

Fleet Numerical Meteorology and Oceanography Center



**CAPT Dave Titley
Commanding Officer**

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FNMOC

Fleet Numerical Meteorology and Oceanography Center (FNMOC)



- **Mission**
 - Principal weather and ocean prediction center in DoD
 - Around-the-clock support to U.S. & allied forces worldwide
 - Uniquely satisfies military requirement for global weather prediction
 - Information Assurance → protected against Cyberwarfare attack
 - Supports virtually every Navy combat platform and weapons system
 - Provide special weather and ocean prediction products to the Intelligence Community
- **Chain of Command**
 - Echelon IV Command under Commander Navel Meteorology and Oceanography Command (CNMOC), and Commander Fleet Forces Command (CFFC)

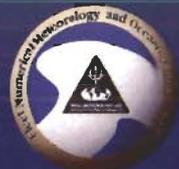


FNMI/OC

FNMI/OC (Continued)



- **Budget**
 - ~\$20M operating funds annually
 - ~\$4M capital funds annually
 - **Total capital investment ~ \$120M**
 - **Buildings**
 - **Supercomputers, servers and networks – 4.5 TeraFLOPS**
 - **One of most extensive and complex software suites in DoD**
- **People**
 - **135 government civilian**
 - **89 officer and enlisted**
 - **40 contractor**



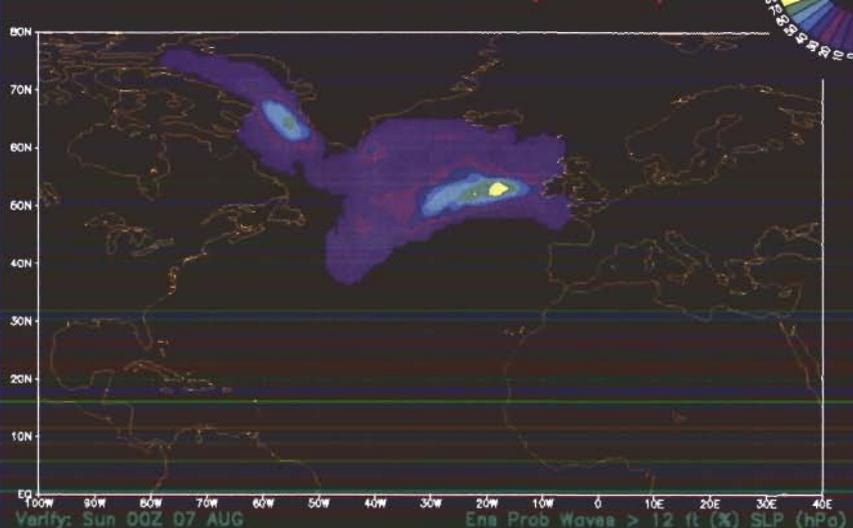
FNMOC Operational Models

(Global and Regional, Atmosphere and Ocean)

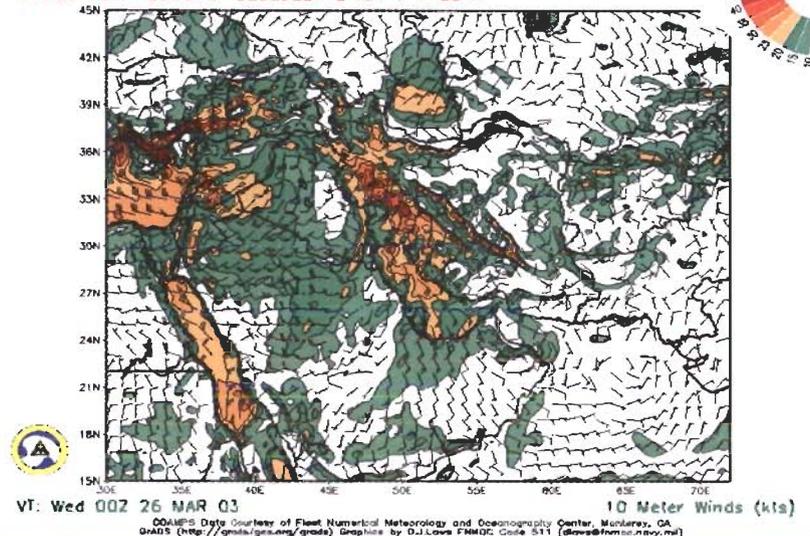


FNMOC

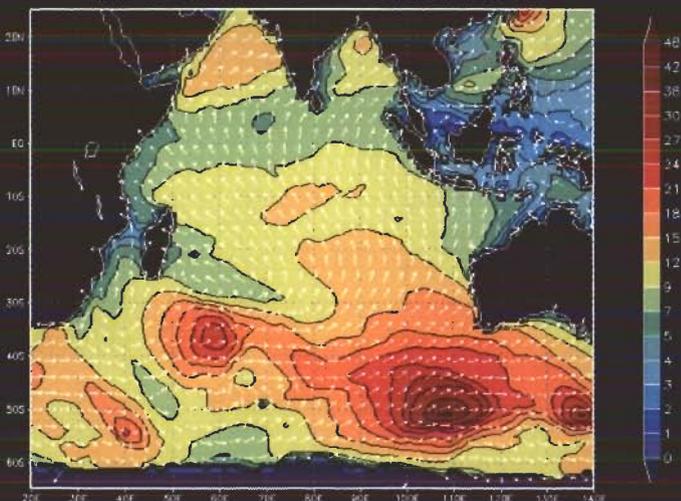
FNMOC EFS 2005080200 run 1.0° Fields $\tau = 120$ h (18 members)



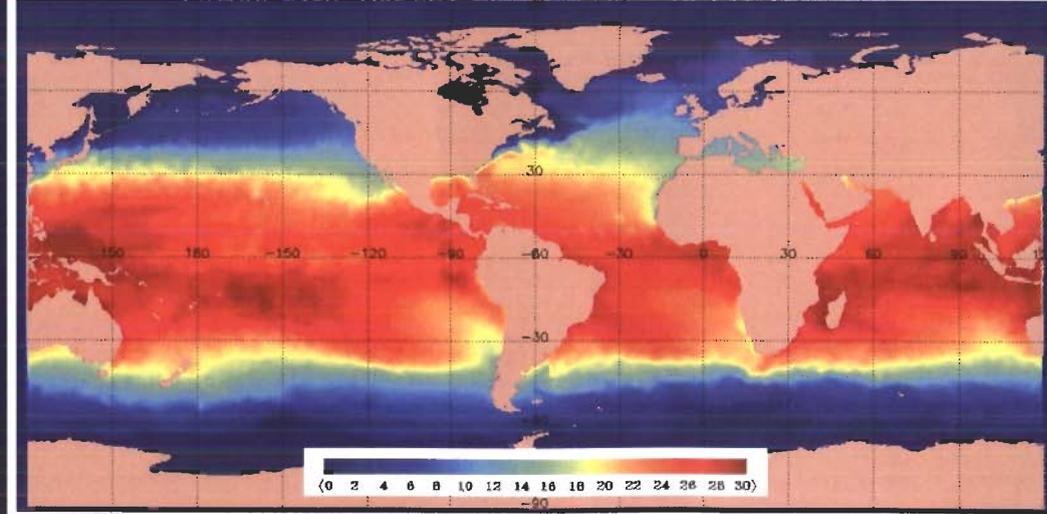
FNMOC 18km COAMPS 2003032412 run $\tau = 36$ h



WW3_GLOBAL Wave Height [ft] and Direction for 03AUG2005 12Z
Valid 05AUG2005 12Z Forecast Hour 48



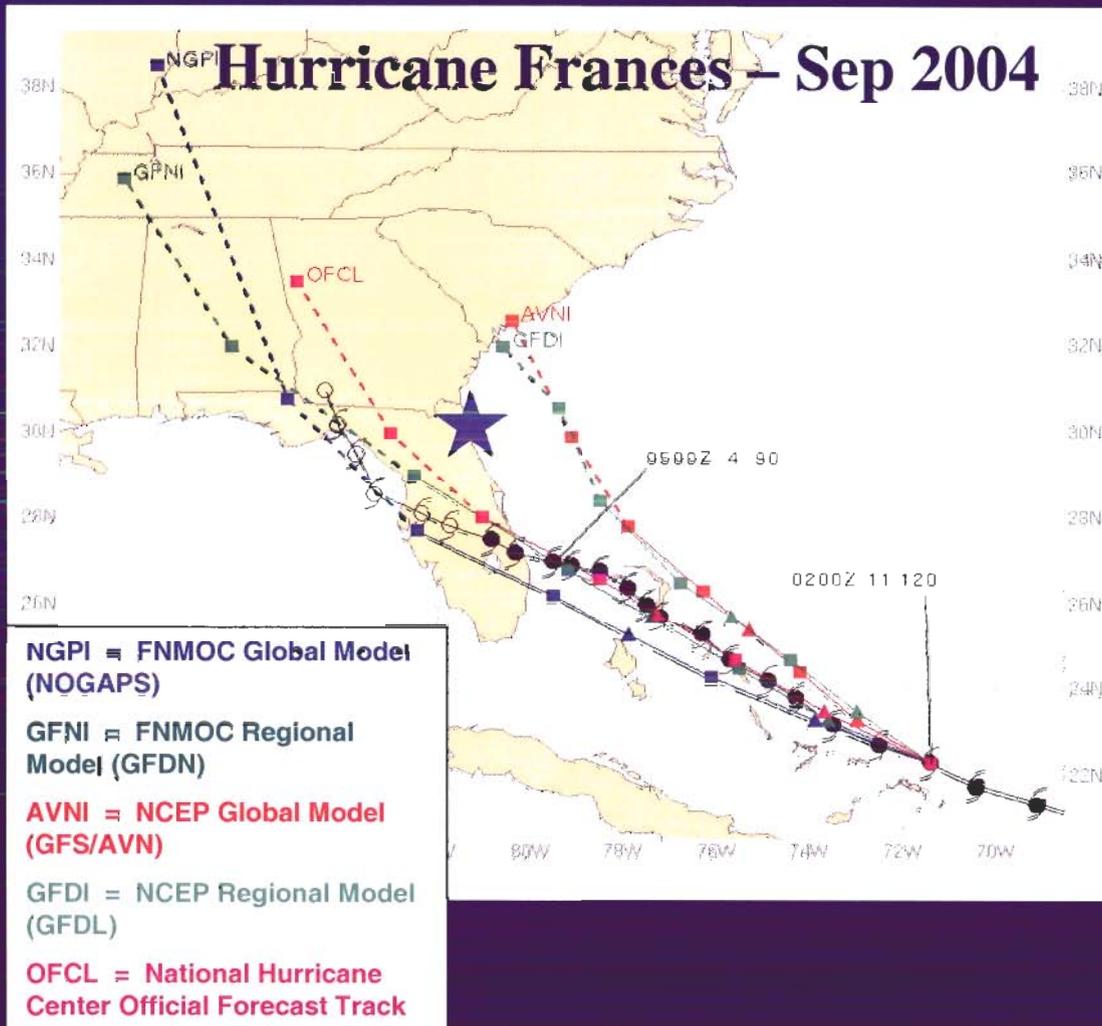
FNMOC OTIS 4.0: SST Analysis (C) 19 Feb 1999 12Z



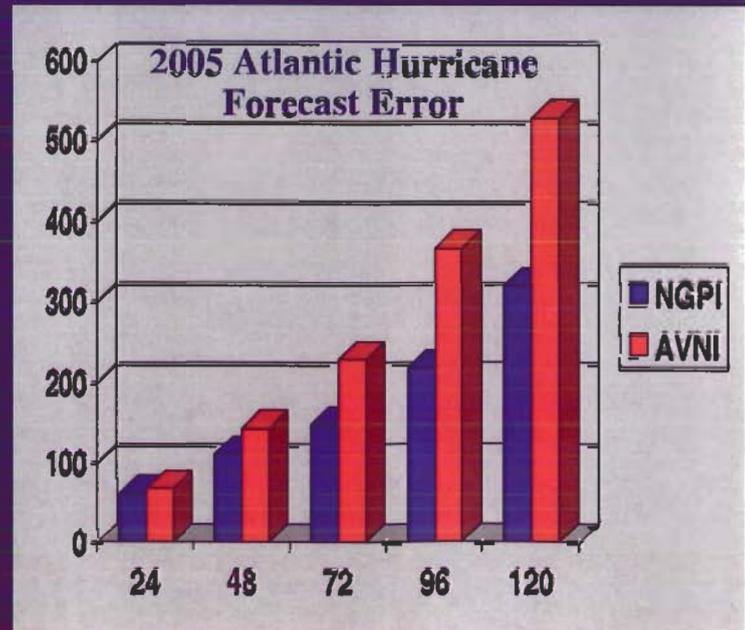


FNMOC

Analysis and Prediction *Making a Difference*



FNMOC impact on consensus forecast: prevented unnecessary sortie from Naval Station Mayport that would have cost \$7M.





FNMIOC

FNMIOC Relocation Estimate



- If relocated, mission critical systems would have to remain online at the present site until duplicate capabilities could be fielded and thoroughly tested at the new site.
- Funding required to relocate FNMIOC → \$120M plus
 - Facilities
 - High Performance Computers (HPC)
 - Software re-host
 - People

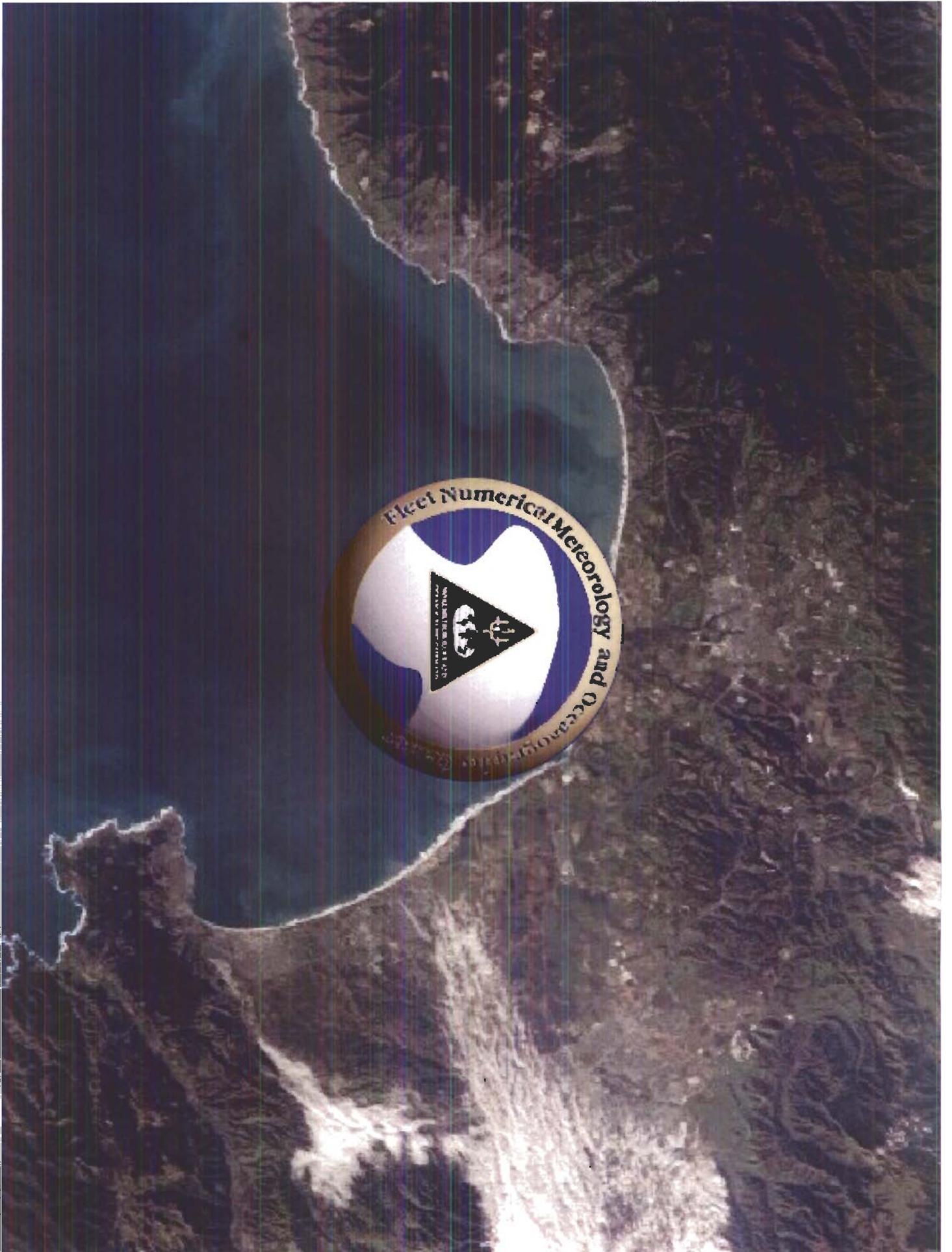


FNMOC

Summary



- **FNMOC fully supports DoD decision to maintain all defense activities in Monterey “as is”**
- **FNMOC a 24X7 operational command that supports Fleet/Joint Force combat operations worldwide**
 - Echelon IV command not associated with Education
- **FNMOC/NRL/NPS represent a highly effective team for the Navy’s Meteorological and Oceanographic mission**
- **Five years and over \$120M to relocate FNMOC**





ENMOC

Team Monterey



Joint Support

Educational Opportunities for Staff



Shared Computational & Data Resources

Shared Operational Testbeds

Physical Science Expertise

Academic Support from Staff

~ 90 PhD's
~ 80 MS

Joint Transition Teams

Rapid Response; Troubleshooting



Exposure of students to broader activities

Information Technology Expertise

Joint Projects that Leverage Local Expertise



Rapid Transition of R&D

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