Countdown begins for launch of Navy communications satellite

September 12 2011

TacSat-4 spacecraft in near-flight configuration during processing at Kodiak Launch Complex on Kodiak Island, Alaska. Credit: US Naval Research Laboratory photo by spacecraft processing team

The Navy began counting down the final days to a Sept. 27 launch of its new joint tactical satellite, which will bring on-the-go communications to the battlefield.

The Tactical Microsatellite (TacSat)-4, funded by the Office of Naval Research (ONR) and developed by the Naval Research Laboratory (NRL), is scheduled to begin transmitting data 30 days later.

"TacSat-4 fills a Navy and Marine Corps capability gap by enabling 'comms on the move,'" said Bob McCoy, an ONR senior scientist. "That is a unique feature of this system—no other Department of Defense [DoD] satellite system can relay information from the satellite all the way down to warfighters' portable communications packs and handheld radios."

It enables warfighters to use a regular handheld radio for mobile communications without having to stop and set up an antenna in the field. This eliminates downtime and maintains connectivity to the base of operations at all times, so one is never out of touch, said John Moniz, ONR's program officer for Expeditionary Warfare Command, Control, Computers and Communication, whose work could potentially benefit from TacSat-4.

TacSat-4 arrives March 1, 2011, at the Joint Base Elmendorf-Richardson, Anchorage, Alaska, aboard a C-17 Globemaster operated by the 3rd and 176th Wings of the USAF. Credit: US Naval Research Laboratory photo by Jamie Hartman

The fourth-generation microsatellite, TacSat-4, is smaller—weighing 990 pounds as opposed to the industry average of approximately 4,300—and less expensive than a conventional system. It is designed to support traditional satellite communications, providing two hours of coverage, up to three times per day in multiple theaters, worldwide in a 24-hour period.

"This gives additional capability and more communications channels to where there's a 'hot spot' in the world," McCoy said.

TacSat-4's communication is also flexible and faster, providing dynamic channel assignments within 24 hours during normal operations rather than the typical several days. It offers a smarter, more efficient way of assigning channels.

The satellite will carry an ONR-sponsored payload built by NRL on infrastructure funded by the former DoD Office of Force Transformation and built by NRL and the Johns Hopkins University Applied Physics Laboratory. The Operationally Responsive Space Office funded the launch, which is managed by the Space Development and Test Directorate, a directorate of the Air Force Space and Missile Systems Center, and performed using a Minotaur-IV rocket built by Orbital Sciences.

More information: A launch countdown clock can be viewed at www.nrl.navy.mil/ . The launch-day video will be available online at: www.spaceflightnow.com/minotau … /tacsat4/status.html .

Provided by Office of Naval Research