

Naval Technology: Delivering Dominance

The Sound Surveillance System (SOSUS)

1950 - 1962



As the **U.S. Navy** sought to counter rising undersea threats, **ONR** led groundbreaking research into ocean acoustics and established the ocean itself as a **sensing medium**.

By 1962, listening stations ● across the oceans were operational and the system recorded its first successful long-range detection.



The Sound Surveillance System (SOSUS)

1962 - 1990s

Soviet "GOLF II" class SSB (U.S. Navy photo)



Backed by **ONR**-directed research, SOSUS evolved into a global undersea surveillance network of fixed-array hydrophones providing **persistent, near real-time awareness of undersea activity** for long-range acoustic detection.

This gave the **U.S. Navy** operational advantage and laid the technical groundwork for today's integrated and complementary maritime sensing systems.



The Sound Surveillance System (SOSUS)

2000s - today



Sailors deploy the multifunction towed array during a sonar exercise (U.S. Navy photo)

*The science that powered SOSUS has evolved: Advances in AI-enabled signal processing, adaptive sensing and autonomous undersea systems are built directly on decades of **ONR** research in ocean acoustics and environmental modeling.*

These capabilities are now critical to how the Navy understands and secures the undersea domain.

