Navy Funds Development of New Sonobuoy to Track Quiet Submarines

Gunner’s Mate Seaman Tyrell Christman, from Waco, Texas, holds a sonobuoy aboard the Arleigh Burke-class guided-missile destroyer USS Pinckney (DDG 91) Nov. 23, 2019. The Navy is seeking a new type of sonobuoy that is harder to detect. U.S. NAVY / Mass Communication Specialist 3rd Class Erick A. Parsons

ARLINGTON, Va. — The U.S. Navy is developing a new sonobuoy to enhance is ability to track newer and quieter submarines, according to a July 20 Defense Department contract announcement.

The Office of Naval Research has awarded Undersea Signal Systems Inc. of Columbia City, Indiana, a $28.3 million cost-plus-fixed-fee-contract “to develop a prototype sonobuoy, known as Extended Range Directional Frequency Analysis and Recording (ER-DIFAR), to address new and quiet threat submarine targets.”

Sonobuoys are deployed by Navy P-8A, P-3C and MH-60R aircraft to acoustically detect and track submarines. They are expendable sensors that float on the surface of the water and extend a hydrophone to depths to collect sound from submarine propulsion systems, auxiliary machinery and other sources of sound from a submarine.

Passive sonobuoys, such as the SSQ-53 DIFAR (Directional Frequency Analysis and Recording) sonobuoys were a staple of Cold War antisubmarine operations because they were able to detect and point to the sounds from a submarine. As Soviet and later Russian submarines improved in their acoustic quieting, the DIFAR sonobuoy became less effective. The Navy then turned

to emphasized active tracking sonobuoys such as the SSQ-125 sonobuoy, which used a sound source to “ping” a submarine, but also revealed to a submarine that it was being tracked.

A new extended-range DIFAR sonobuoy would increase the ability to passively track quieter submarines.

The contract for the DIFAR-ER is a three-year base contract with a one-year option. Work is expected to be completed by July 2024.