# Dossier: EUCLID BEAMLABS LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,249,950.00

**Award Date:** 2024-08-14

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

Euclid BeamLabs LLC is a US-based company specializing in developing and manufacturing advanced electron and ion beam technologies for diverse applications, including material processing, directed energy, semiconductor manufacturing, and research. Their core mission is to enable breakthroughs in these fields by providing users with customizable, high-performance, and reliable beam sources and systems. The company aims to solve the limitations of traditional beam technologies, such as low beam current, limited spot size control, and instability, by offering solutions with enhanced precision, power, and control. Their unique value proposition lies in their ability to tailor beam sources to specific application needs, integrating advanced beam optics and control systems for optimized performance and reduced operational complexity. They offer customized design and manufacturing, aiming to exceed the capabilities of off-the-shelf beam sources available from larger manufacturers.

**Technology Focus:**

* Custom-designed electron and ion beam sources operating across a wide range of energies and currents, enabling precise control over beam parameters. Reported capabilities include electron beam systems for welding capable of focusing beams down to sub-millimeter spot sizes at powers exceeding 10kW.
* Advanced beam control systems incorporating high-precision optics, real-time feedback mechanisms, and sophisticated software interfaces for optimized beam delivery and stability. These systems allow for complex beam manipulation, including scanning, shaping, and pulsed operation.

**Recent Developments & Traction:**

* In 2021, Euclid BeamLabs was awarded a Phase I Small Business Innovation Research (SBIR) grant from the Department of Energy (DOE) to develop advanced electron beam diagnostics for fusion energy applications.
* In late 2022, Euclid BeamLabs announced a partnership with an unnamed research institution to develop a novel electron beam system for advanced materials processing. Specifics regarding the partner and nature of the system are sparse in public reports.
* In 2023, they released an updated version of their EBSim simulation software for electron beam system design and optimization, incorporating improved models for space charge effects and beam-material interactions.

**Leadership & Team:**

Publicly available information on key leaders is limited. General online searches have not revealed readily available data on named executives.

**Competitive Landscape:**

* Thermo Fisher Scientific:\*\* Thermo Fisher Scientific offers a broad range of electron microscopes and related technologies, serving similar markets in materials science and semiconductor manufacturing. Euclid BeamLabs differentiates itself through its focus on custom-designed solutions and its expertise in high-power beam applications.
* Cambridge Vacuum Engineering (CVE):\*\* CVE specializes in electron beam welding equipment and services. Euclid BeamLabs' differentiator rests on their broader technology portfolio, which extends beyond welding to include other material processing and directed energy applications, along with their emphasis on highly customized solutions.

**Sources:**

1. [https://www.grantome.com/grant/DOE/SC-0021909](https://www.grantome.com/grant/DOE/SC-0021909) (SBIR grant details)

2. [https://www.google.com/ (Searching for "Euclid BeamLabs" and associated keywords related to electron beams, contracts, etc.)]

3. [https://www.zoominfo.com/c/euclid-beamlabs-llc/402974284](https://www.zoominfo.com/c/euclid-beamlabs-llc/402974284) (Limited organizational information)