



# *WaveWatch III Implementations at FNMOC*

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*Fleet Liaison Officer*



# *Wavewatch III*

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- Developed by Dr. Hendrik Tolman (NCEP)
- Third generation wave model
- Can be implemented globally and regionally
- Development continues at NOAA and Universities around the world
- New physics being developed
- Adaption of near shore physics
- New variable resolution grids (multi-grids)



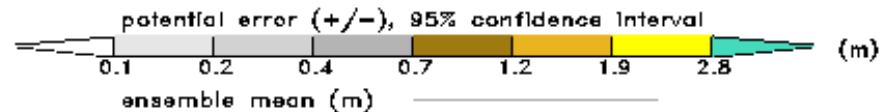
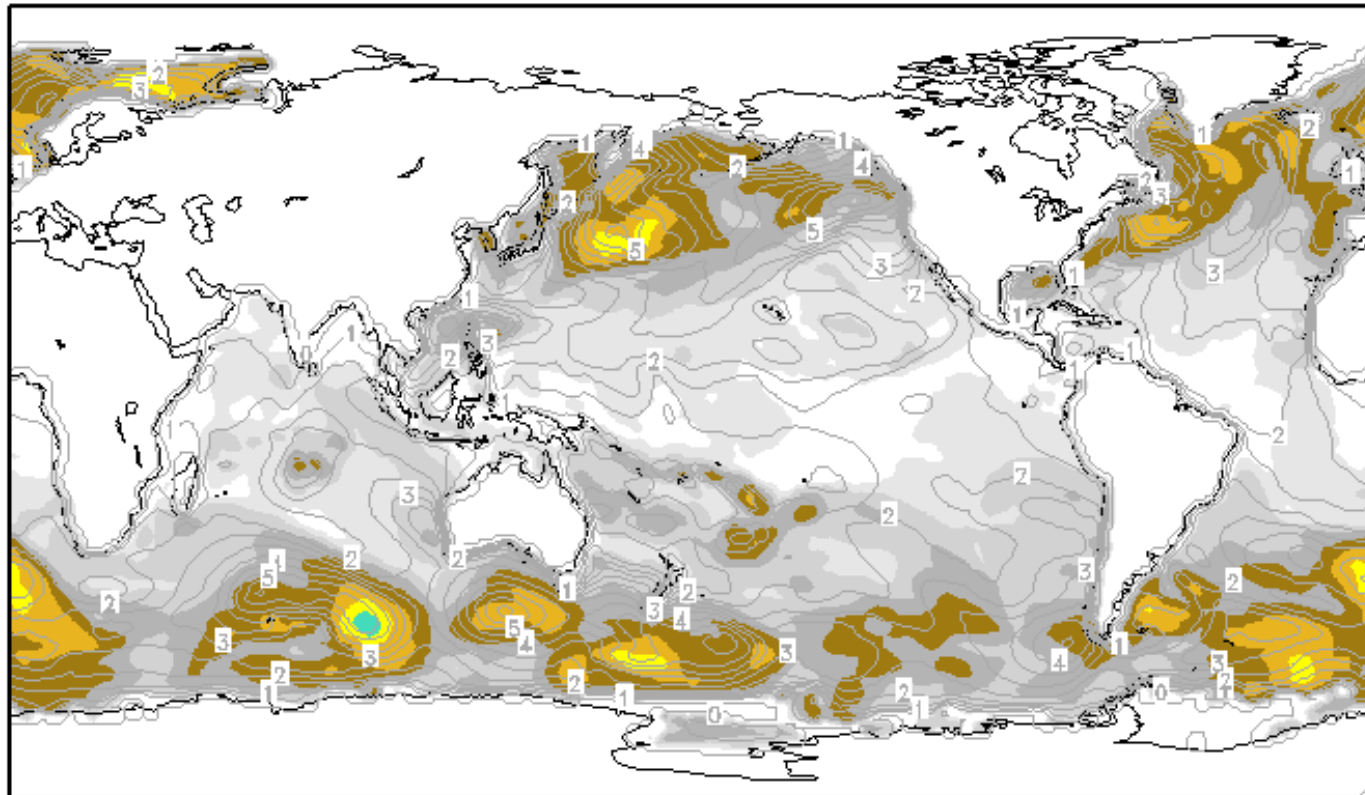
# Details

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- Global model runs at  $\frac{1}{2}$  degree resolution
- Forced by NOGAPS out to 180 hours
- Regional WW3 forced by COAMPS ~22km
- 16 Member global EFS runs at 1 deg resolution
- Version 3.12 implemented in Oct. 2008
- Assimilation of altimetry data since May 2010
- Integration into COAMPS On Scene for rapid implementation.



# WW3 Ensemble

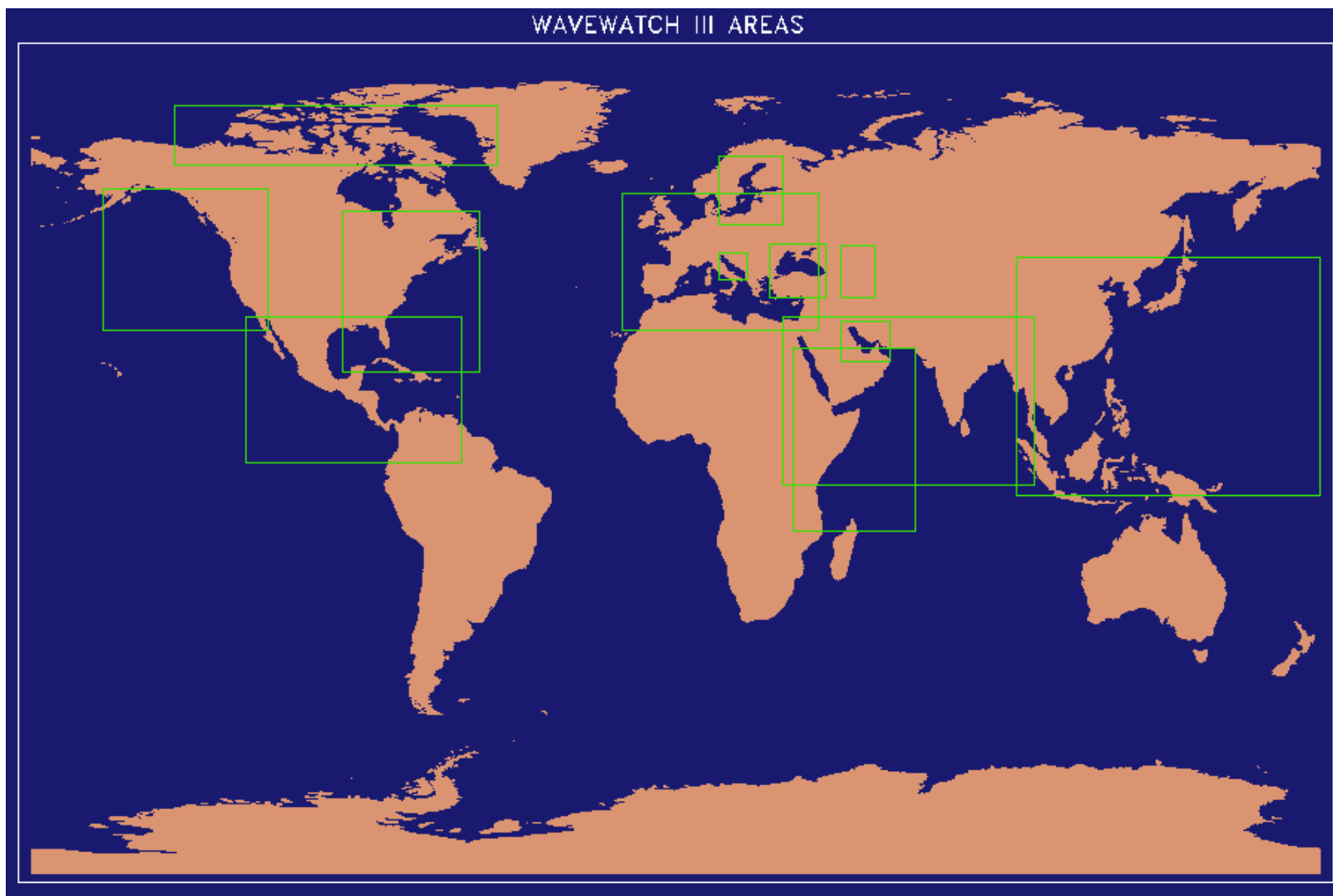


Significant Wave Height

NOGAPS: 05 JAN 09 00Z  
48 hr forecast valid 07 JAN 09 00Z

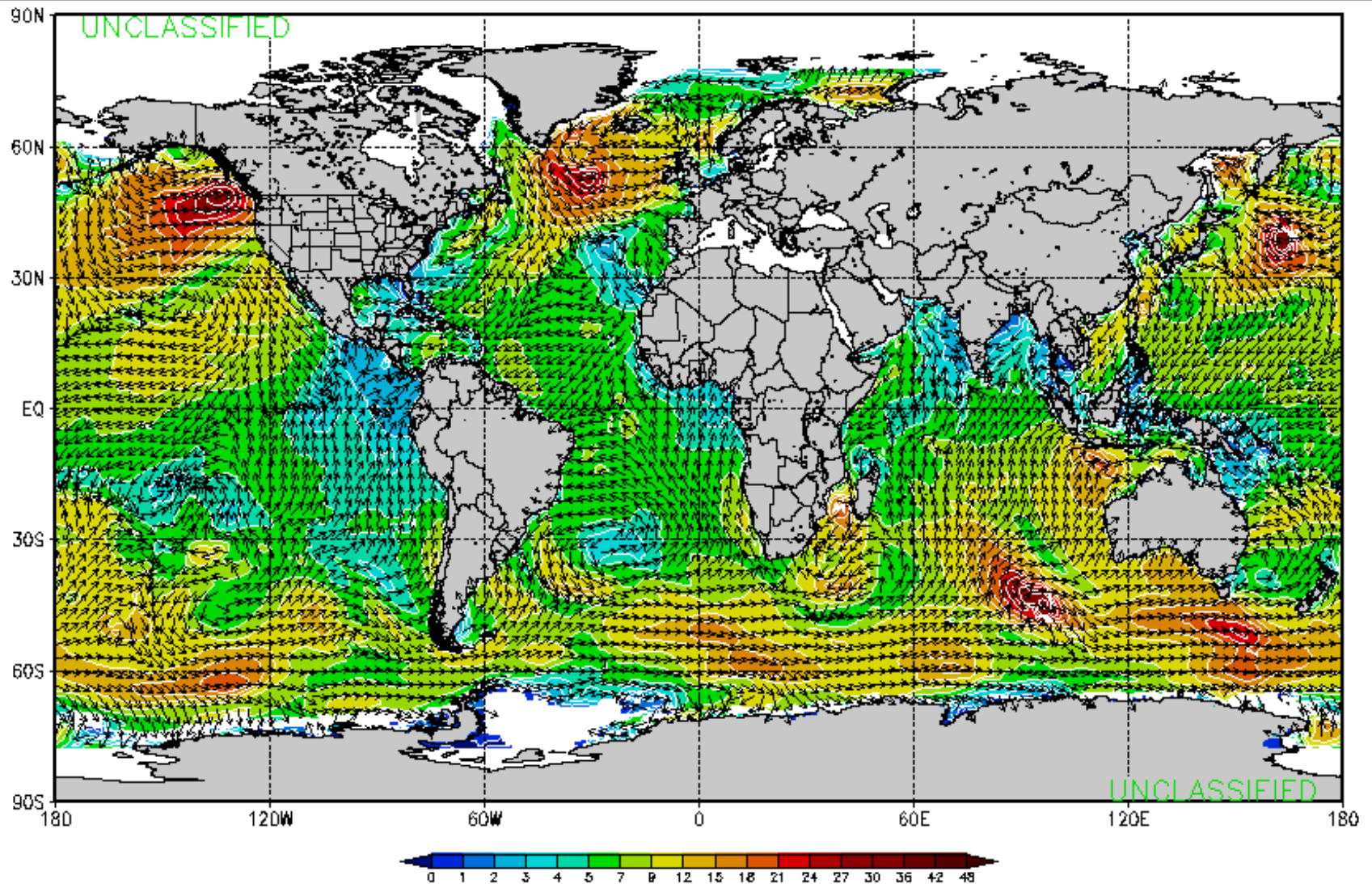


# WW3 Areas (COAMPS Driven)





# NOGAPS ( $\frac{1}{2}$ Degree)



VT: Wed 06Z 25 JAN 12

FNMOG WAVE WATCH (U): Significant Wave Height [ft] and Direction

Run: 2012012506Z Tau: 0

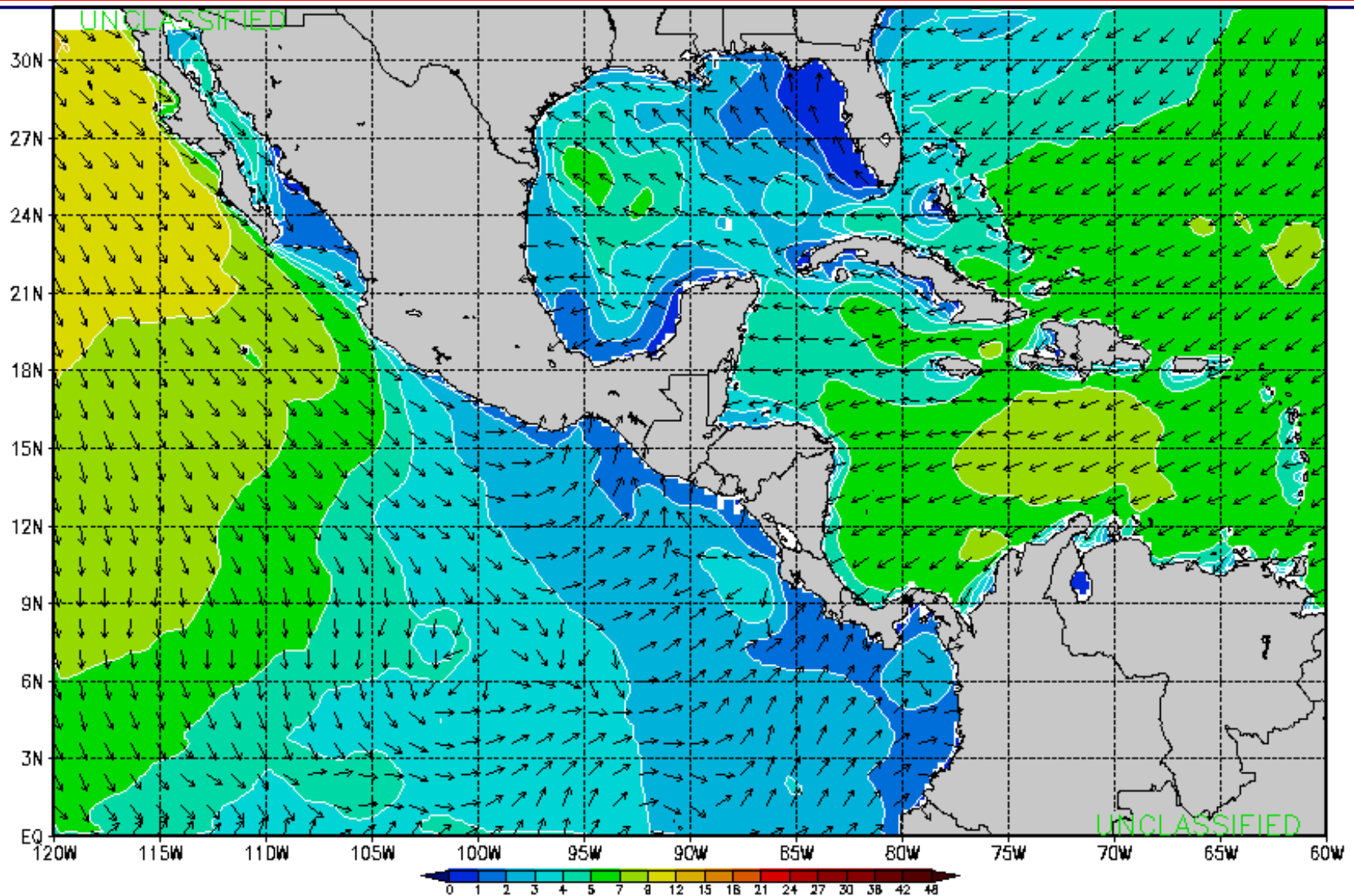
Supercomputing Excellence for Fleet Safety and Warfighter Decision Superiority...

Approved for public release; Distribution is unlimited





# COAMPS (27km)



VT: Wed 00Z 25 JAN 12

FMOC 27km COAMPS (U): Significant Wave Height [ft] and Direction

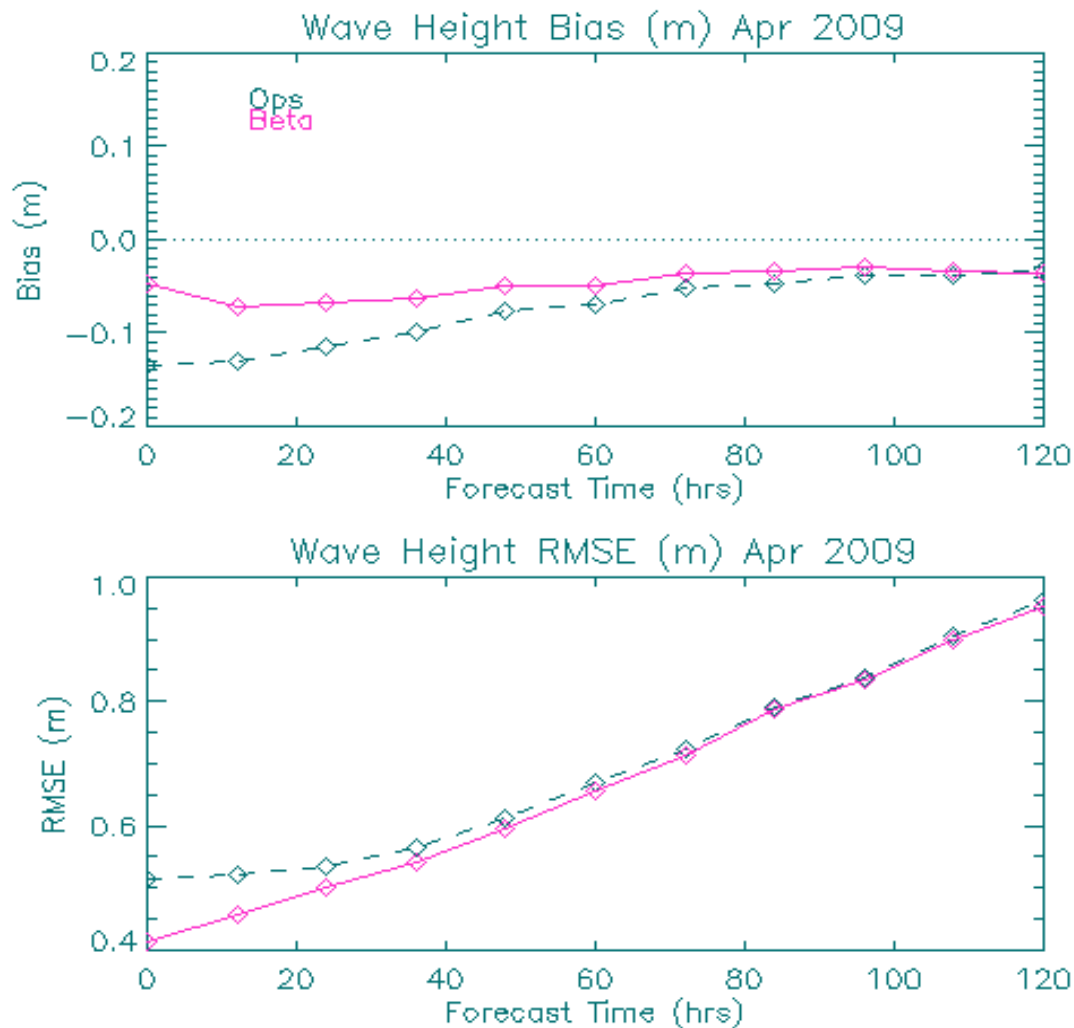
Run: 2012012500Z Tau: 0

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# Data assimilation

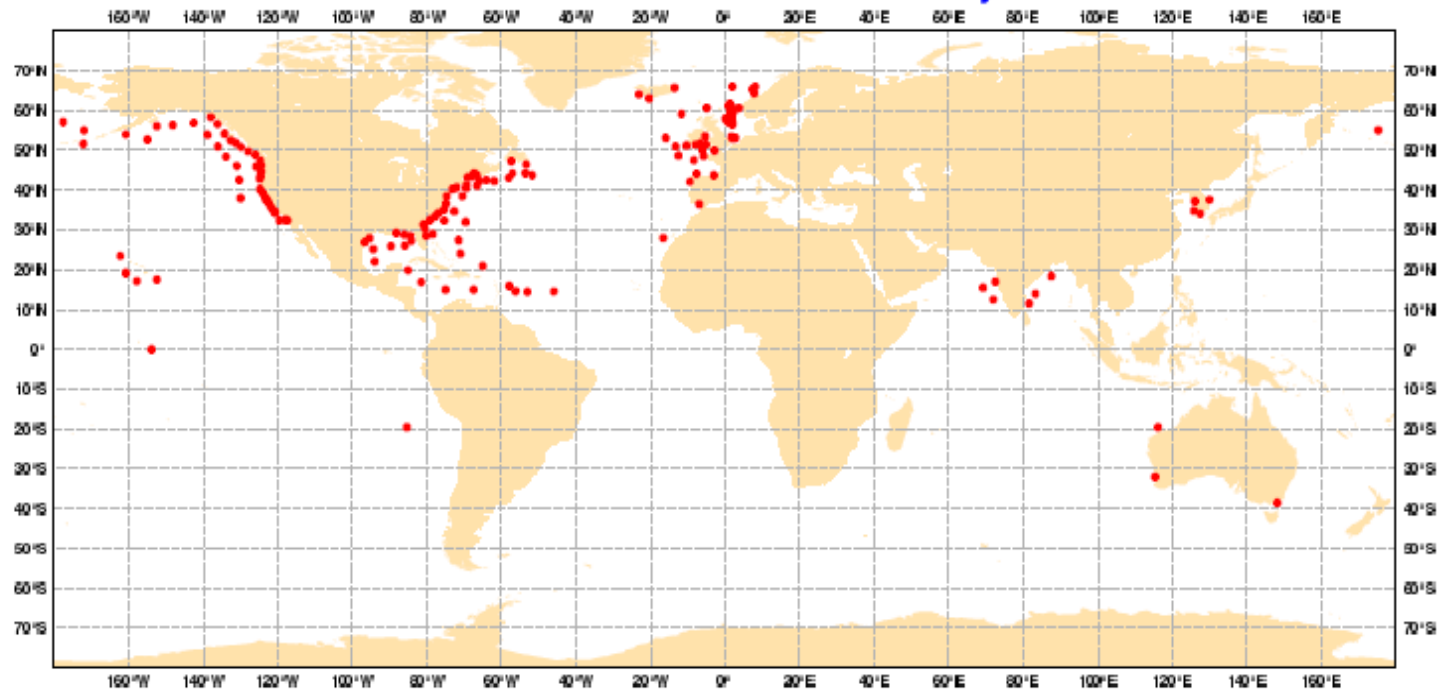


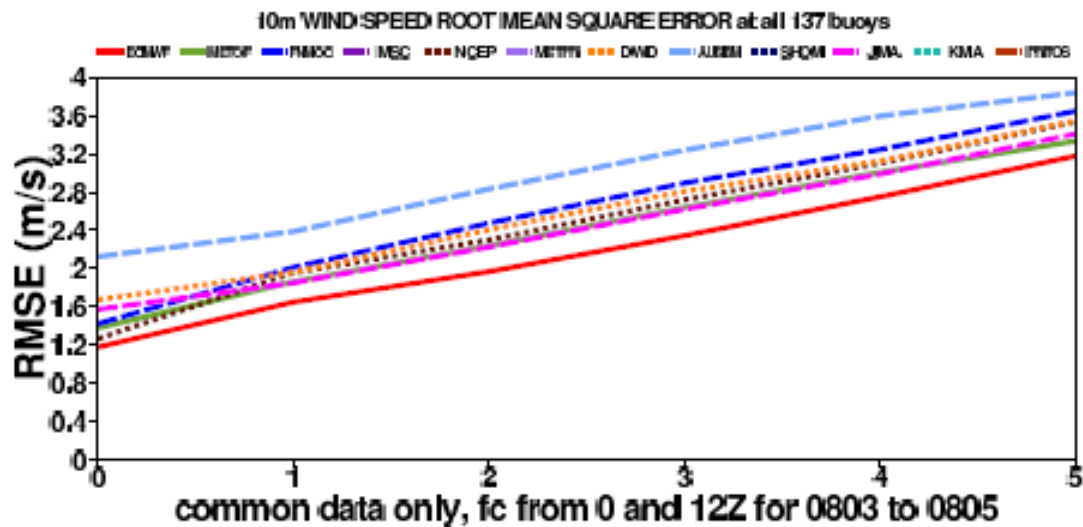
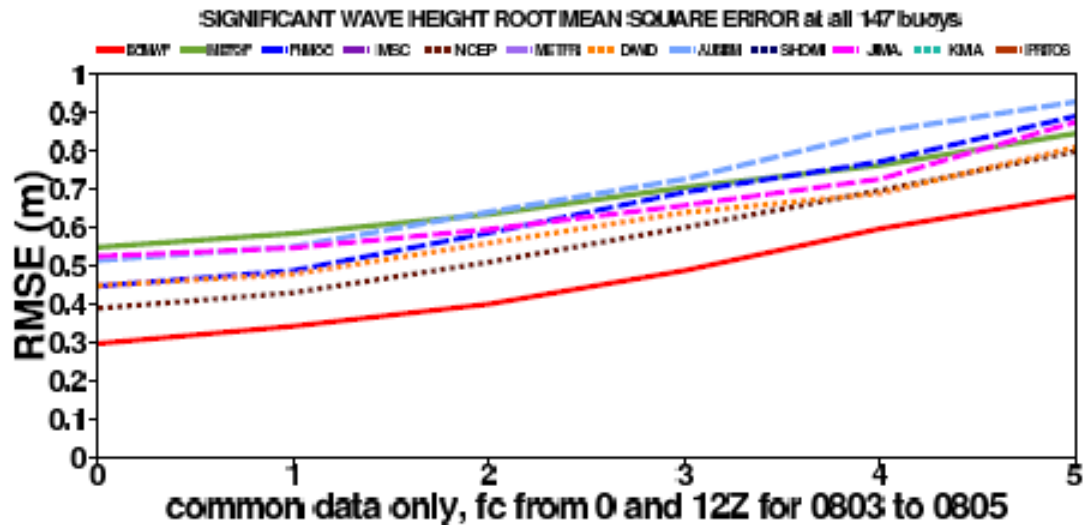




# Buoy Locations

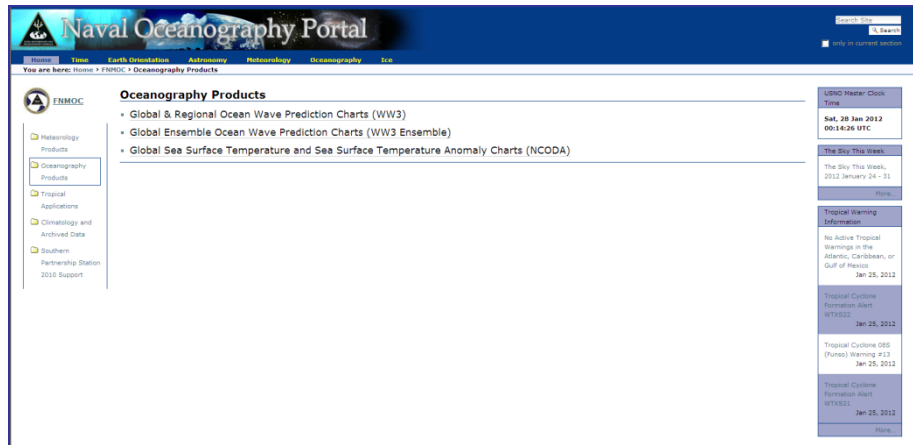
Wind and wave observations at common locations for all buoys from 200803 to 200805



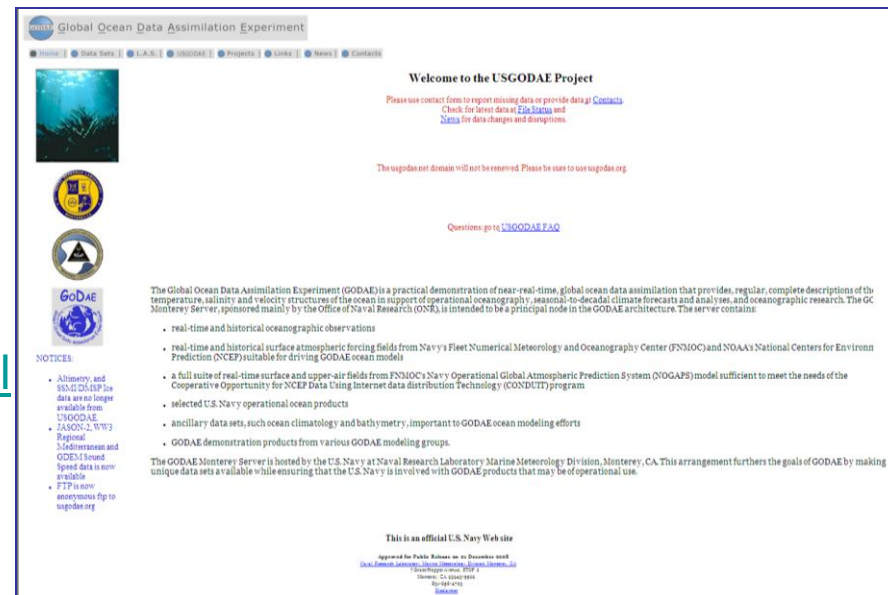




# Public Websites



- <http://www.usno.navy.mil/>



- <http://www.usgodae.org>

- <http://polar.ncep.noaa.gov/waves/index2.shtml>