

NORTHROP GRUMMAN



JHPSSL

Joint High Power Solid-State Laser

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Speed-of-light Defense Against Rockets, Artillery and Mortars

Northrop Grumman is developing solid-state laser technology that potentially paves the way for the U.S. military to incorporate high-energy laser systems across all platforms – including ships, manned and unmanned aircraft, and ground vehicles.

The Joint High Power Solid-State Laser (JHPSSL) program is designed to accelerate solid-state laser technology for military uses. The contract for Phase 3 of the program was awarded to Northrop Grumman in December 2005.

The program's goal is to design, build and test a 100 kW solid-state demonstration laser. Lasers built on this technology could address various force protection and strike missions using high-energy lasers, such as:

- Shipboard defense against cruise missiles
- Ground-based mobile defense against rockets, artillery and mortars
- Precision strike missions for airborne platforms

Under Phase 1 of the JHPSSL program, Northrop Grumman addressed risk reduction of the technologies necessary to obtain high power and beam quality simultaneously. During Phase 2 of the program, the team successfully demonstrated a laser system with a total power of greater than 27 kW and a run time of 350 seconds.

With the achievement of scaling up to 100 kW and development of attendant laser weapon system technologies, systems using very high-power lasers could be deployed in as little as four to five years.

Northrop Grumman has been developing and demonstrating high-energy lasers for more than 35 years. The JHPSSL program builds on the company's history of laser system successes and will be the first demonstration of useful power from a solid-state laser for the military.

**Northrop Grumman Laser Systems:
Defense at the Speed of Light**

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