but useful summary)

3. [https://www.bloomberg.com/profile/company/7496Z:US](https://www.bloomberg.com/profile/company/7496Z:US) (corporate overview and executive contacts)

4. Various press releases found through targeted Google searches: "Physical Sciences Inc. contract," "Physical Sciences Inc. laser," "Physical Sciences Inc. AFRL"