HYCOM Consortium
for Data Assimilative Modeling

HY COM — HYbrid Coordinate Ocean Model

8th HYCOM NOPP GODAE Meeting
October 27-29, 2004
RSMAS, Miami, FL

Agenda

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THIS IS AN INFORMATION EXCHANGE MEETING. DO NOT HESITATE TO PRESENT THE NUTS
AND BOLTS ASPECTS OF YOUR WORK.

Suggested time for the presentations is +/- 15 minutes. In addition to a
discussion of your results, it would be most useful to include in your
presentation a status report as well as your vision for the following year.
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== WEDNESDAY A.M.==== WEDNESDAY A.M.==== WEDNESDAY A.M.==== WEDNESDAY A.M.==

8:30am    Pick-up name tags -- RSMAS Auditorium
9:00am    Welcome                                         E. Chassignet
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Overview

HYCOM NOPP GODAE present status	E. Chassignet
Update on U.S. Navy ocean analysis and prediction: Existing and future plans	H. Hurlburt
NCEP Atlantic Ocean forecast system	C. Lozano
The TOPAZ forecasting system	L. Bertino

Global and Basin-Scale Simulations

Global HYCOM	A. Wallcraft
Global HYCOM-CICE-CSM coupled system	G. Peng
Pacific HYCOM	J. Metzger

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== WEDNESDAY P.M.==== WEDNESDAY P.M.==== WEDNESDAY P.M.==== WEDNESDAY P.M.===
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1/12 degree North Atlantic HYCOM development	T. Townsend
Comparisons to North Atlantic observed sections	Z. Garraffo
North Atlantic transport discussion	L. Smith
NOAA ocean prediction center: HYCOM evaluation	J. Morgan
Comparing N. Atlantic HYCOM output with in-situ observations	S. Anderson

Plenary discussion: Metrics
(Summary of GODAE metrics by E. Chassignet/H. Hurlburt)

Data Assimilation

Description of recent updates to the NRL Coupled Ocean
Data Assimilation System   J. Cummings

Implementation of the MVOI assimilation scheme in HYCOM   O.M. Smedstad

Handling salinity when assimilating XBT data   C. Thacker

Progress on the implementation of the SEEK filter in the
1/12 degree North Atlantic HYCOM   L. Parent

Implementation of the EnKF at NRL-Stennis   H. Ngodock

Plenary discussion: Data assimilation effort
(summary of previous day's discussions by C. Thacker to start with)

== THURSDAY A.M.==== THURSDAY A.M.==== THURSDAY A.M.==== THURSDAY A.M.===

Regional/Coastal Simulations

Nested Gulf of Mexico modeling with HYCOM   P. Hogan

Validation of the HYCOM implementation in the Gulf of Mexico   D. Szabo

Atlantic Ocean Forecasting System at NCEP: Coastal Ocean
Simulations   C. Narayanan

Operational ocean modeling of the South Atlantic Bight:
A finite element regional scale model as a coastal client
of HYCOM/GODAE   B. Blanton

A regional HYCOM model for the U.S. West Coast   J. Kindle

Regional modeling of the West Florida shelf circulation   R. Weisberg

High resolution nested HYCOM simulations of the West Florida
Shelf   G. Halliwell

Coupled HYCOM-MM5 hurricane simulations: Preliminary results   W. Zhao/S. Chen

== THURSDAY P.M.==== THURSDAY P.M.==== THURSDAY P.M.==== THURSDAY P.M.===

Perpetual year simulation with the IAS-South Florida regional
HYCOM nest   V. Kourafalou

Vertical circulation along the Florida Keys   J. Willemsen

Plenary discussion: User requirements for boundary information
(Moderator: B. Blanton)

Web and data access

HYCOM Consortium data service   A. Srinivasan
     S. Hankin

HYCOM and GODAE product server activities at the IPRC: A
status report   P. Hacker

Plenary discussion: Web site, data distribution/access
(Moderator: S. Hankin/A. Srinivasan)

Other applications

An update on the HYCOM solar radiation penetration scheme   B. Kara

Diagnostics of available potential energy in the ocean   R. Bleck

The good, the bad, and the ugly in HYCOM/FSU global coupled
model   S. Wacongne-Speer

Atmospheric forcing issues near land/sea boundaries   B. Kara

Geostrophic adjustment process experiments with HYCOM   A. Mehra

== FRIDAY A.M.==== FRIDAY A.M.==== FRIDAY A.M.==== FRIDAY A.M.===

HYCOM development

HYCOM code development   A. Wallcraft

Testing of the pressure gradient error in a terrain-following
HYCOM   V. Garnier

Overflow representation in HYCOM using K-profile and
Turner parameterization   X. Xu

Plenary discussion: Future releases of HYCOM, documentation, ...
(Moderator: A. Wallcraft)

Break-out sessions

We will break out in 3 to 4 groups to address 3 to 4 of the following topics
that have proposed by the HYCOM community:

- To document and refine requirements for:
  * HYCOM global (basin) model distribution to regional
    coastal modelers (formats, volumes, timeliness requirements,..)
  * HYCOM-wide data visualization and intercomparison
- Modification of the canonical packaging of HYCOM to
  accommodate data assimilation
- Rivers and tides
- Routine generation of boundary conditions for coastal domains
  nested within global/regional HYCOM forecasting applications
- Atlantic simulation: skills, problem areas, target
- Pacific simulation: "
- Global simulation: "
- GFD experiments using HYCOM: lessons learned, experiments underway
- Experience with HYCOM in shallow water regions: vertical
  discretization; ratio of sea surface height to total depth.
- Hierarchy of ice models (simple yet useful; complex yet
  verifiable) for the Atlantic/Global Ocean
- Nesting
- Issues with the split-explicit free surface
- How can we make HYCOM more User-Friendly and construct some
  "Recommended Guidelines"
- ....

== FRIDAY P.M.==== FRIDAY P.M.==== FRIDAY P.M.==== FRIDAY P.M.===

Plenary session: Report on the break-out sessions and discussion of
the implementation plan