# Dossier: GEOOPTICS, INC.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $4,049,370.00

**Award Date:** 2023-08-29

**Branch:** NAVY

## AI-Generated Intelligence Summary

**Company Overview:**

GeoOptics, Inc. is a US-based data analytics company specializing in providing high-resolution, near real-time Earth observation data and analytics derived from radio occultation (RO) and other sources. The company's primary business involves leveraging its CICERO constellation to collect radio occultation data which is then processed and analyzed to provide precise measurements of atmospheric temperature, pressure, and humidity, as well as ionospheric electron density. Their core mission focuses on significantly improving weather forecasting, climate monitoring, and space weather prediction. GeoOptics aims to solve critical challenges related to limited global observation coverage, particularly over oceans and remote areas, and the need for higher accuracy data for more reliable predictive models. Their unique value proposition lies in their high-density, all-weather, and globally distributed data which complements traditional observation systems and significantly enhances numerical weather prediction (NWP) models and other applications.

**Technology Focus:**

* CICERO Constellation:\*\* GeoOptics utilizes a growing constellation of small satellites, known as the CICERO constellation, each equipped with radio occultation receivers. These receivers analyze the bending of radio signals from GPS and other GNSS satellites as they pass through the Earth's atmosphere.
* RO Data Processing & Analytics:\*\* GeoOptics' proprietary data processing algorithms transform the raw RO measurements into high-resolution atmospheric profiles, providing accurate and timely data on temperature, pressure, humidity, and ionospheric electron density. They offer various data products and analytics services based on these profiles.

**Recent Developments & Traction:**

* NOAA Contract (2022-2023):\*\* GeoOptics received multiple contracts from NOAA to provide radio occultation data for use in weather forecasting models. These contracts demonstrate the increasing recognition of the value and accuracy of GeoOptics' data.
* Constellation Expansion:\*\* GeoOptics has continued to expand its CICERO constellation with new satellite launches, increasing its data collection capacity and improving the temporal and spatial resolution of its observations. This expansion demonstrates a commitment to increasing data throughput to better meet the needs of its customers.
* Partnerships:\*\* Partnerships with organizations like Spire have been forged to expand the use of radio occultation data in new sectors.

**Leadership & Team:**

* Tom Pikoff (CEO):\*\* Background in Aerospace engineering and prior startup experience.
* Dr. Conrad Lautenbacher (Chairman):\*\* Former Under Secretary of Commerce for Oceans and Atmosphere and NOAA Administrator. This provides significant credibility and government connections.

**Competitive Landscape:**

* Spire Global:\*\* Spire also operates a constellation of small satellites that collect RO data. GeoOptics differentiates itself through its exclusive focus on high-precision RO data and analytics, potentially offering specialized algorithms and data products optimized for weather forecasting and climate monitoring.
* PlanetiQ:\*\* PlanetiQ is another competitor in the RO data market. GeoOptics differentiates itself by using a more advanced data assimilation approach.

**Sources:**

1. [https://geooptics.com/](https://geooptics.com/)

2. [https://spacenews.com/noaa-awards-space-weather-data-contracts/](https://spacenews.com/noaa-awards-space-weather-data-contracts/)

3. [https://www.satellitetoday.com/innovation/2024/02/21/small-satellite-companies-reap-awards-for-big-innovation/](https://www.satellitetoday.com/innovation/2024/02/21/small-satellite-companies-reap-awards-for-big-innovation/)