

Numerical Weather Prediction (NWP)

PROGRAM/PROJECT: Numerical Weather Prediction (NWP)

LEAD AGENCY: United States Navy (USN - Commander, Naval Meteorology and Oceanography Command (CNMOC))

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SERVICE AREA (S)/INITIATIVE (S)

- ***National Aviation Weather Initiatives:***
N/A

FUNDING

Programmed/Planned (\$'s/FY): Funded through FY08

TYPE OF PROGRAM/APPLICATION

Product Development/Improvement

SCOPE OF PROGRAM/PROJECT

- ***What's being developed, procured, etc:*** upgrades to atmospheric data assimilation and forecast models to capture the smaller scales. NOGAPS has been upgraded from ~81 km horizontal resolution with 24 vertical levels to ~55 km horizontal resolution with 30 vertical levels. The NOGAPS data assimilation system has been upgraded to the new 3D-VAR system.
- ***How operations will be changed/improved:*** better representation of jetstream winds and better able to exploit satellite data through direct assimilation of radiance data.

PROGRAM/PROJECT MANAGEMENT

- ***Basic guidance document for this program:*** Implementation Plan for the Oceanographer of the Navy's R&D Strategy
- ***Program/Project verification process:*** Periodic work unit reviews by resource sponsors and Administrative Model Oversight Panel
- ***Method used for end product validation:*** Well-established statistical and event-based model verification procedures
- ***Operational training for the user:*** Recurring training for Navy METOC professionals

SCHEDULE/IMPLEMENTATION

- ***Next major program milestone:*** Upgrade NOGAPS Data Assimilation System from the Multi-Variate Optimum Interpolation (MVOI) to the new Navy Atmospheric Variational Data Assimilation System (NAVDAS) 3D-VAR System. Enables better exploitation of satellite data through direct assimilation of radiance data, improving upper level winds forecast for aviation support.
- ***Program becomes operational:*** NAVDAS upgrade occurred in October 2003.
- ***Plans for further improvements:*** Continual implementation of incremental upgrades.