Payload For Lockheed Martin-Built Missile Warning Satellite Completes Extensive Environmental Test Phase

GEO-1 Payload Readied for Delivery for Start of Integration with Spacecraft

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Lockheed Martin announced today that the payload for the first Space-Based Infrared System (SBIRS) geosynchronous orbit (GEO) spacecraft has successfully completed thermal vacuum testing, a key milestone in preparation for launch of this first-of-its-kind satellite.

SBIRS will provide early warning of ballistic missile launches and support other missions simultaneously, including missile defense, technical intelligence and battlespace characterization. Lockheed Martin Space Systems Company, Sunnyvale, Calif., the SBIRS prime contractor, and Northrop Grumman Electronic Systems, Azusa, Calif., the payload subcontractor, are developing SBIRS for the U.S. Air Force Space and Missile Systems Center, Los Angeles, Calif. Air Force Space Command operates the SBIRS system.

The successful test, conducted at Northrop Grumman's Azusa facilities from March 11 to June 15, demonstrated the function and performance of the fully integrated GEO-1 payload in vacuum conditions at temperatures bounding the environments expected when the SBIRS satellite is on orbit.

Key aspects of the test included radiometric performance, simultaneous tasking of both sensors against moving IR targets, on-board target processing against cluttered backgrounds, data downlink formatting and spacecraft interface verification. Test evaluation shows the GEO sensor will perform in family with the SBIRS HEO payload sensor now on orbit.

The GEO payloads feature a scanning sensor that will provide for short revisit times over its full field of view and a staring sensor that can be tasked for step-stare or dedicated stare operations over smaller areas. The GEO scanner and other payload components such as the focal plane assembly, and processing algorithms are identical to those used on SBIRS highly elliptical orbit (HEO) payloads, the first of which has completed initial on-orbit deployment and checkout and demonstrated that its performance meets or exceeds specifications.

"This test, performed over a three-month period, is testimony to the team's drive to attain operational excellence and mission success on this vital national security program," said Mark Crowley, Lockheed Martin's SBIRS vice president. "Our team has completed a series of major milestones and is poised to begin final assembly, integration and test following delivery of the critical payload."

Northrop Grumman will now prepare the payload for delivery to Lockheed Martin's facilities in Sunnyvale, Calif. facilities in early August where it will be integrated with the GEO-1 spacecraft. Lockheed Martin is currently under contract to provide two HEO payloads and two GEO satellites, as well as the ground-based assets to receive and process the infrared data.

Headquartered in Bethesda, Md., Lockheed Martin employees about 140,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. The corporation reported 2006 sales of $39.6 billion.

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