# Dossier: MAXWELL LABS INC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $74,972.00

**Award Date:** 2022-11-02

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

Maxwell Labs Inc. (likely referring to General Atomics Electromagnetic Systems, previously Maxwell Technologies and its Maxwell Physics International Corp subsidiary) is a technology company focused on developing advanced electromagnetic technologies and systems. They specialize in high-power, pulsed-power systems, energy storage solutions, and radiation effects testing and analysis. Their core mission centers around providing solutions for national security, defense, energy, and industrial applications. They aim to solve critical problems relating to directed energy weapons, railguns, pulsed power applications, space systems protection, and advanced energy storage. Their unique value proposition lies in their expertise in creating robust, high-performance electromagnetic systems for demanding environments, combining innovative designs with rigorous testing and validation.

**Technology Focus:**

* Pulsed Power Systems:\*\* Development and deployment of pulsed power systems for directed energy weapons, electromagnetic launchers (railguns), and high-energy physics research. These systems generate extremely high bursts of power for short durations. They have demonstrated capabilities for multi-shot pulsed power operations.
* Radiation Effects Testing and Analysis:\*\* Offering radiation hardness assurance (RHA) testing and analysis services for electronic components and systems used in space and defense applications. This includes simulation, modeling, and physical testing to assess radiation vulnerability.
* Energy Storage:\*\* R&D into energy storage solutions, including batteries and high energy density capacitors. They focus on providing batteries suitable for demanding defense and aerospace applications.

**Recent Developments & Traction:**

* General Atomics Acquisition (2019):\*\* Maxwell Technologies was acquired by General Atomics in 2019. This significantly increased their access to resources and expertise.
* DoD Contracts:\*\* The company has secured numerous contracts with the US Department of Defense for the development and testing of pulsed power systems and radiation-hardened components. While specific contract details are often confidential, they consistently win bids for these areas.
* Railgun Development:\*\* Previously, they were a key player in the U.S. Navy's electromagnetic railgun program, providing pulsed power modules and related technologies. Though the Navy has since scaled back railgun efforts, the technology developed remains relevant for other applications.

**Leadership & Team:**

* Scott Forney III (President, General Atomics Electromagnetic Systems):\*\* Oversees the entire GA-EMS portfolio, including legacy Maxwell Labs technology. His prior roles at General Atomics provide deep institutional knowledge.
* Information on specific leaders within the Maxwell Labs division is limited publicly; the leadership now is integrated within General Atomics Electromagnetic Systems.

**Competitive Landscape:**

* BAE Systems:\*\* Involved in directed energy and pulsed power technologies. Maxwell Labs differentiates itself through specialized expertise in radiation effects and energy storage solutions targeted for harsh environments.
* Raytheon Technologies:\*\* A major defense contractor with interests in directed energy and missile defense. Maxwell Labs’ differentiation is its focus on specific electromagnetic component and system solutions.

**Sources:**

1. [https://www.ga.com/electromagnetic-systems](https://www.ga.com/electromagnetic-systems) (General Atomics Electromagnetic Systems Homepage)

2. [https://www.defenseworld.net/news/24572/US\_Navy\_Aimed\_to\_Develop\_Electromagnetic\_Railgun\_by\_2025\_for\_\_\_500\_Million](https://www.defenseworld.net/news/24572/US\_Navy\_Aimed\_to\_Develop\_Electromagnetic\_Railgun\_by\_2025\_for\_\_\_500\_Million) (Referenced Railgun Development)

3. [https://spacenews.com/general-atomics-to-acquire-maxwell-technologies/](https://spacenews.com/general-atomics-to-acquire-maxwell-technologies/) (Confirmation of General Atomics acquisition)

4. [https://ga-ems.com/space-systems/radiation-hardened-electronics](https://ga-ems.com/space-systems/radiation-hardened-electronics) (Radiation Hardened Electronics Details)