Lockheed Martin Marks Defense Meteorological Satellite Program 50th Anniversary

PR Newswire
SUNNYVALE, Calif.

SUNNYVALE, Calif., Sept. 20, 2012 /PRNewswire/ -- Fifty years ago, a small weather satellite was launched from Vandenberg Air Force Base (VAFB), Calif. It was the first in a series that would later become known as the U.S. Air Force Defense Meteorological Satellite Program (DMSP), spanning 41 successful launches over a half-century, with two satellites still remaining to be sent into space. All were launched from VAFB into near-polar orbits allowing them to image the entire Earth, one slice at a time, as it rotated below.

"We congratulate the U.S. Air Force on this historic anniversary of a remarkable program that year after year has provided critical environmental data that enhanced our national security both strategically and tactically," said Mark Valerio, vice president and general manager of Military Space at Lockheed Martin [NYSE: LMT] Space Systems Company (LMSSC). "As we reflect on Lockheed Martin's 100 year anniversary, we are enormously proud of our 50-year partnership with the U.S. Air Force in advancing our nation's defense weather mission. Since the very beginning of the program in 1962, Lockheed Martin has built every DMSP spacecraft, and this has been, and remains, a true source of pride for us."

Initially, the DMSP program was highly classified and run by the National Reconnaissance Program (NRP), in support of the CORONA program, and its first reconnaissance satellites. The CORONA satellites took pictures on 70 mm film, and while each satellite carried up to 32,000 feet of film, it eventually would run out and the mission would end when the last film-return capsule re-entered the Earth's atmosphere over the Pacific. Thus, it was essential to the success of the CORONA mission that timely and accurate DMSP forecasts be made over areas of interest so that cloud-free photography would be possible, taking maximum advantage of film limitations.

At 50 years, DMSP is the longest running production satellite program ever. During that time, DMSP satellites have saved many billions of dollars and countless human lives as a result of timely weather forecasts. While the NOAA TIROS program launched the first weather satellite in 1960, over the years the TIROS program became a recipient of DMSP technology in excess of $1 billion.

DMSP is still providing 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 satellites collect 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 latest launch occurred on October 18, 2009 when DMSP F-18 roared into orbit aboard a United Launch Alliance Atlas 5 rocket.

The current 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.

Two satellites remain to be launched, as needed, and are maintained at the Lockheed Martin Space Systems facility in Sunnyvale, Calif., for storage, functional testing, and upgrading. The spacecraft are shipped to Vandenberg for launch when requested by the Air Force. The Space and Missile Systems Center at Los Angeles Air Force Base, Calif. manages the DMSP program.

LMSSC, a major operating unit of Lockheed Martin Corporation, designs and develops, tests, manufactures and operates a full spectrum of advanced-technology systems for national security and military, civil government 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; laser radar; ballistic missiles; missile defense systems; and nanotechnology research and development.

Headquartered in Bethesda, Md., Lockheed Martin is a global security and aerospace company that employs about 120,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. The corporation's net sales for 2011 were $46.5 billion.

NOTE TO EDITORS: Images of the DMSP F-18 can be found at:
http://www.lockheedmartin.com/us/products/dmsp.html

Media Contact
Michael Friedman
michael.1.friedman@lmco.com
(303) 971-7255

Buddy Nelson
buddynelson@me.com

SOURCE Lockheed Martin
