Nation's Newest USAF Weather Satellite Ready For Launch

The Defense Meteorological Satellite Program (DMSP) F-17 Block 5D-3 spacecraft, built under contract for the U.S. Air Force by Lockheed Martin , is undergoing final preparation for a launch from Vandenberg Air Force Base, Calif. on November 4.

"After several years of building, integrating, upgrading and testing DMSP F-17, our second Block 5D-3 spacecraft, we're eagerly anticipating this launch so that this satellite can carry out its vital mission of supporting our warfighters," said Michael O'Hara, Lockheed Martin DMSP program director. "Our partnership with the Air Force dates to the very beginning of the DMSP program with a common goal of ensuring that commanders have access to environmental data critical to the preparation and execution of military operations."

The Block 5D-3 series accommodates larger sensor payloads than earlier generations. They also feature a larger capability power subsystem; a more powerful on-board computer with increased memory -- allowing greater spacecraft autonomy -- and increased battery capacity that extends the mean mission duration. Starting with F-17, the attitude control subsystem has also been enhanced with the integration of a second inertial measurement unit using ring laser, versus mechanical, gyros to provide greater precision pointing flexibility.

DMSP is used for strategic and tactical weather prediction to aid the U.S. military in planning operations at sea, on land and in the air. Equipped with a sophisticated sensor suite that can image visible and infrared cloud cover and measure precipitation, surface temperature, and soil moisture, the satellite collects specialized global meteorological, oceanographic, and solar-geophysical information in all weather conditions. The DMSP constellation comprises two spacecraft in near-polar orbits, C3 (command, control and communications), user terminals and weather centers. The most recent launch of a DMSP spacecraft took place on October 18, 2003 from Vandenberg Air Force Base, on the final Titan II booster flown. That launch marked the first of the Block 5D-3 satellites. DMSP F-17 will launch on a Delta-IV Medium booster.

Including DMSP F-17, four satellites remain to be launched and are maintained at Space Systems' operations in Sunnyvale, Calif. for storage, functional testing, and upgrading. The spacecraft are shipped to Vandenberg for launch when requested by the Air Force. Since 1965, 43 Lockheed Martin DMSP satellites have been launched successfully by the U.S. Air Force. Now in its fourth decade of service, the DMSP has proven itself to be a valuable tool in scheduling and protecting military operations on land, at sea and in the air. The Space and Missile Systems Center at Los Angeles Air Force Base, Calif. manages the DMSP program.

Lockheed Martin Space Systems Company, a major operating unit of Lockheed Martin Corporation, designs, develops, tests, manufactures and operates a variety of advanced-technology systems for national security, civil and commercial customers. Chief products include human space flight systems; a full range of remote sensing, navigation, meteorological and communications satellites and instruments; space observatories and interplanetary spacecraft; launch vehicles, fleet ballistic missiles; and missile defense systems.

Headquartered in Bethesda, Md., Lockheed Martin employs 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 2005 sales of $37.2 billion.

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