



Meteorology Equipment

Navy Integrated Tactical Environmental Subsystem (NITES) IV

NITES IV is the portable tactical environmental support system used by the U.S. Navy Mobile Environmental Teams operating aboard unit-level ships and at undeveloped shore sites. The NITES IV subsystem is also used by the U.S. Marine Corps weather service personnel assigned to Fleet Marine Force units.

The main purpose of NITES IV is to enhance the automated capabilities of these teams/units to provide meteorology and oceanography (METOC) support at remote locations, which are often in harsh environments. The system is portable, lightweight, rugged, flexible and independent and allows deployment of the minimal hardware and software configuration needed to support each mission. NITES IV serves as the replacement system for the Interim Mobile Oceanographic Support System (IMOSS) and the METOC Integrated Data Display System-Tactical (MIDDS-T). Procurement, installation and training are provided by NAVOCEANO Systems Integration Division.

Remote Automated Weather System (RAWS)

RAWS is a modular sensor environmental observing station designed to automatically collect, process, archive and transmit vital in situ environmental observational data from remote locations. This is critical to both afloat and ashore Naval mission planning. RAWS operates worldwide to provide Navy and U.S. Marine Corps the needed support in critical locations.

The weather data monitored by RAWS includes air temperature, sea surface temperature, barometric pressure, visibility, ceiling height, visual condition (video camera), rainfall, wind speed and direction, relative humidity and wind gust speed and direction.

METOC Integrated Data Display System-Next (MIDDS-Next)

MIDDS-Next uses state-of-the-art environmental prediction software to provide for the automated collection, analysis, forecasting, display and dissemination of weather products and services, primarily focused on the needs of Naval aviation facilities. MIDDS-Next is capable of multiple data feeds, including but not limited to, NOAAPort (trichannel), METCAST and FMQ-17/SMQ-11. MIDDS-Next interfaces with NIPRNET, Internet and local sensors such as Automated Surface Observing System (ASOS). Data are displayed locally on large screens to facilitate briefings and monitoring of weather-related events. MIDDS-Next provides for one or more Forecast Duty Officer (FDO) workstations and one or more observer workstations. External users access products via the NIPRNET or Internet using standard Web browsers.



*For more information, please contact NAVOCEANO Public Affairs at 228.688.5649
or visit <https://www.navo.navy.mil>.*



Oceanographic Tools and Data Transfer

Integrated Survey System (ISS) 60

ISS-60 is a distributed network-based software system developed for NAVOCEANO's survey vessels. It integrates several systems that support high-resolution seafloor mapping, physical and chemical oceanography and precision stationkeeping accommodating over-the-side sensor deployments. ISS-60 is flexible and can be configured to meet the Navy's present and future needs. The software combines a sophisticated navigation positioning algorithm and a data acquisition system designed to collect, process and record navigation, multibeam, bathymetric and environmental data.

Joint Operational Data Interface (JODI) and Trusted Gateway System (TGS)

JODI and TGS are both Multilevel Security Systems designed for Secret and Below Interoperability (SABI)-approved devices. These allow a one-way transfer of environmental data from unclassified systems to classified systems. This allows METOC centers to support Fleet customers with limited NIPRNET capabilities and gives them the ability to retrieve real-time environmental products via the SIPRNET. TGS is supportable on a Sun computer system running the Solaris Operating System. TGS also allows environmental products to be scanned for viruses before being transferred to the SIPRNET.

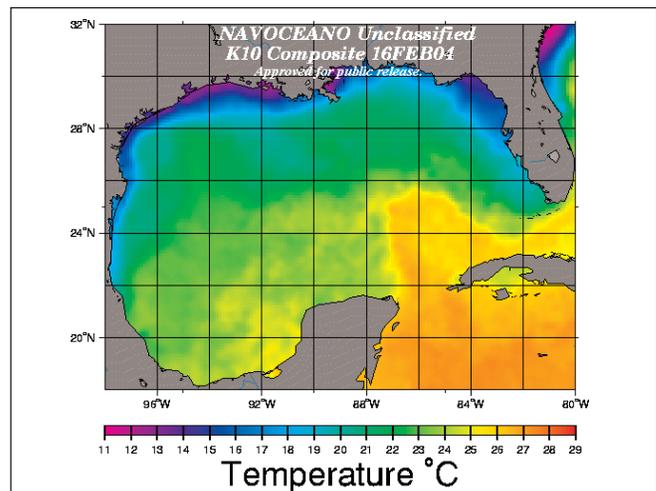
Modular Ocean Data Assimilation System (MODAS)

MODAS has been described as the most tactically useful ocean-modeling product of the U.S. Navy. It is a software tool for mapping disparate and randomly spaced ocean temperature data onto a grid. The real-time products of MODAS describe the 3D ocean thermal and sound speed structures. These descriptions include profiles at specific points, 2D cross sections and 3D grids. The 3D grids are the most requested products and are ingested into Tactical Decision Aids (TDAs). An important aspect of MODAS, its dynamic climatology, was developed from an analysis of historical temperature and salinity observations. Since

subsurface temperature data are very sparse, this dynamic climatology enables a user to infer a subsurface temperature profile (i.e., a synthetic observation) at a location using more abundant sea surface temperature data and sea surface height data.

The first implementation of the TDA Global Ocean Data Environmental Support System (GODESS) will make MODAS available to users as a Web service. This implementation is an important step in the integration of oceanographic data and model fields into the Navy's FORCENet initiative.

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