

Lockheed Martin to Design Submersible RHOV

Woods Hole Oceanographic Institution (WHOI) has awarded Lockheed Martin a US\$2.8 million contract for the initial design of the Replacement Human Occupied Vehicle (RHOV), a next generation three-person Deep Submergence Vehicle (DSV) that will be used by the U.S. scientific community. The contract has an option for subsequent construction of the RHOV once the initial design is completed and the project is approved to move forward.

Funded through the National Science Foundation, the RHOV is intended to replace the DSV Alvin, the human-occupied deep submergence vehicle currently operated by WHOI. In more than four decades of operation, the Alvin has made headlines for locating a hydrogen bomb lost in the Mediterranean Sea in 1966, discovering deep-sea hydrothermal vents in the late 1970s and exploring the sunken ocean liner Titanic in 1986.

The enhanced design of the RHOV will provide additional space in the vehicle's personnel sphere for its complement of two scientists and a pilot; the design also will accommodate greater science payload and provide improved visibility. RHOV will operate in depths of 6,500 metres (about 4 miles) and will be able to reach nearly 99 percent of the global ocean floor, with each dive lasting up to ten hours. By comparison, Alvin can reach 4,500 metres (almost 3 miles), giving it access to about 63 percent of the ocean floor. The RHOV will be capable of hovering in the water column at any depth, maneuvering in rugged topography or resting on the sea floor while exploring and surveying the ocean's geology and biology. The RHOV will ultimately be a part of the National Deep Submergence Facility, a fleet of underwater vehicles operated by WHOI for the U.S. oceanographic community.

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