

At a Glance

What is it?

■ The Automated Shipboard Weather Observation System (ASO) is a weather data collection system designed for naval surface ships. ASO is a suite of sensors designed to reduce workload on sailors by automating the required periodic weather reports. The system replaces the existing METAR/SYNOPTIC data collections.

How does it work?

■ Naval ships are required to provide a weather report at least every six hours. ASO will automatically send weather reports to the Fleet Numerical Meteorological and Oceanographic Center, enabling Sailors to focus on other important tasks. Additionally, it will automatically generate frequently used documents and identify pilot trends.

What it will achieve?

■ ASO will provide uniformly formatted weather data and increased ship reporting while minimizing the potential for human error and improving safety. Data collected by ASO will improve the accuracy of weather models and improve hazardous weather avoidance routing.

Point of Contact

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Surface ship weather observations are critical to worldwide fleet operations, yet manual reporting is creating an increasingly unsustainable workload as afloat manning decreases. To reduce workload and improve efficiency fleetwide, the Office of Naval Research (ONR) TechSolutions sponsored the Automated Shipboard Observation (ASO) System, which utilizes automated meteorological sensors and SIPRNet, to transmit formatted weather reports to data collection centers.

The 24-hour automatic shipboard weather observation data is available in real-time via multiple formats. The uniformly formatted data provided by the ASO system and increased ship reporting enhances the accuracy of weather models and improves hazardous weather avoidance routing. The request for an improved weather observation system was submitted by a lieutenant commander in the Navy's Oceanographic Office. In response to the request, TechSolutions partnered with the Space and Naval Warfare Systems Center Atlantic to produce the technology.

TechSolutions links warfighters to the government science and technology community to help develop needed technologies as quickly as possible. Sailors and Marines are encouraged to submit requests via the TechSolutions website at <https://www.onr.navy.mil/techsolutions> (no account needed). Their goal is to have a solution prototype in the hands of a requesting Sailor or Marine within 12-18 months.