

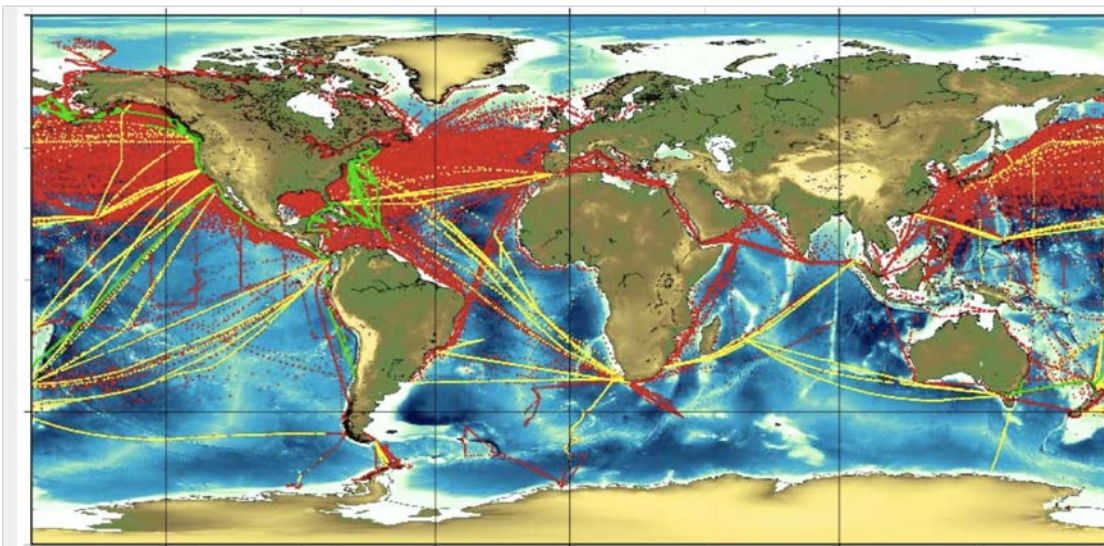
AMVER SEAS Program

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The Shipboard Environmental (data) Acquisition System (SEAS) is a Windows-based, real-time data acquisition and transmission system developed at AOML in 2001 with the assistance of NOAA's Office of Marine and Aviation Operations. This software enables various types of atmospheric and oceanographic data to be obtained from ships and transmitted in real-time to AOML for quality control. The data are subsequently transmitted to the Global Telecommunication System and several operational databases for use by scientists as input to weather and climate forecast models. A major component of SEAS is the acquisition of ocean data using Expendable BathyThermographs (XBTs). AOML, the National Weather Service (NWS), and the Scripps Institution of Oceanography are the principal users of the SEAS software.

The NWS uses SEAS software to generate and transmit marine meteorological (MET) observations. Over 400 vessels operated by NOAA, the University-National Oceanographic Laboratory System (UNOLS), the Coast Guard, and vessels participating in NOAA's Volunteer Observing Ship Program, participate in reporting MET observations, which contain atmospheric, oceanographic, and position data acquired both manually and automatically by shipboard sensors. More than 200,000 SEAS MET observation bulletins are transmitted annually.

Additionally, the Coast Guard uses AMVER reports, along with SEAS MET observations, to support their AMVER vessel search and rescue program. The SEAS software creates a series of reports that include a ship's medical personnel, point of departure, route, positions underway, and arrival to help locate able vessels near vessels in distress. Over 14,000 AMVER reports are transmitted annually to the Coast Guard. These reports have helped rescue more than 2,100 people during the last seven years; SEAS accounts for nearly 20% of the Coast Guard's AMVER reports. The SEAS is used for data transmissions by different NOAA line offices with applications to physical, biological, and meteorological marine studies.



Location of oceanographic (yellow=XBTs, green=TSGs) and meteorological (red) observations transmitted with SEAS during 2007.