Live Access Server Developments

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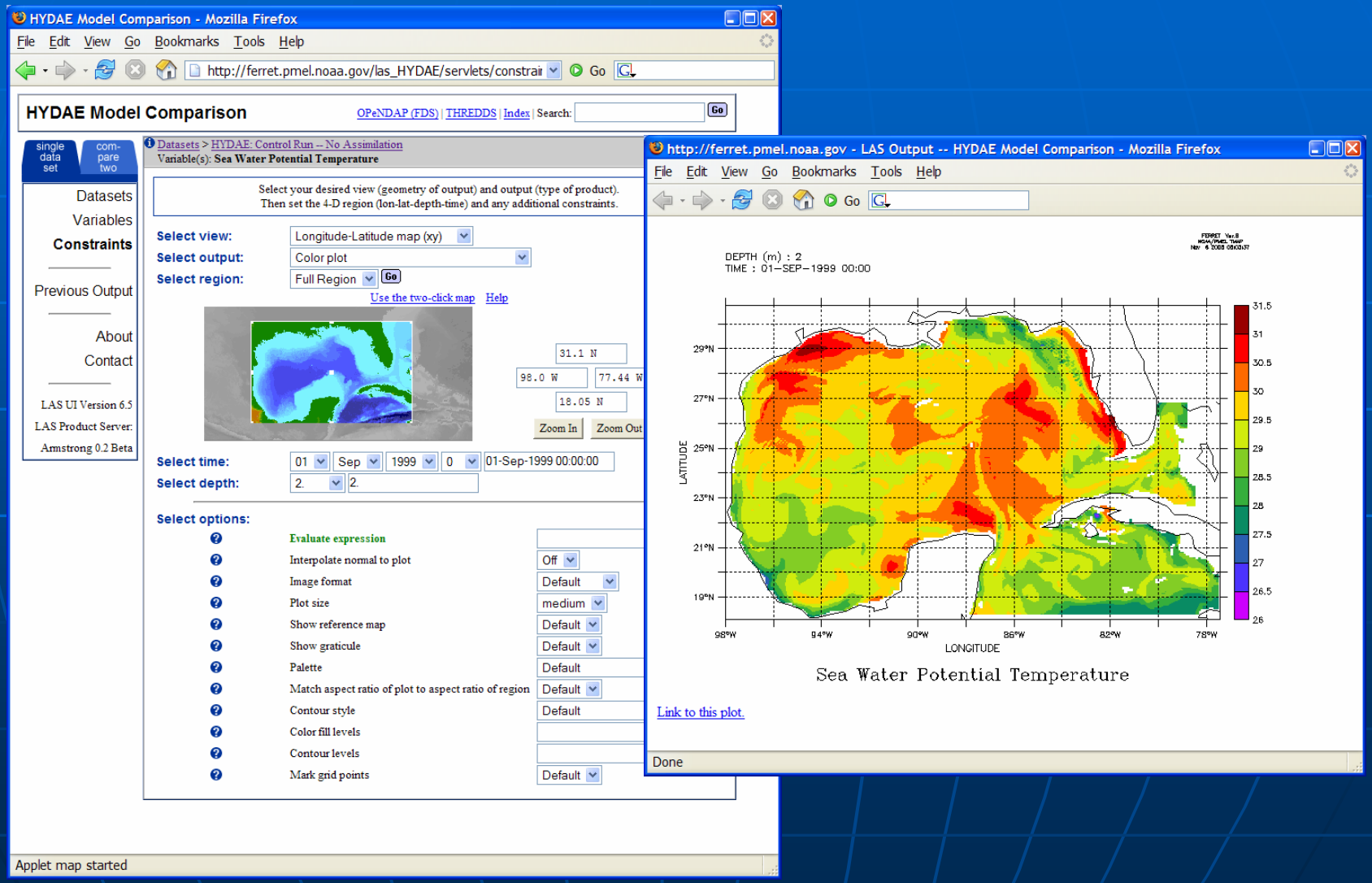
LAS Review


HYDAE Model Comparison - Mozilla Firefox
File Edit View Go Bookmarks Tools Help
http://ferret.pmel.noaa.gov/las_HYDAE/servlets/constrai
Go
HYDAE Model Comparison
OPeNDAP (FDS) | THREDDS | Index | Search:
Go
single data set
com-pare two
Datasets
Variables
Constraints
Previous Output
About
Contact
LAS UI Version 6.5
LAS Product Server:
Armstrong 0.2 Beta
Datasets > HYDAE: Control Run -- No Assimilation
Variable(s): Sea Water Potential Temperature
Select your desired view (geometry of output) and output (type of product).
Then set the 4-D region (lon-lat-depth-time) and any additional constraints.
Select view:
Longitude-Latitude map (xy)
Select output:
Color plot
Select region:
Full Region
Go
Use the two-click map
Help
31.1 N
98.0 W
77.44 W
18.05 N
Zoom In
Zoom Out
Select time:
01
Sep
1999
0
01-Sep-1999 00:00:00
Select depth:
2.
2.
Select options:
Evaluate expression
Interpolate normal to plot
Off
Image format
Default
Plot size
medium
Show reference map
Default
Show graticule
Default
Palette
Default
Match aspect ratio of plot to aspect ratio of region
Default
Contour style
Default
Color fill levels
Contour levels
Mark grid points
Default
Applet map started
http://ferret.pmel.noaa.gov - LAS Output -- HYDAE Model Comparison - Mozilla Firefox
File Edit View Go Bookmarks Tools Help
Go
DEPTH (m) : 2
TIME : 01-SEP-1999 00:00
29°N
27°N
25°N
23°N
21°N
19°N
LATITUDE
98°W
94°W
90°W
86°W
82°W
78°W
LONGITUDE
31.5
31
30.5
30
29.5
29
28.5
28
27.5
27
26.5
26
Sea Water Potential Temperature
Link to this plot.
Done

Our Raison d'Être

We develop web based visualization and analysis tools for climate science.

- Modeling, assimilating, etc. is the hard work for HYCOM members.
- Data reformatting, visualization and simple analysis shouldn't be.

HYCOM Data Assimilation Systems Comparison Experiment

"The purpose of this experiment is to compare the assimilation outcomes of the systems being developed for HYCOM in the NOPP GODAE project. The assimilation systems all use the same forward model (HYCOM) and, hopefully, for the purpose of this experiment, the same forcing fields, observations, and model setup. "

Assimilation Systems

- Topaz — L. Bertino
- EnKF — H. Ngodock
- MVOI — J. Cummings
- ROIF — A. Srinivasan
- SEEK — L. Parent
- NCEP — C. Lozano

Experimental Setup

- Forecast Model: HYCOM
- Domain: Gulf of Mexico
- Assimilation Time Period: 2004 through 2005
- Atmospheric Forcing: COAMPS (27 or 9 km)
- River Inputs: USGS (for US only)

A free run of the 1/25 HYCOM Gulf of Mexico model will be done by NRL (Pat Hogan) for the 1999-2005 time period using climate and NOGAPS forcing. COAMPS forcing will be used during the last two years of the run. The free run of the model, COAMPS forcing fields, and river run off data will be made available on the NAVO MSRC and the HYCOM data server.

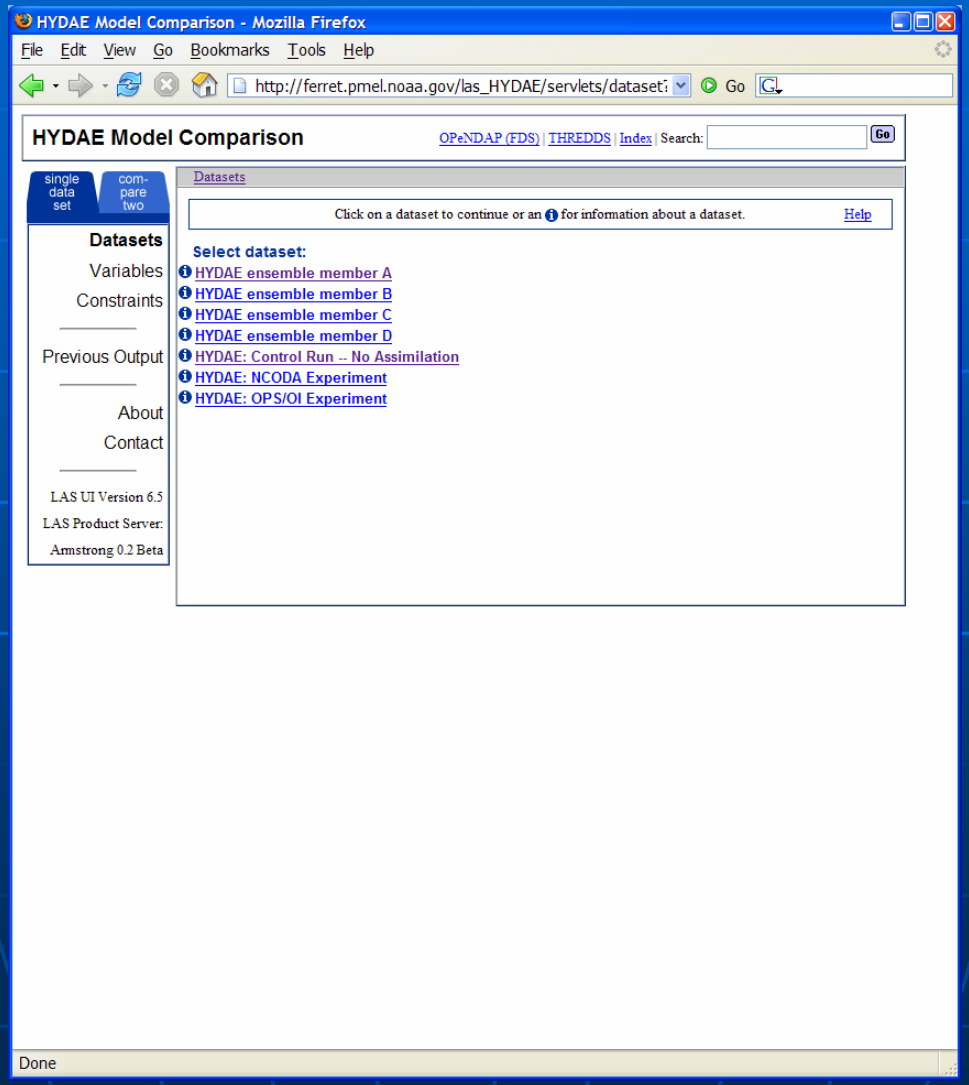
Evaluation Criteria

- Skill of the forecasts issued from the different analysis initial conditions out to 72 hours, as measured by anomaly correlation and forecast of yet-to-be-assimilated observations.
- Skill of the nowcasts as compared to the free run of the model.
- Performance measures of the assimilation system based on time series of the innovations and the residuals.
- Skill of the assimilative lateral boundary conditions for downscaling to nested models in the NOPP CODAE experiment.
- Prediction of unassimilated observations. For this purpose we will have ADCP measurements from oil platforms for at least the latter half of 2005.
- Prediction of loop current and loop current eddy locations.

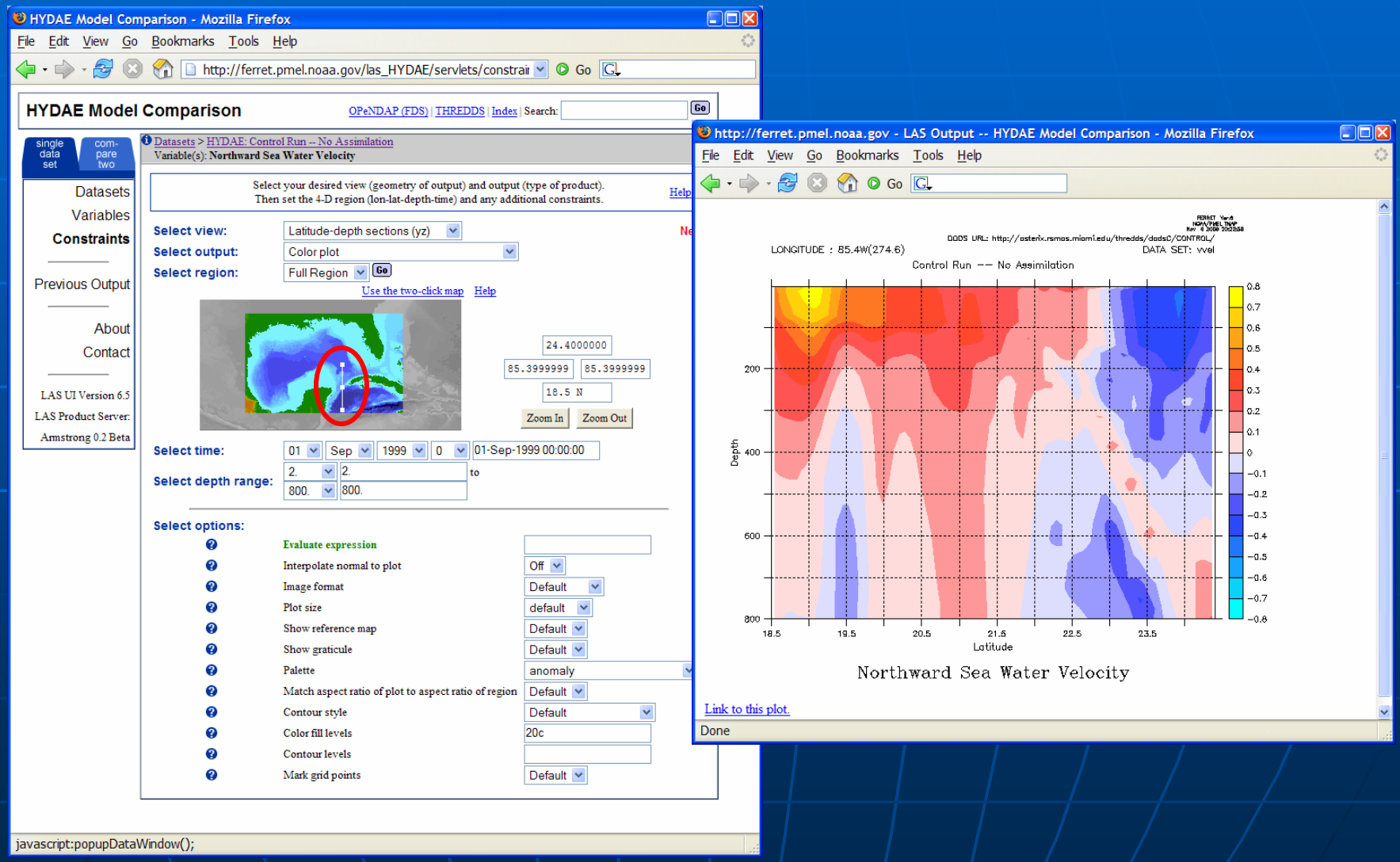
Until we have assimilation experiment runs and further guidance on quantitative analyses we have been working on the following:

- LAS core redevelopment for:
  - Improved performance
  - Enhanced analysis capabilities
- On-the-fly conversion between sigma coordinates and depths
- Native grid visualizations
- Interactive products for visual comparison

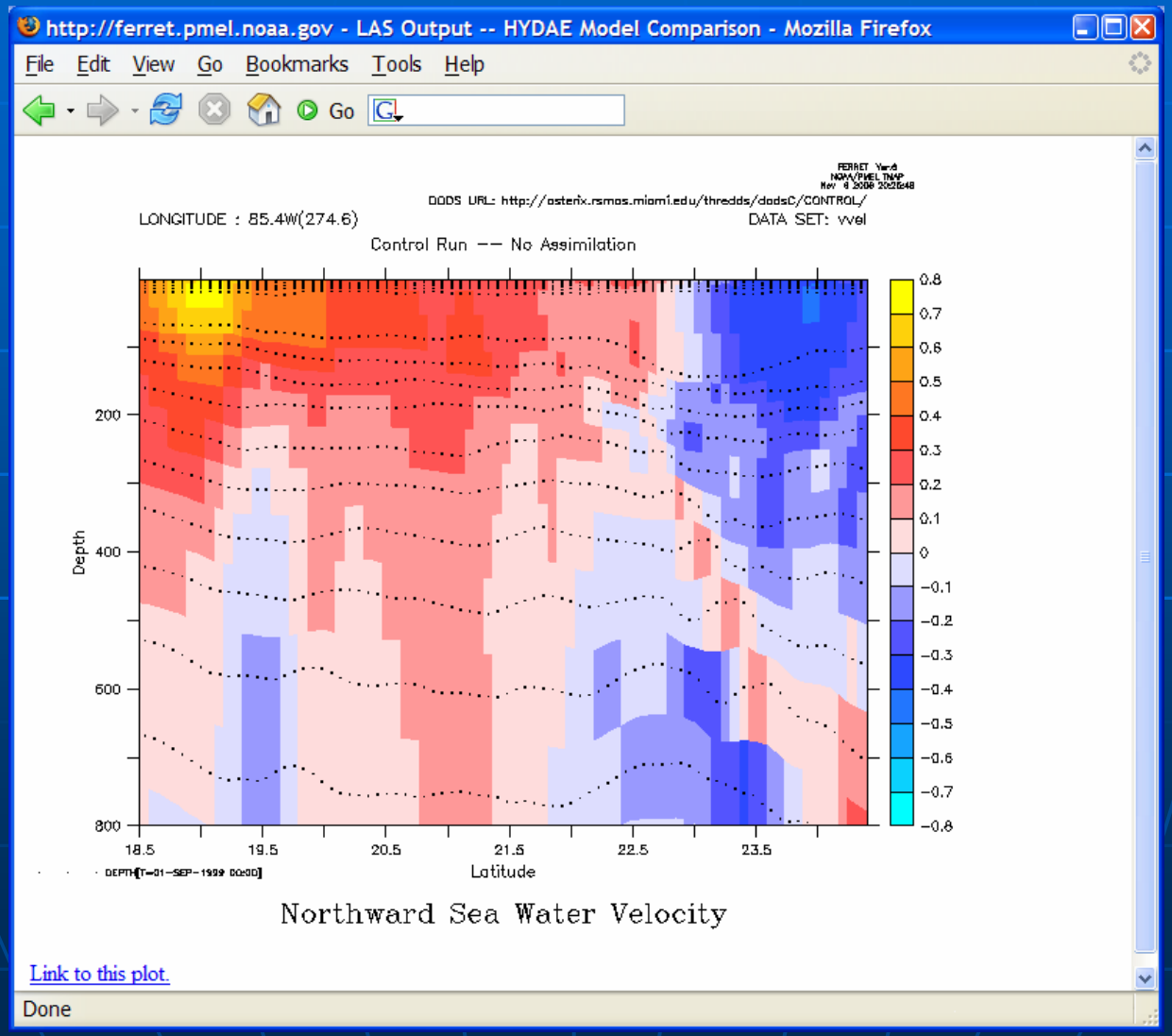
Prototype HYDAE LAS



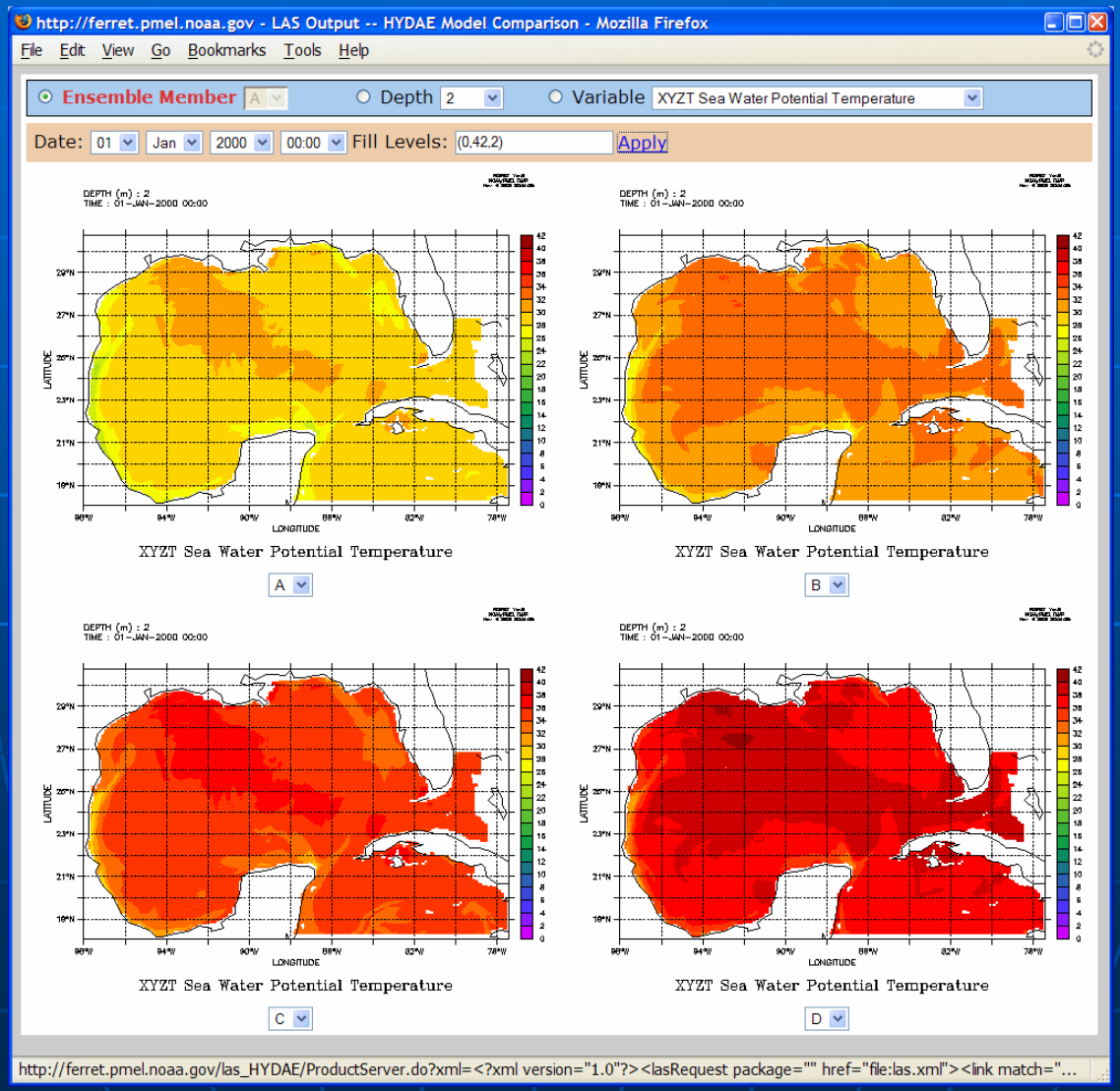
Sigma-Depth Conversion



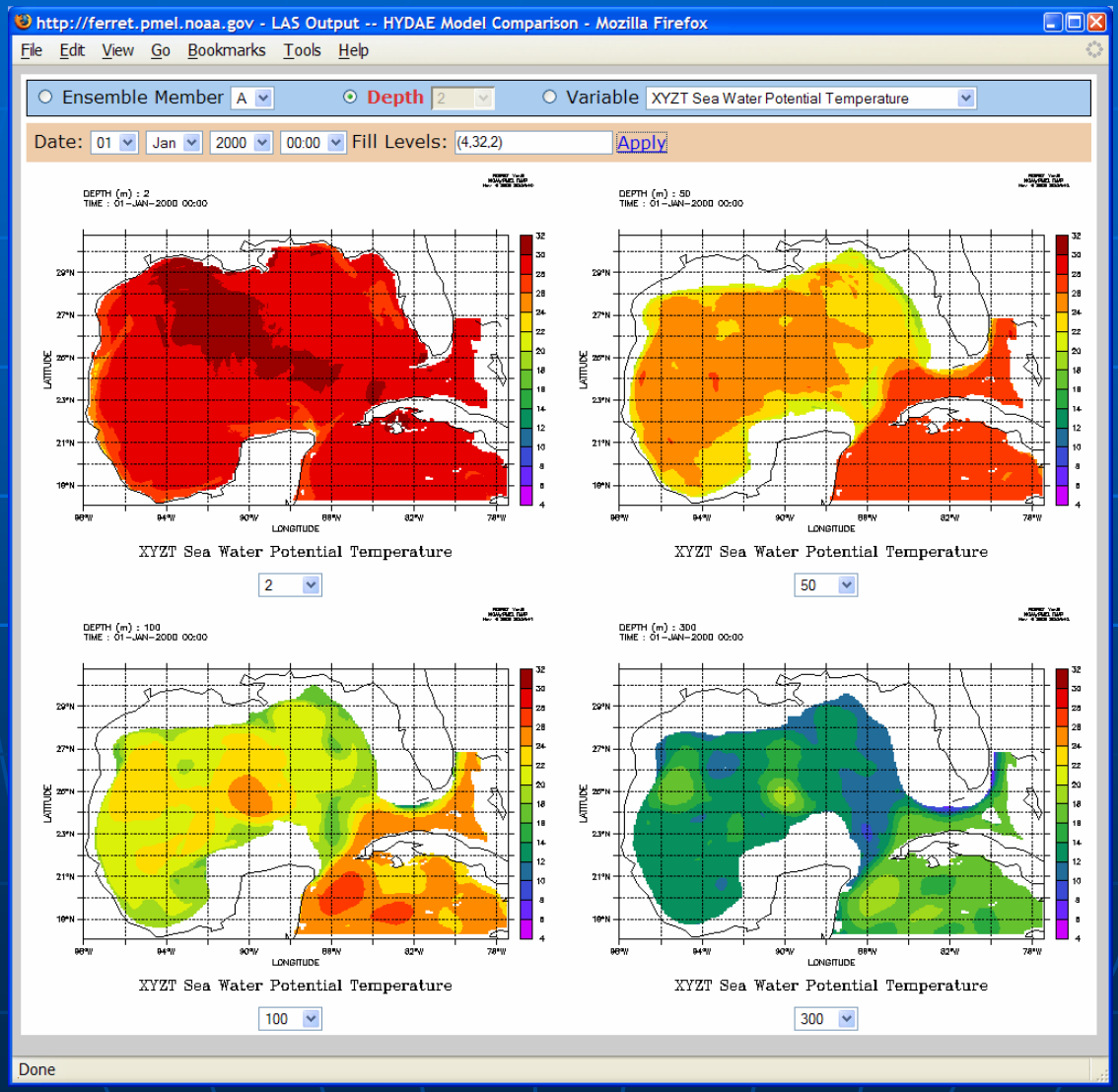
Native Grid Visualization



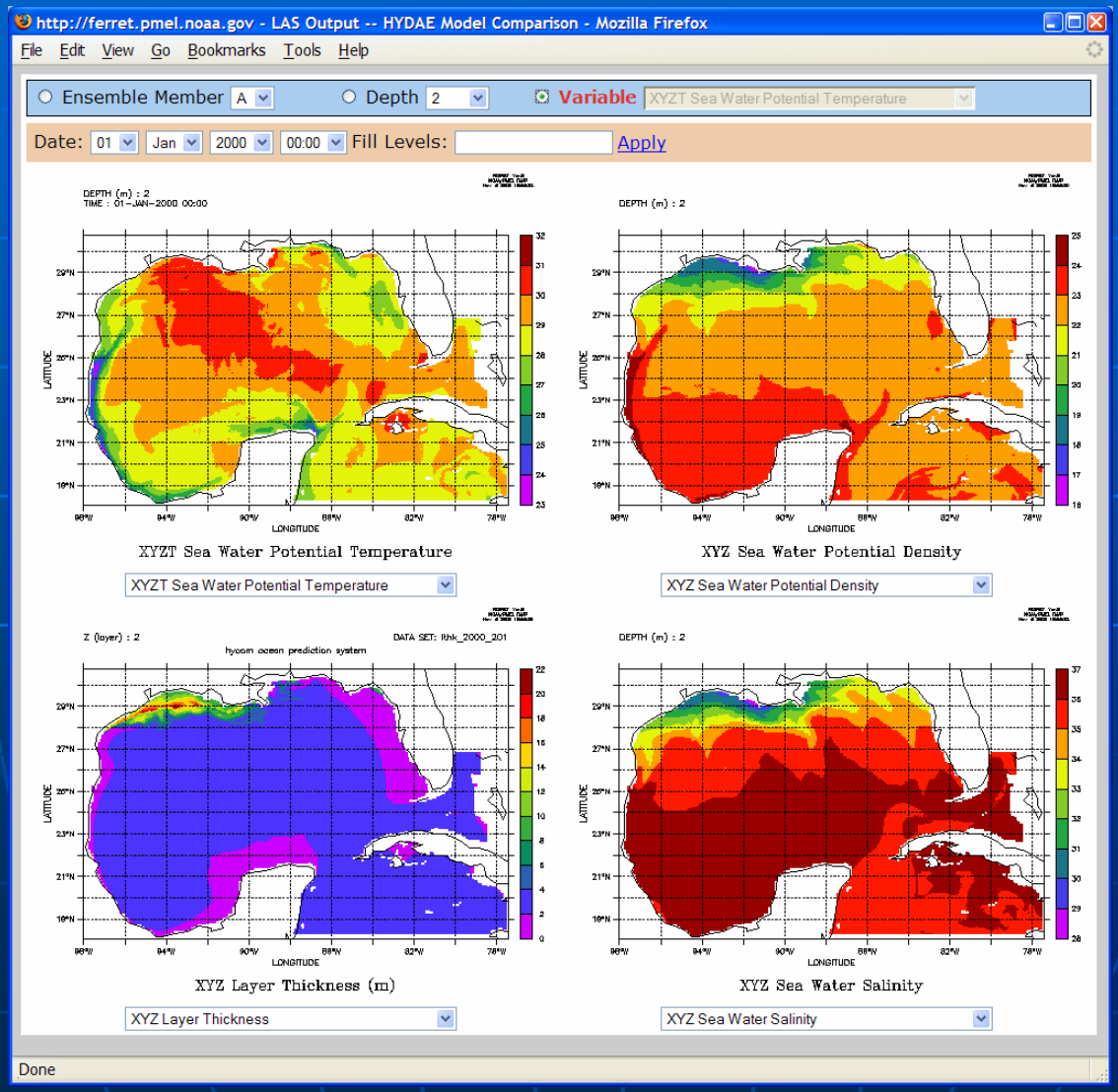
Visual Comparison – by Model



Visual Comparison – by Depth



Visual Comparison – by Variable



Take Home Message

1. We are ready to work with your model output data.
2. Let us know what additional features you need/want.

Take Home Message 2

Optimal data storage for data creation

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Optimal data storage for data access

Consider subsetting, decimating and reformatting your data