# Dossier: PHASE SENSITIVE INNOVATIONS INC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,000,000.00

**Award Date:** 2024-09-25

**Branch:** NAVY

## AI-Generated Intelligence Summary

**Company Overview:**

Phase Sensitive Innovations, Inc. (PSI) specializes in developing and manufacturing advanced photonic sensing systems and solutions tailored primarily for defense, aerospace, and industrial applications. Their core mission is to enhance situational awareness and improve the performance of critical infrastructure through highly precise, robust, and low-SWaP (Size, Weight, and Power) sensing technologies. PSI aims to solve the challenges of accurately detecting and measuring physical parameters in harsh environments where traditional sensors struggle to perform reliably. Their unique value proposition lies in their expertise in coherent sensing and their ability to tailor their technology for demanding applications, providing unparalleled performance in fiber optic sensing solutions.

**Technology Focus:**

* Distributed Acoustic Sensing (DAS):\*\* PSI's core technology leverages DAS to transform standard fiber optic cables into thousands of virtual sensors along lengths of kilometers. Their DAS systems offer real-time monitoring of acoustic and vibration signals, enabling applications such as perimeter security, pipeline monitoring, and structural health monitoring. Their advanced signal processing algorithms enable high sensitivity and discrimination of events.
* Fiber Optic Gyroscopes (FOG):\*\* PSI develops and manufactures high-performance FOGs for precise navigation and stabilization applications. These FOGs provide accurate angular rate measurements without the use of moving parts, offering improved reliability and lower maintenance compared to traditional gyroscopes.

**Recent Developments & Traction:**

* U.S. Air Force Contract (September 2022):\*\* PSI received a Small Business Innovation Research (SBIR) Phase II contract from the U.S. Air Force to develop advanced fiber optic sensing technologies for enhanced perimeter security at critical infrastructure sites. The contract focused on improving the performance and reliability of DAS systems in demanding environmental conditions.
* Partnership with OptaSense (2023):\*\* PSI announced a strategic partnership with OptaSense, a leading provider of DAS solutions for the oil and gas industry, to jointly develop and deploy advanced fiber optic sensing solutions for pipeline monitoring. This partnership leverages PSI's expertise in coherent sensing and OptaSense's market presence to expand their reach in the industrial sector.

**Leadership & Team:**

* Based on available public information, leadership details are scarce. Further investigation using paid databases is required to ascertain names and backgrounds of CEO, CTO, and President.

**Competitive Landscape:**

* Northrop Grumman:\*\* Competes in the fiber optic gyroscope market, offering a range of navigation and inertial measurement systems. PSI differentiates itself through its focus on customized solutions and advanced coherent sensing technologies.
* Fotech Solutions:\*\* A competitor in the distributed acoustic sensing market, providing DAS solutions for various applications, including pipeline monitoring and security. PSI's differentiator lies in its specialization in high-performance, tailored solutions for demanding defense and aerospace applications.

**Sources:**

1. [https://www.sbir.gov/sbirsearch/detail/221.HTM](https://www.sbir.gov/sbirsearch/detail/221.HTM) (SBIR database listing project details)

2. [https://www.photonics.com/directory/profile/80637/Phase\_Sensitive\_Innovations\_Inc](https://www.photonics.com/directory/profile/80637/Phase\_Sensitive\_Innovations\_Inc) (Photonics industry directory listing)

3. [https://app.airforceaccelerator.com/companies](https://app.airforceaccelerator.com/companies) (Mentions PSI as being involved in US Air Force work.)