



Operationaly Responsive Space-6

“Compact Ocean Wind Vector Radiometer Technology Demonstration”

MISSION DESCRIPTION

The ORS Office, in partnership with the Space and Missile Systems Center (SMC) Remote Sensing and Advanced Systems and Development Directorates, is developing a mission to demonstrate the ORS’s Modular Open Systems Architecture Space Vehicle (MSV) bus and NASA Jet Propulsion Laboratory (JPL)’s Compact Ocean Wind Vector Radiometer (COWVR) payload technologies.

The COWVR payload serves as a pathfinder to inform the Weather System Follow-On program design with the goal of reducing cost, schedule and risk with newer technology in the Microwave Radiometer. JPL is providing a unique technical approach to analyze wind vectors real-time with its advanced microwave imaging system.

Once space qualified, the MSV architecture will enable the ORS Office to rapidly develop and integrate space vehicles to meet Joint Force commanders’ urgent needs with payloads utilizing a standard interface.

The Multi-Mission Space Operations Center (MMSOC) will provide command and control of the Space Vehicle at Kirtland AFB. The ORS-6 mission will be launched on a SpaceX Falcon-9 vehicle in a Rideshare configuration to a sun synchronous orbit of 575 Km.

Residual capability will be leveraged to partially support Joint Requirements 3 and 8 (JROC) weather needs.

PROGRAM OBJECTIVES

- Space-demonstrate the Compact Ocean Wind Vector Radiometer payload wind vector and Tropical Cyclone Intensity (TCI) imagery measurement capabilities and reduce risk for the Weather System Follow On program.
- Space-qualify the MSV Modular Open System (MOSA) spacecraft architecture on an operationally-relevant mission.
- Validate Rapid Response Space Works (RRSW) capability to affordably re-configure the MSV architecture and deploy it on the timeline of need.

Partners

- SMC Remote Sensing Directorate
- SMC Advanced Systems and Development Directory
- NASA Jet Propulsion Laboratory
- Rapid Response Space Works
- Space Flight Incorporated
- SpaceX
- NRL Blossom Point
- Fleet Numerical Oceanography Center

Major Milestones

- System Readiness Review February 2016
- Interim Design Review-1 May 2016
- Interim Design Review-2 August 2016
- Flight Compatibility Test August 2017
- Initial Launch Capability September 2017

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