# Dossier: SPECTRAL SCIENCES, INC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $900,000.00

**Award Date:** 2024-08-06

**Branch:** NAVY

## AI-Generated Intelligence Summary

**Company Overview:**

Spectral Sciences, Inc. (SSI) is a research and development company specializing in the development of advanced sensor systems, data exploitation methodologies, and software tools for remote sensing and spectral analysis. Their core mission revolves around developing and deploying innovative technologies for applications in defense, homeland security, environmental monitoring, and industrial process control. SSI aims to solve complex challenges related to threat detection, environmental characterization, and process optimization by leveraging their expertise in spectroscopy, hyperspectral imaging, and advanced algorithm development. Their unique value proposition lies in their ability to translate fundamental scientific principles into practical, deployable solutions, often with a focus on reducing system size, weight, power, and cost (SWaP-C) without sacrificing performance.

**Technology Focus:**

* Hyperspectral Imaging and Analysis:\*\* Development of hyperspectral imaging systems and algorithms for chemical detection, material identification, and target recognition. Their focus includes pushing the boundaries of spectral resolution and sensitivity in compact, low-power sensors.
* Atmospheric and Radiative Transfer Modeling:\*\* Creation and application of advanced atmospheric and radiative transfer models (e.g., MODTRAN) to simulate and correct for atmospheric effects on remote sensing data. This includes model development, validation, and integration into operational systems.

**Recent Developments & Traction:**

* DoD Contracts:\*\* SSI has received numerous contracts from the Department of Defense (DoD), specifically from agencies like the US Army, to develop advanced sensor technologies for threat detection and situational awareness, specifically related to Chemical, Biological, Radiological, and Nuclear (CBRN) threats (reported consistently across defense industry news outlets, particularly within the last 2 years).
* Partnerships with Larger Defense Contractors:\*\* Evidence of teaming agreements and subcontracting roles with prime defense contractors like Lockheed Martin and Northrop Grumman on major government programs involving remote sensing and target identification suggests active engagement in larger, multi-faceted defense projects.
* Advancement of MODTRAN:\*\* Continued updates and enhancements to their widely-used MODTRAN atmospheric radiative transfer code, including improved accuracy and computational efficiency.

**Leadership & Team:**

* CEO:\*\* While specific CEO information isn't readily available without subscribing to paid databases, the company's long track record and continued government contract awards suggest a stable and experienced leadership team. Publicly available information on the technical team indicates a strong emphasis on PhD-level scientists and engineers.

**Competitive Landscape:**

* BAE Systems:\*\* BAE Systems develops and provides similar spectral imaging solutions, but SSI's focus on atmospheric modeling and algorithm development provides a differentiator.
* Raytheon Technologies:\*\* Raytheon offers a broader portfolio of defense technologies, whereas SSI focuses on niche spectral sensing applications, giving them potential advantage in specialized requirements.

**Sources:**

1. [https://spectral.com/](https://spectral.com/) (Official Company Website)

2. [https://www.army.mil/](https://www.army.mil/) (U.S. Army website – search for "Spectral Sciences" for contract announcements)

3. [https://www.defense.gov/](https://www.defense.gov/) (Department of Defense website - search for contract announcements)