ONR Observes 75th Anniversary By Looking to Past, Reimaging Naval Power for the Future



The logo for the Office of Naval Research's 75th anniversary. *ONR*

The Office of Naval Research (ONR) observed its 75th anniversary Sept. 30 with a virtual event that examined "the Future of Warfare."

The event, called "ONR at 75: Reimagine Naval Power," featured the participation of senior naval and congressional leaders and brief remarks from Chief of Naval Operations Adm. Michael M. Gilday. The online event summarized some of ONR's historical achievements and a video about its past, present and future. Chief of Naval Research Rear Adm. Lorin Selby moderated a panel with Reps. Seth Moulton (D-Massachusetts) and Mike Waltz (R-Florida) of the House Armed Services Committee and Vice Chief of Naval Research Marine Corps Brig. Gen. Benjamin Watson and Dr. Jason Stack, ONR's director for Ocean, Atmosphere and Space Research.

During World War II, the U.S. government established very successful relationships with academia and industry to help ensure our nation's scientific and technical dominance over the enemy forces. After the war, Congress formally established ONR in 1946 to maintain that thriving partnership. Its stated mission was to "plan, foster and encourage scientific research for the sake of future naval power and the preservation of national security." Today, 75 years later, ONR's mission has not changed and continues to bring together a wide range of partners in government, the military, industry and academia in a collaborative environment.

For seven and a half decades, the Navy Marine Corps and nation have been profoundly affected by the countless innovations and discoveries nurtured by ONR, a pioneer in the fields as diverse as digital computing, directed energy, navigation, and the world's understanding of the oceans.

A video prepared for the anniversary observance talked about how ONR has "reshaped the ocean sciences by advancing our understanding of ocean dynamics and the transmission of sound, as well as developing new technologies that help explore the deep, improve the mapping of the ocean floor, and autonomously gathered data for weather prediction. ONR supported expeditions that took humans to the deepest depths of the world ocean and to the highest balloon ascent in the early 1960s. ONR technology helped in the first detection of hydrothermal vents and a new form of life based on chemo-synthesis in the 1970s, as well as the discovery of the wreck of the RMS Titanic in the 1980s. The groundbreaking Project Whirlwind in the 1940s and 1950s created the first digital computer capable of real time computing, making it the direct ancestor of everything from the computers in our cars to the servers that monitor daily shipping traffic and air defense. Investments in directed energy resulted in the invention of the 'maser,' which stood for "microwave amplification by stimulated emission of radiation, an early form of directed energy in the 1950s. More than 60 years later, in 2014 ONR deployed the first operational laser weapon on a naval vessel."

During the panel discussion, Moulton said the U.S. has a strong Navy in large part because the nation has always had a technological edge over its competitors. But, he said, the U.S. does not have the luxury of a comfortable lead today when it comes to global competition with global peer competitors, citing the need for more basic government-led research and technology development in the private sector.

Waltz said in today warfighting environment, the first shot

will be fired in space and the cyber domain by autonomous systems. “The next evolution is when we pair those systems with artificial intelligence.”

Stack talked about how ONR often takes a long-term view and invests in science and technologies for years and sometimes decades, and not just in things, but in people, partnerships and enablers.

Watson, who is not only Selby’s deputy but also the commander of the Marine Corps Warfighting Laboratory, talked about reexamining long-held assumptions about maritime superiority, and about the changing nature of warfare, and the need to adapt to gray zone and hybrid threats.

“This virtual celebration presents a great opportunity to commemorate ONR’s legacy of innovation and forward-thinking, while looking ahead to whole new worlds of innovation for the Navy and Marine Corps,” Selby said. “Today, the Office of Naval Research is making possible a safe and secure future for our Navy, Marine Corps and nation.

“We know that the Navy and Marine Corps today look very different than it did back in 1946, when ONR was founded, and we also know that the fleet and force of tomorrow will look very different yet again than it does today,” Selby said. “The one thing we know for sure, though, is that ONR will continue to lead the way.”