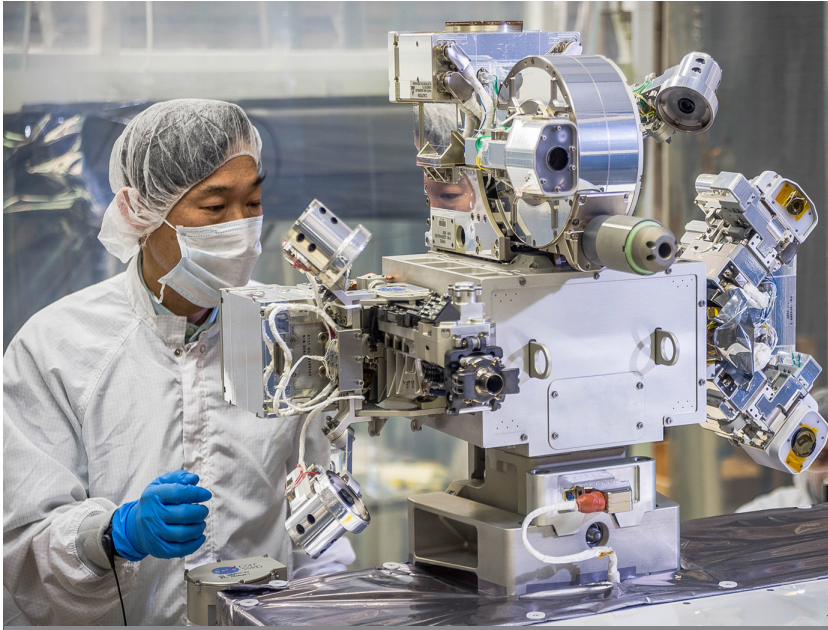


TECHNOLOGY SOLUTION

Optics



Goddard's Reconfigurable Laser Ranger (GRLR)

Utilizes high performance computing and systems level integration to push state-of-the-art laser ranging technology.

High orbit satellite servicing and planetary science missions are susceptible to effects from harsh radiation environments and long mission lives. The need for long measurement ranges and accuracy presents a unique set of requirements for relative navigation using LRFs. While other potential solutions exist, high costs and schedule risks of reliability/performance make them unfeasible. This NASA technology alleviates those problems.

BENEFITS

- Reconfigurable and modular
- Easily integrated with new detectors, lasers, processing technology, and software algorithms
- Longer range capability
- Interference resistant and low range noise
- High resolution



THE TECHNOLOGY

NASA Goddard Space Flight Center has developed a low cost, modular, and flexible space flight laser range finder consisting of optics, electronics, and interfaces for satellite servicing missions (i.e. Restore-L) using customized optics. Built upon previous NASA technologies, the system also consists of a high dynamic range receiver and adjustable laser for a wide range of measurements (i.e. multiples of km to sub-meter).

APPLICATIONS

The technology has several potential applications:

- Satellite servicing
- Commercial space flight
- Laser ranging

PUBLICATIONS

Patent Pending

More Information

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