

# FLEET NUMERICAL METEOROLOGY AND OCEANOGRAPHY CENTER

## Overview

- The Navy's Operational Numerical Weather Prediction (NWP) Center, providing weather and ocean prediction products in support of Fleet Safety and Warfighting Effectiveness.
- Operates the Nation's only global NWP model protected from cyber terrorism and cyber warfare attack to DoD Information Assurance (IA) standards .
- Possesses world-class expertise in meteorology, oceanography, climatology, computer science, and military operations.

## Operational Capabilities

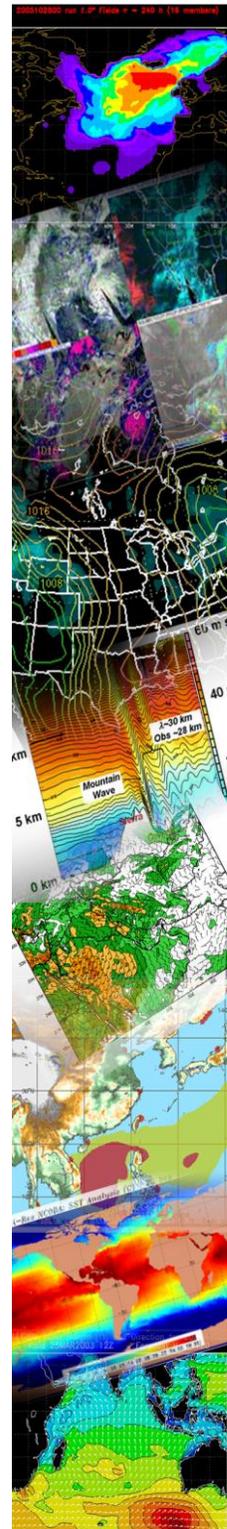
- Dedicated climatology team provides tailored products and data in support of mission planning and execution at all classification levels up to top secret/sensitive compartmented information (TS/SCI).
- Graphical and text-based weather and ocean prediction products, tactically enhanced weather satellite imagery, and related tactical decision aids and data on Navy computer systems.
- The Navy's only supercomputer and high-performance data distribution system dedicated to operations, the Primary Oceanographic Prediction System .
- Expert modelers provide on-demand custom model solutions at resolutions up to 1.66KM at all classification levels in support of global operations.
- One of a kind 60 member ensemble available for high value/high interest operations

## World-class Modeling

- Navy Global Environmental Model (NAVGEM)
- Coupled Ocean/Atmosphere Mesoscale Prediction System (COAMPS) – capable of resolutions up to 1.66KM.
- Navy Atmospheric Variational Data Assimilation System (NAVDAS)
- Navy Aerosol Analysis and Prediction System (NAAPS)
- Geophysical Fluid Dynamics Navy (GFDN) - tropical cyclone model
- COAMPS-TC - tropical cyclone model
- Wave Watch 3 (WW3) - Ocean Wave Model
- Navy Coupled Ocean Data Assimilation (NCODA) System
- Ensemble Forecast System (EFS) – Up to 16 day forecasts of atmospheric and oceanographic conditions
- Scheduled and on-demand products specific to Fleet and Joint operations
- Strategic climatological products tailored for long range mission planning
- Worldwide meteorological and oceanographic data assimilation (assimilating ~10 million observations daily)
- Atmospheric forcing to drive all Navy ocean and acoustic models

## Command Relationships

- Co-located and closely partnered with the Marine Meteorology Division of the Naval Research Laboratory, a model for successful transition of research into operations
- Benefits from association with the Naval Postgraduate School, particularly in the areas of meteorology, oceanography, information technology, and operations research
- Partnered with the Naval Oceanographic Office for ocean modeling support and collaboration
- Partnered with National Weather Service and Air Force for backup and collaboration
- Contributor to the National Unified Operational Prediction Capability (NUOPC)



DECISION SUPERIORITY  
through

**BATTLESPACE ON DEMAND**

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