US MOBILE USER OBJECTIVE
SYSTEM SATELLITE LAUNCH

The US Navy’s fifth Mobile User Objective System (MUOS) satellite was launched on 24 June from Cape Canaveral Air Force Station, Florida.

MUOS-5 is an on-orbit spare and the final satellite in the five-satellite MUOS constellation. Later the same day it was reported that the satellite was successfully responding to commands from a Navy and Lockheed Martin team operating MUOS-5 from the Naval Satellite Operations Center, Naval Base Ventura County, Point Mugu, California.

Rear-Admiral Christian Becker, Program Executive Officer Space Systems commented: ‘With this marking the last launch of the Navy’s MUOS system, I want to thank the entire MUOS team for all the hard work that goes into making these launches successful and the ongoing efforts of those who support the end-to-end integration of the MUOS system around the world. We are looking forward to continued collaboration with the other services and our industry partners as we mature the full system and deliver it for operational use.’

MUOS is an Internet Protocol-based system designed to provide improved communications capabilities to users around the world, regardless of where they are in relation to a satellite, and will provide, it is reported, greater than ten times the bandwidth capacity compared with the current UHF constellation.

Captain Joe Kan, Program Manager for the Navy Communications Satellite Program Office (PMW 146) added: ‘The MUOS Wideband Code Division Multiple Access (WCDMA) system provides significantly increased capacity and coverage, superior voice quality and Internet-like capabilities, enabling warfighters the flexibility to better communicate what they need to, when they need to.’

At the time of writing the MUOS-5 satellite is now in transit toward its geosynchronous orbit location, where it will then deploy its solar arrays and antennas.

‘MUOS-5 will be transitioning over the next nine days to reach its test slot 22,000 miles above the earth in a geosynchronous orbit,’ said Commander Jason Pratt, Principal Assistant Program Manager of MUOS. He added: ‘Once it has reached its location and deployed its arrays and antennas, on-orbit testing of the satellite will begin.’
MUOS is a system consisting of five satellites, four ground stations across the globe, a network management system and an integrated WCDMA* waveform.

The first four MUOS satellites are already operational via their legacy payloads, providing UHF satellite communications (SATCOM) for the (US) Department of Defense and mitigating potential gaps in UHF communications capabilities. The system’s WCDMA capability, currently in its test and evaluation stage, employs advanced third-generation cellular technology adapted for military SATCOM.

‘Looking forward, we are continuing to focus efforts on transitioning to the WCDMA capability of MUOS,’ said Jarratt Mowery, Director of End-to-End System Integration who then continued with: ‘The system first demonstrated WCDMA voice and data calls via the Army’s manpack radios in 2013, and we have since conducted testing and training with each of the various service branches. We are excited to keep working with end-users to ultimately provide warfighters the ability to talk, text and share data around the world using the MUOS WCDMA system.’

The MUOS constellation and associated network will extend narrowband communications availability well past 2025, it is understood.

* Short for wide-band CDMA (Code-Division Multiple Access), a 3G technology that increases data transmission rates in GSM systems.

**Picture caption**

An Atlas V launch vehicle carrying the US Navy fifth Mobile User Objective System (MUOS) communications satellite lifts off from Space Complex 41, Cape Canaveral Air Force Station, Florida on 24 June.

MUOS is the next-generation narrow band tactical satellite communications system designed to significantly improve beyond-line-of-sight communications for US forces on the move.

(US Navy photo courtesy of United Launch Alliance/Released ©)