Sources of Information

Gulf Stream and Weather Information on the WEB

Bohlen @ uconn.edu Rev 2/13

****National Weather Service http://www.nws.noaa.gov or http://www.nws.noaa.gov/om/marine/home.htm

The National Weather Service site with an abundance of products including marine forecasts and satellite imagery. A valuable resource for the study of weather. Look particularly at the NWS Ocean Prediction Center sites. Check out the film loops at this site. **The place to start !**

Northwest Atlantic Weather Briefing

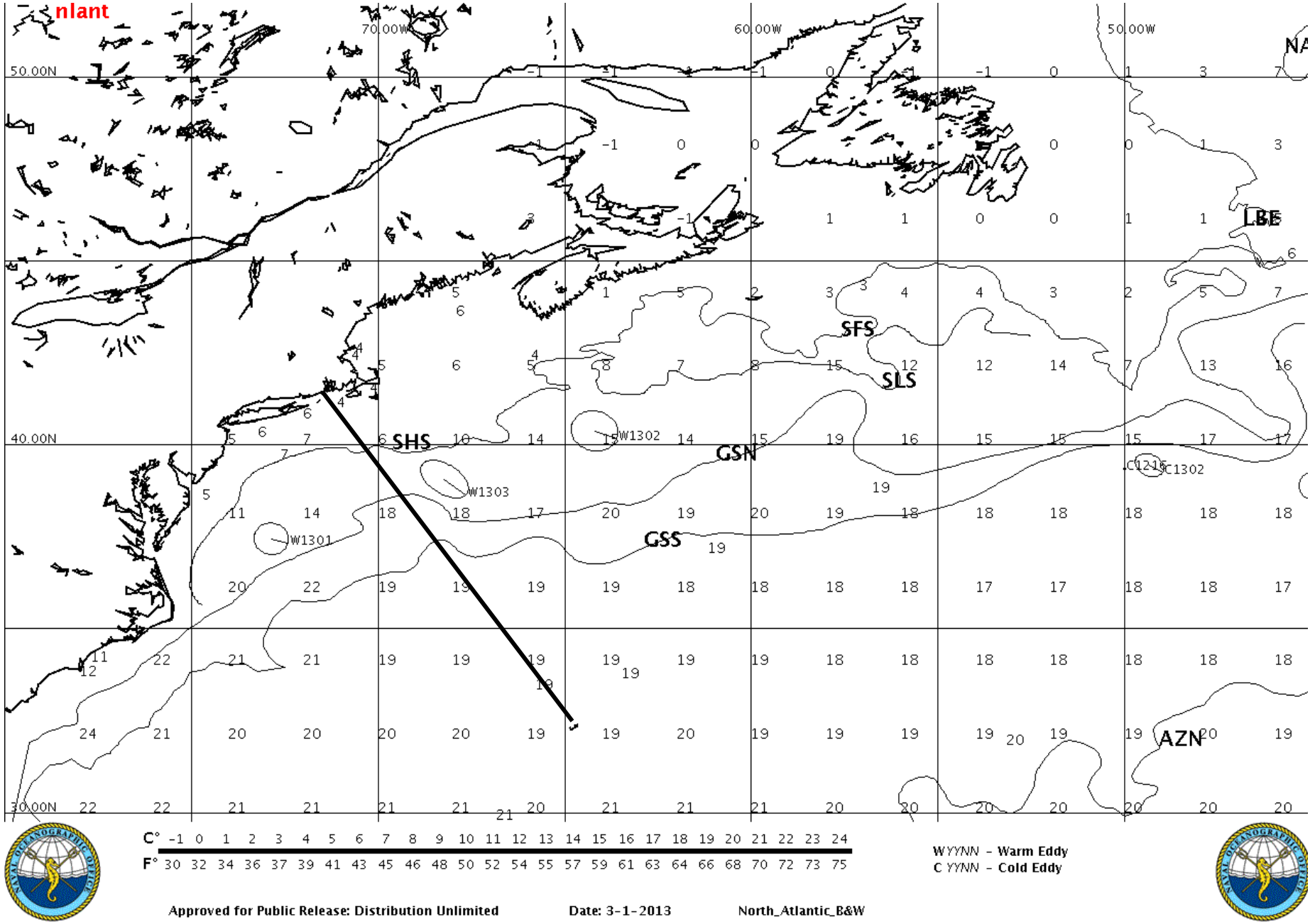
http://www.nws.noaa.gov/om/marine/nwatlanticbrief.shtml

Here's a handy listing of most of the weather fax charts of interest for the northwest Atlantic. When compressed, an efficient way to download a lot of information in a hurry.

NOAA/National Weather Service Environmental Modeling Center

http://polar.ncep.noaa.gov

The National Weather Service's Environmental Modeling Center and home to the Real Time Ocean Forecast System model (RTOFS). Although this model's resolution is a bit coarse, covering for example most of the North Atlantic, its looping capabilities assist in the determination of how fast some ocean current features evolve. In addition this site allows comparison of model results to satellite data and other models such as those developed by the Navy. For particularly interesting comparisons see



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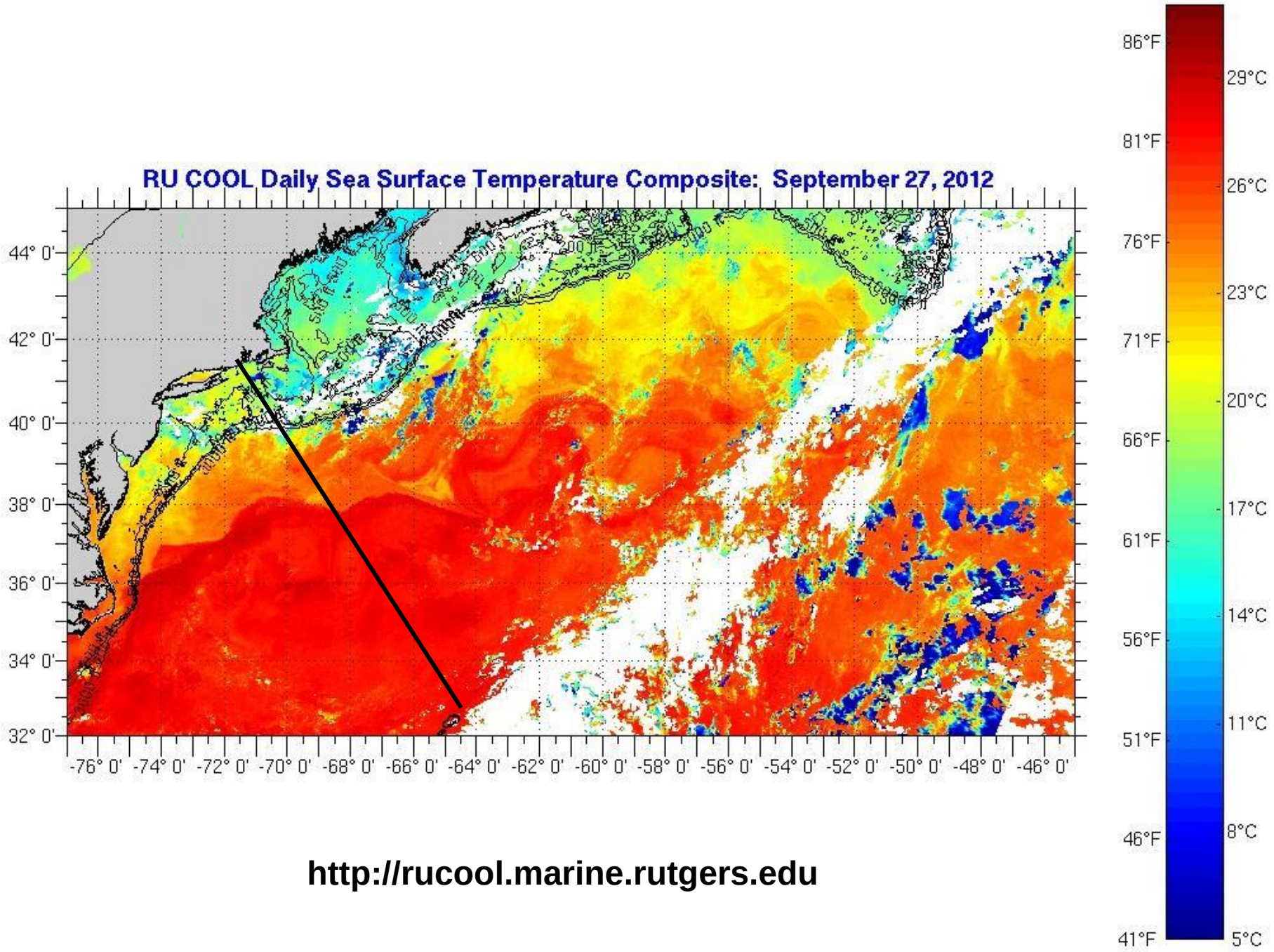
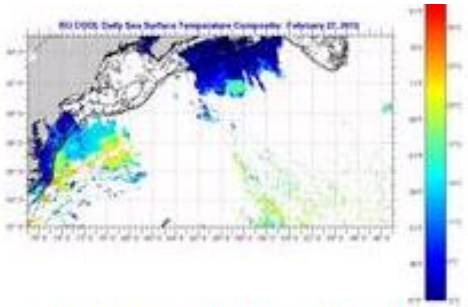


http://rucool.marine.rutgers.edu

So… What do we see today ?



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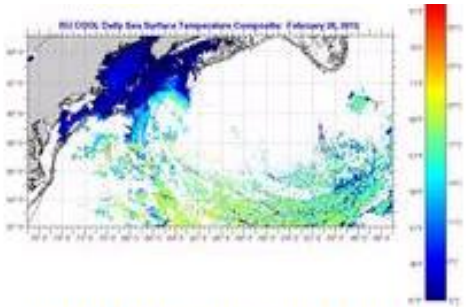

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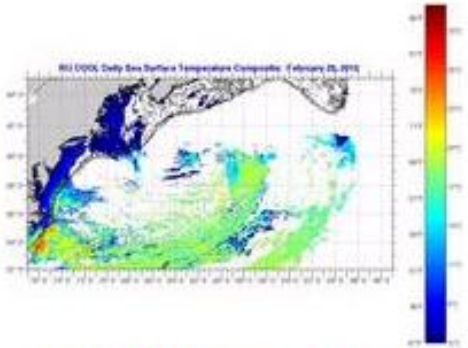

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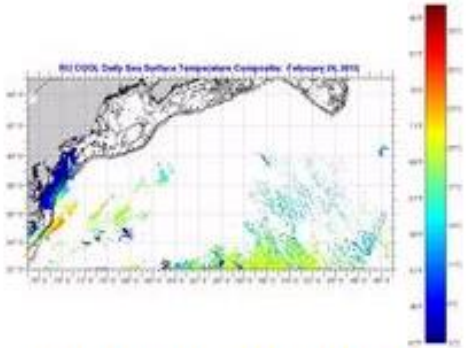

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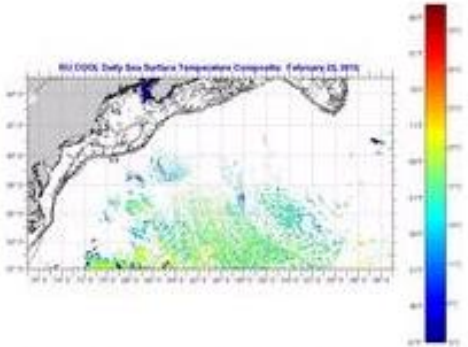

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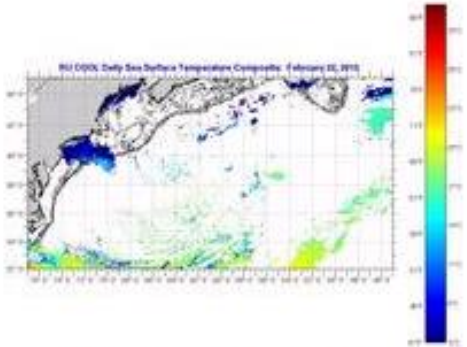

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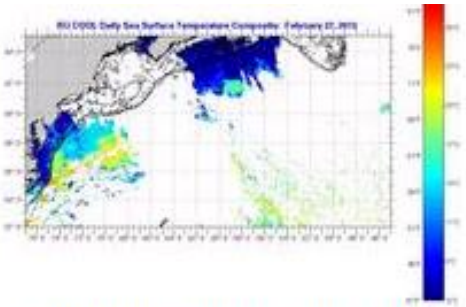
CLOUDS !!



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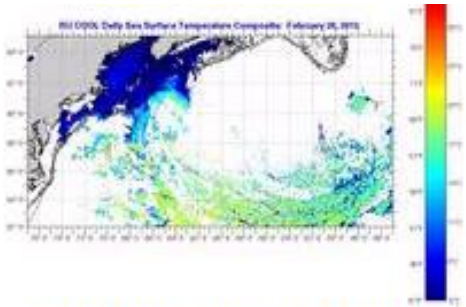

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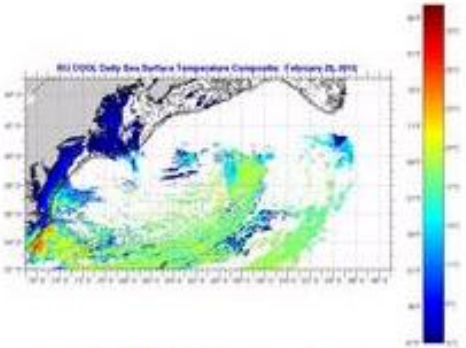

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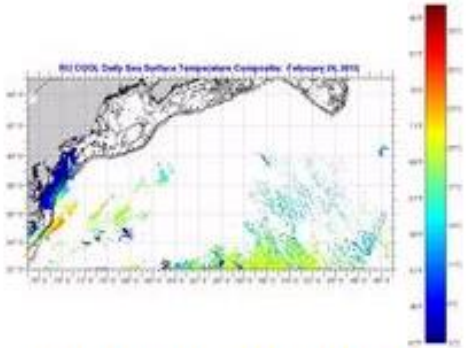

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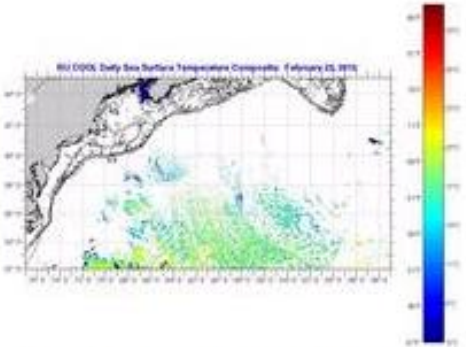

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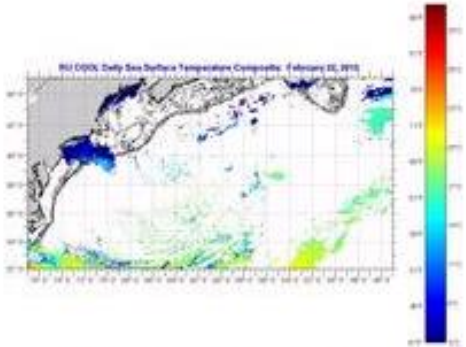

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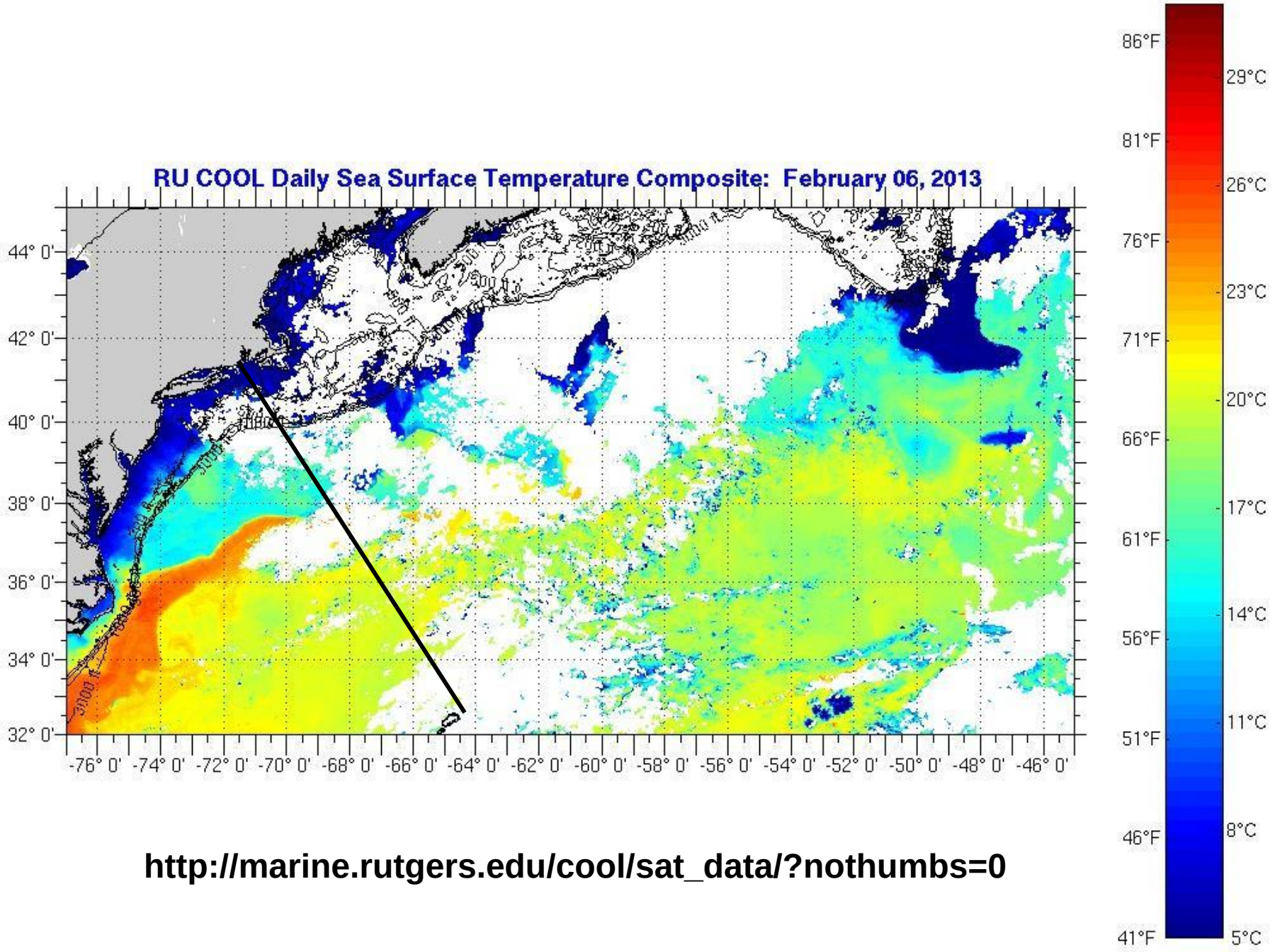
Lesson: START ANALYSIS EARLY !!



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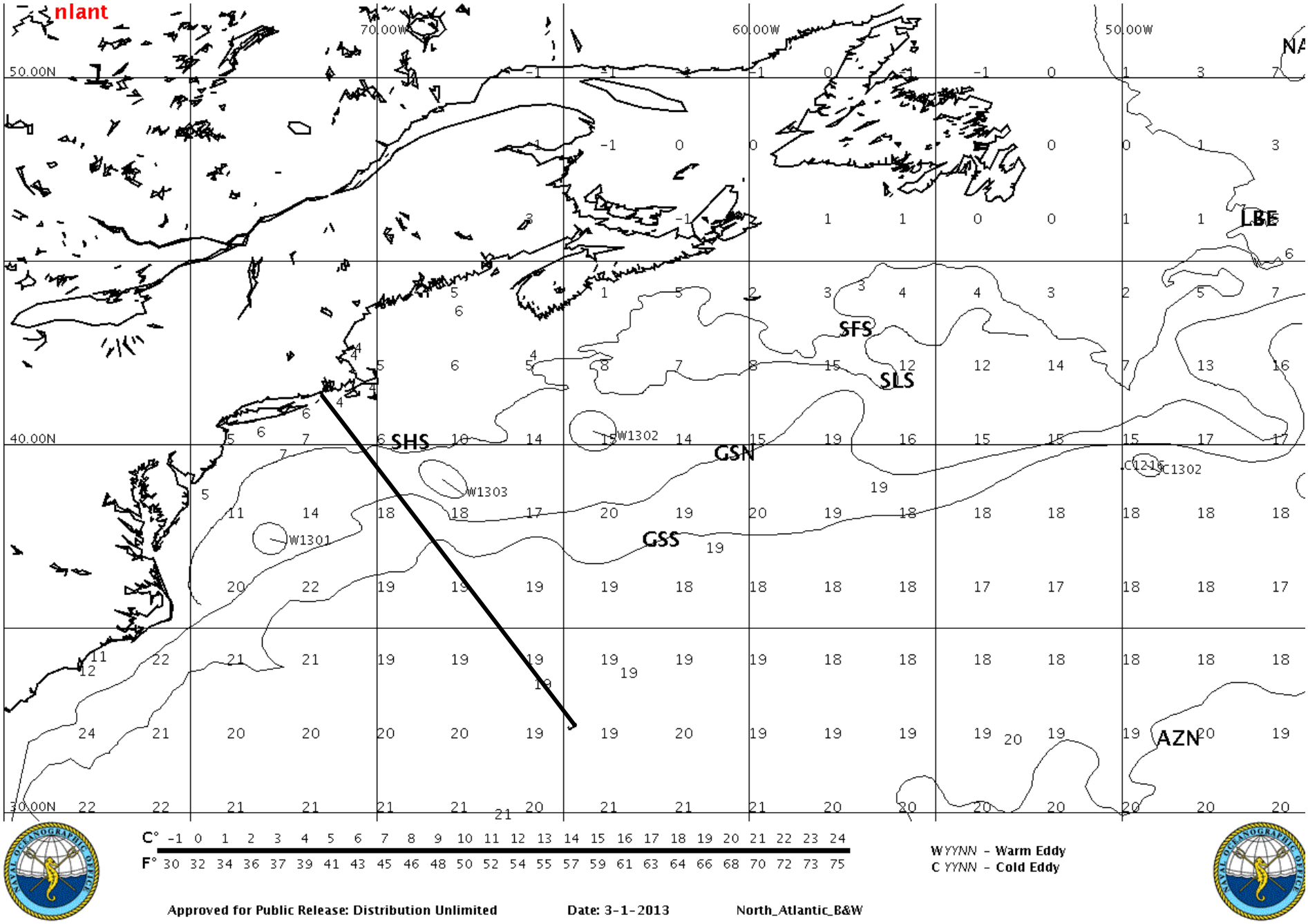

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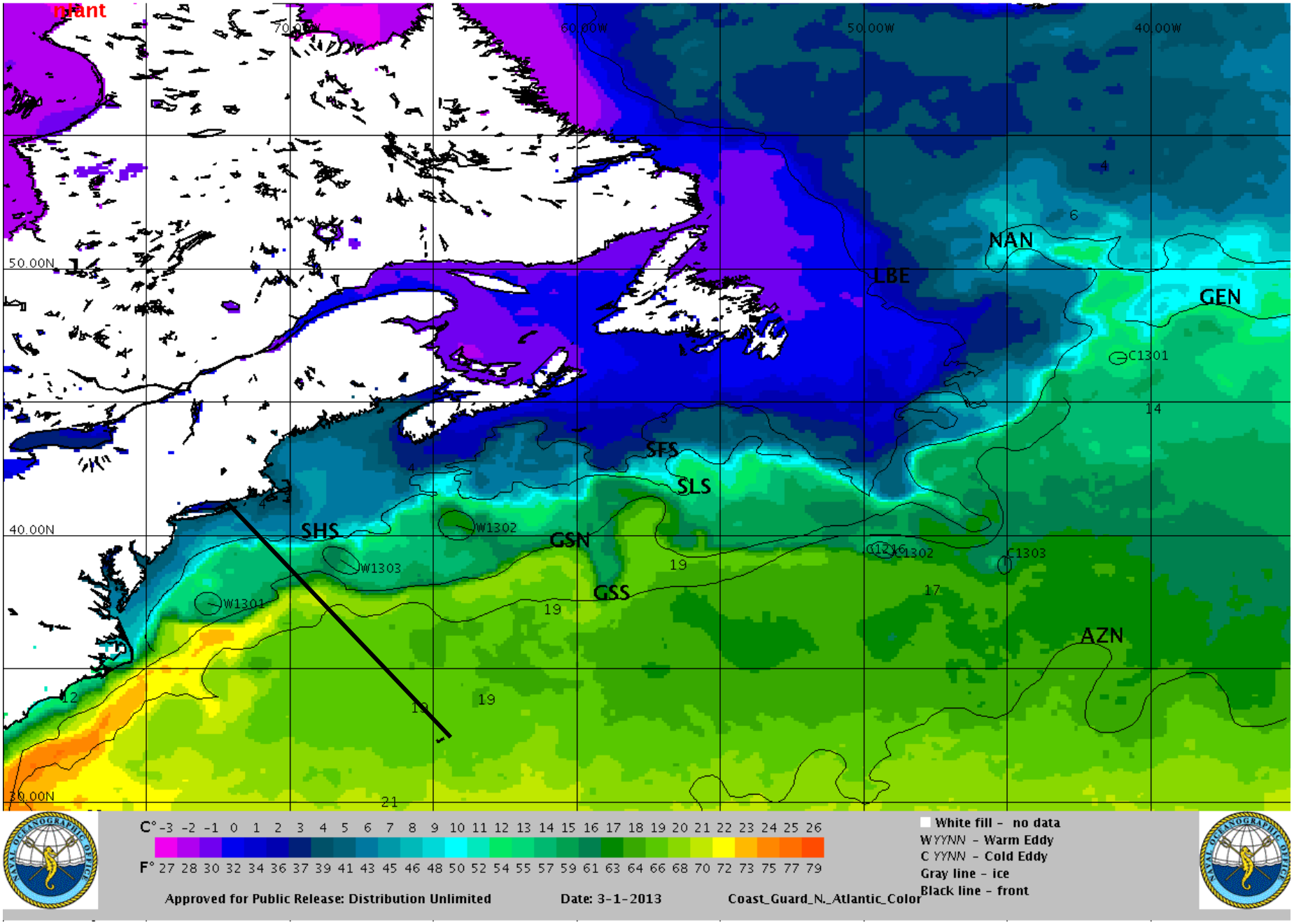

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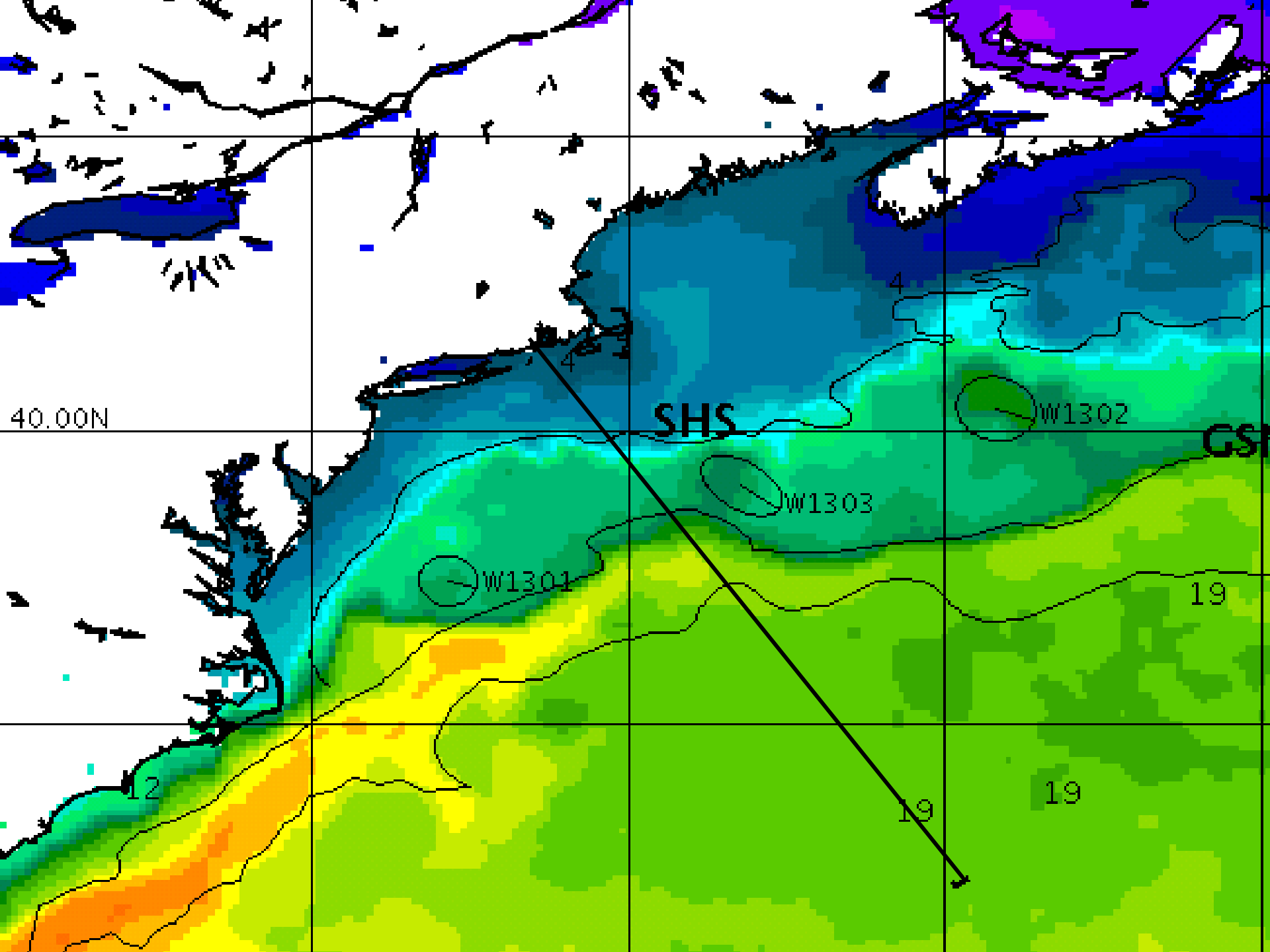
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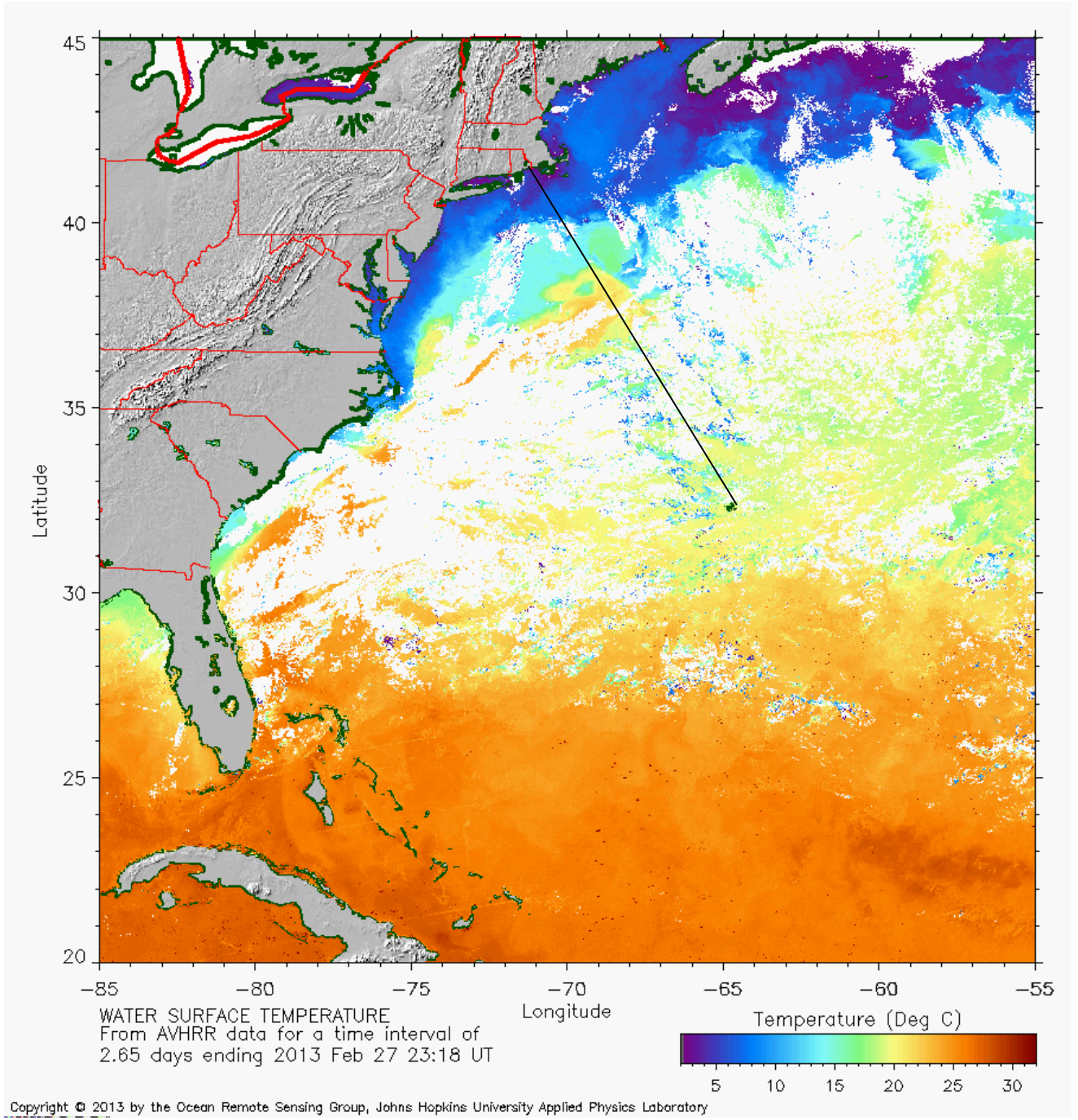

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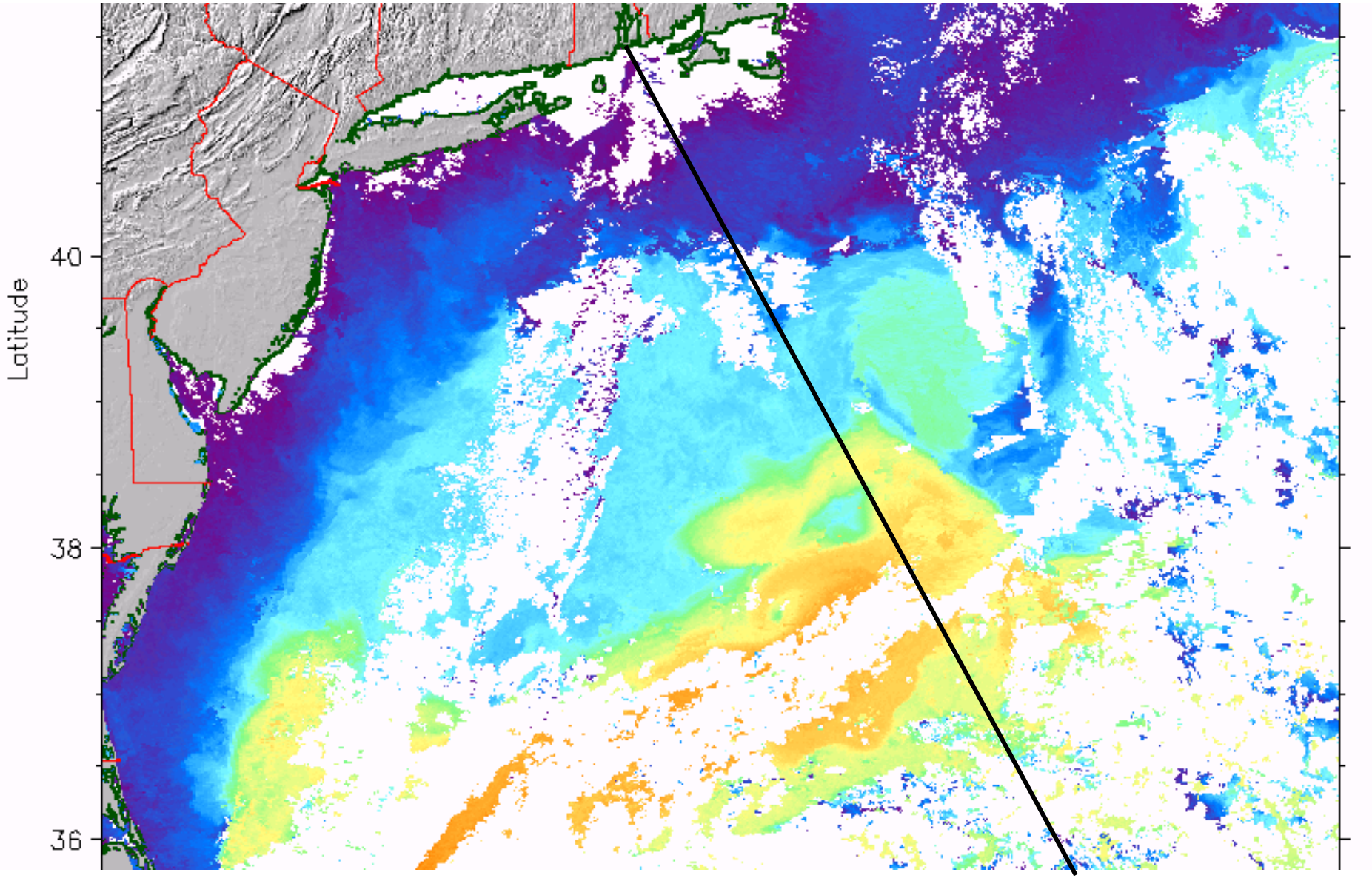

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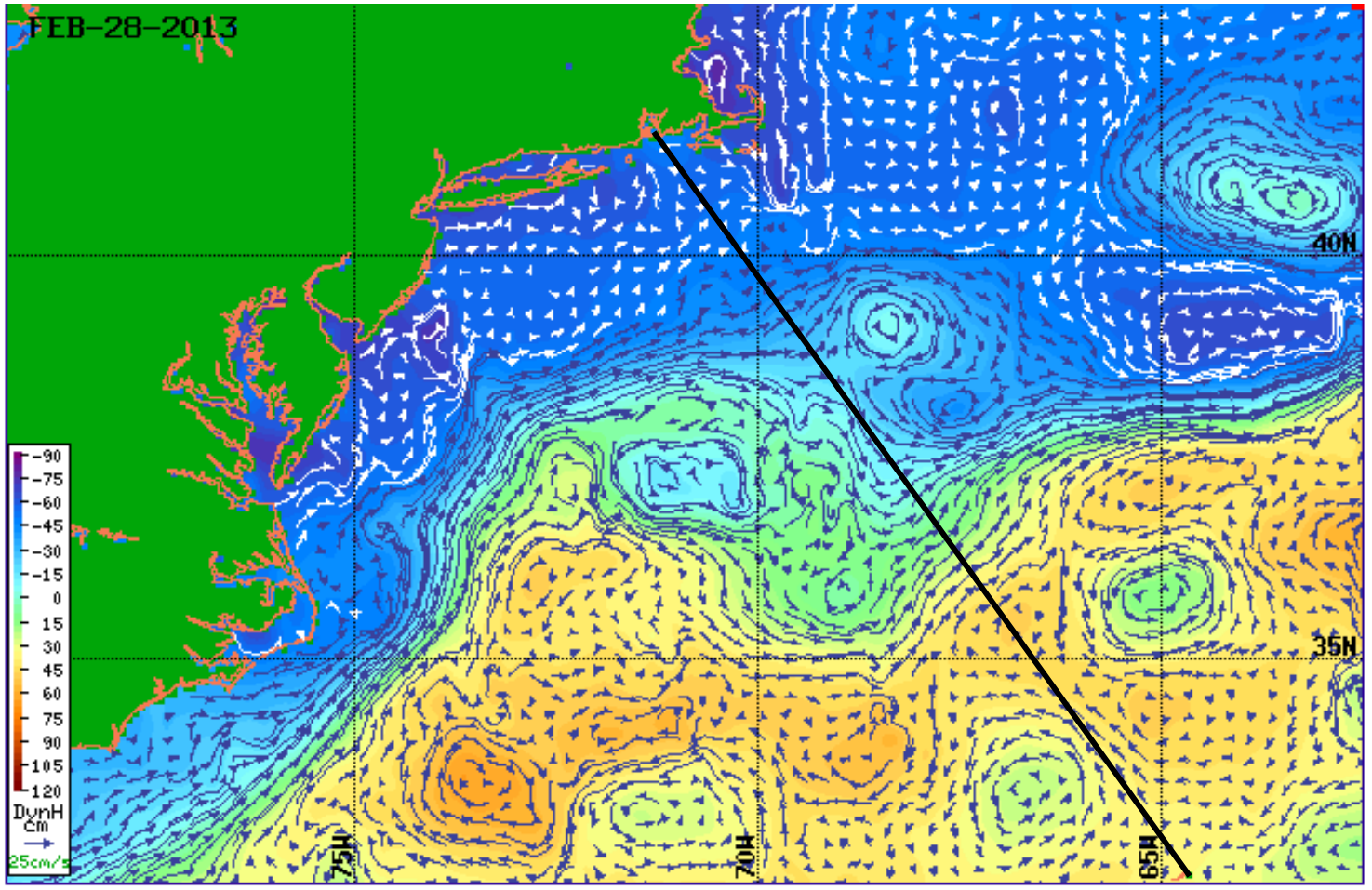
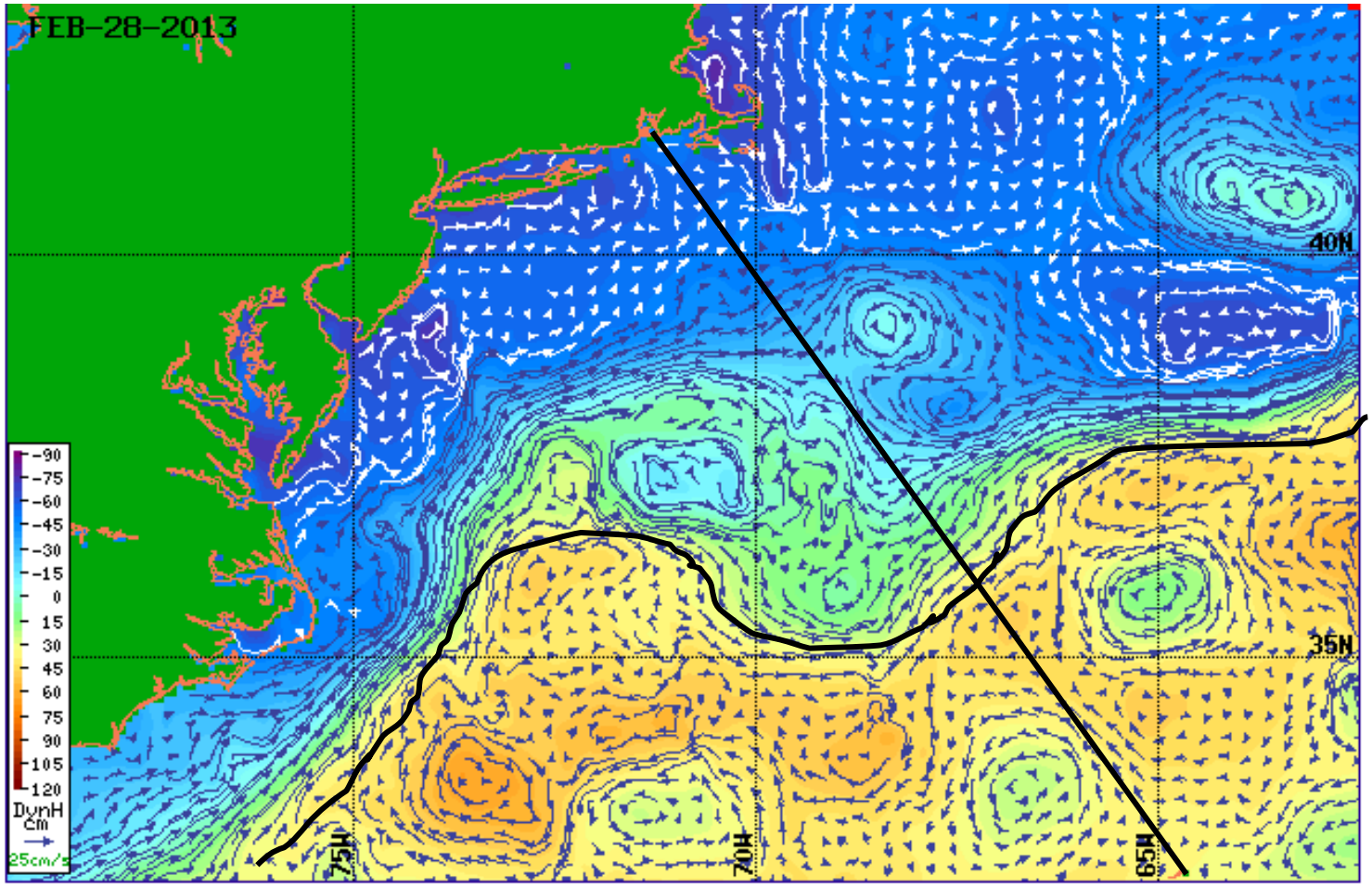


Lon -74.41 -67.37 Date 28 Feb 2013 Currents Vel Field

Lat 43.13 32.20 Data Points Contours S. Wave Height Graphics Go!

Mask depths: 0 m OCCAM_XBT

http://www.aoml.noaa.gov/phod/dataphod/work/trinanes/INTERFACE/index.html



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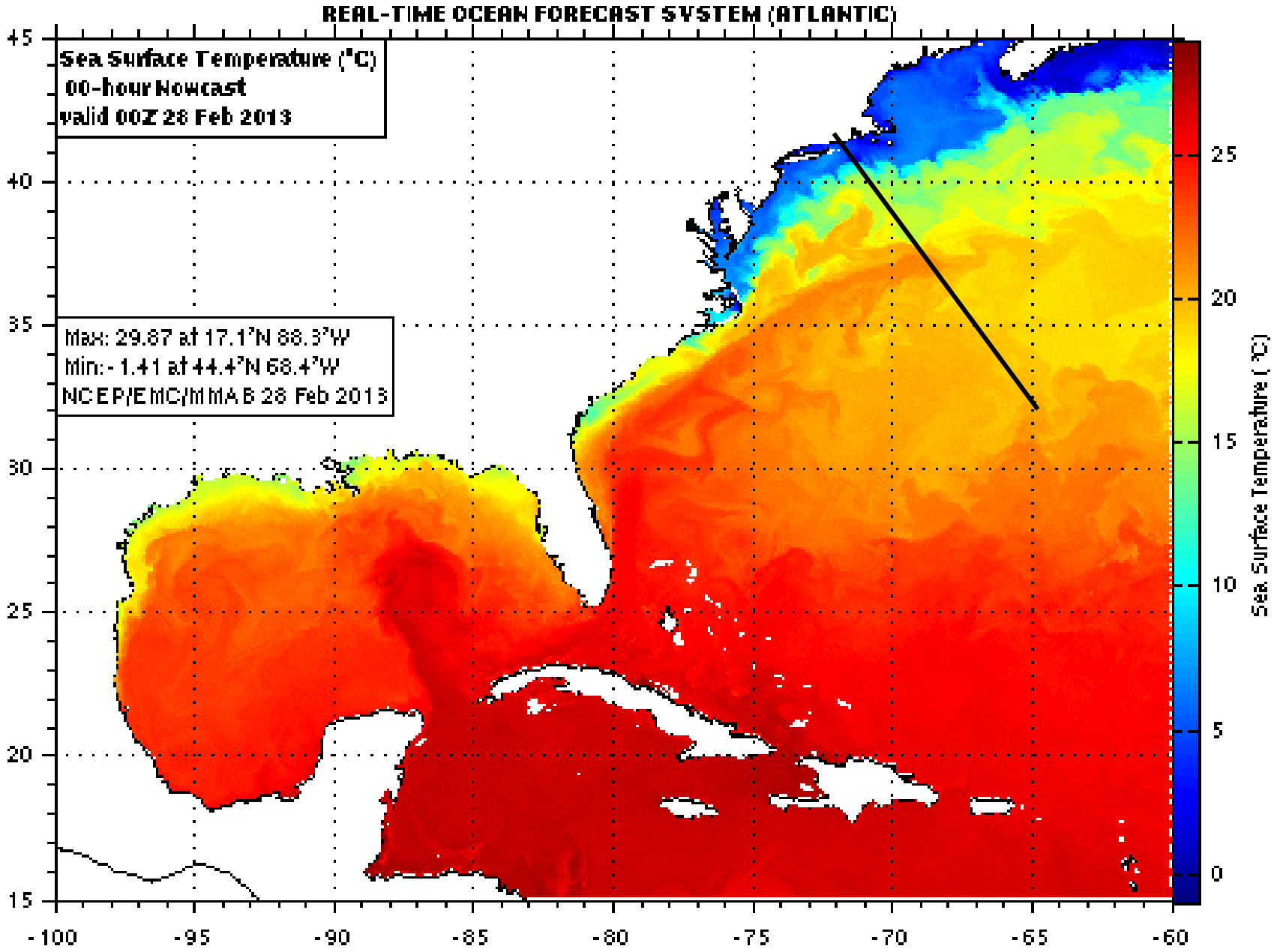

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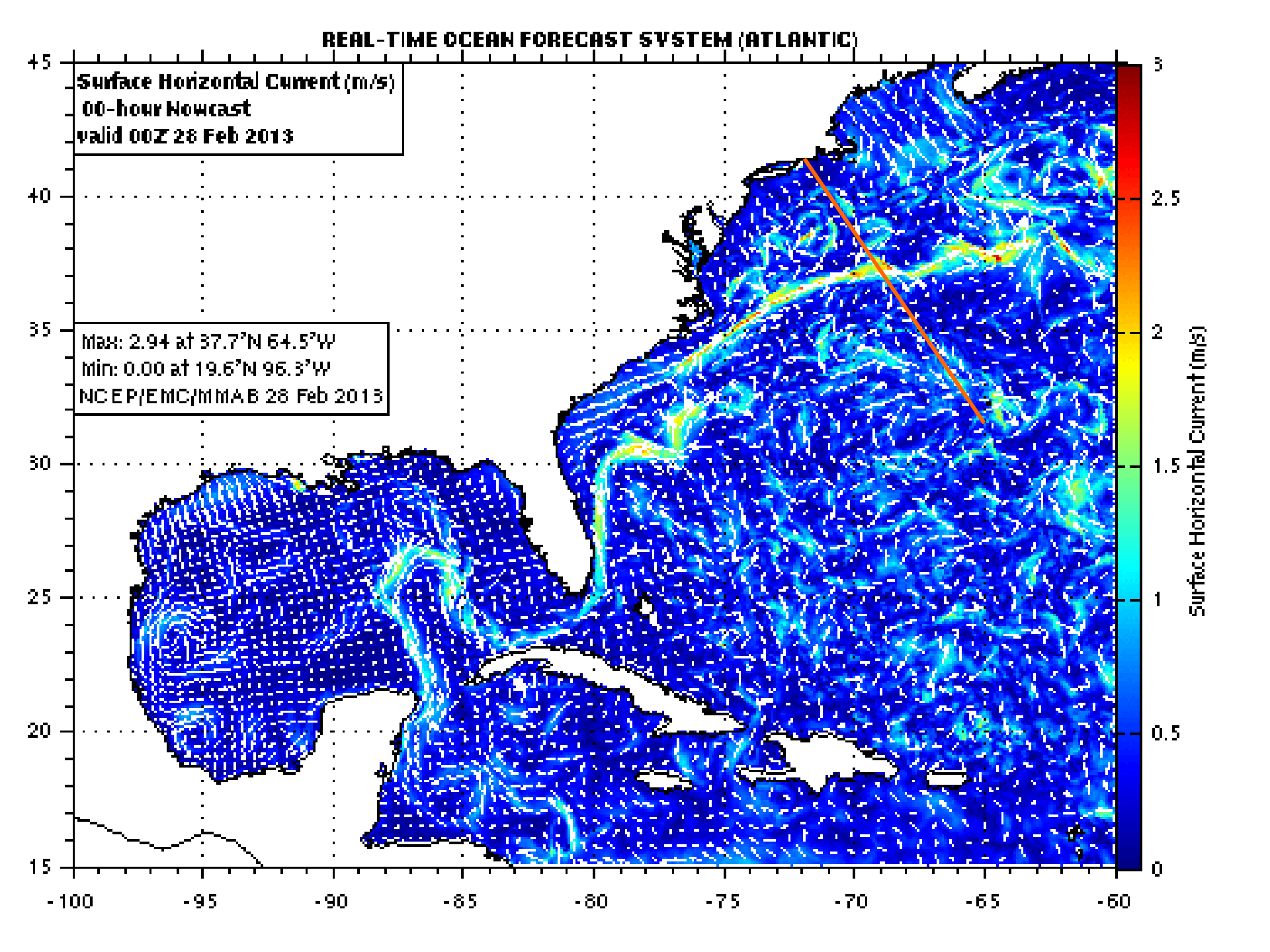
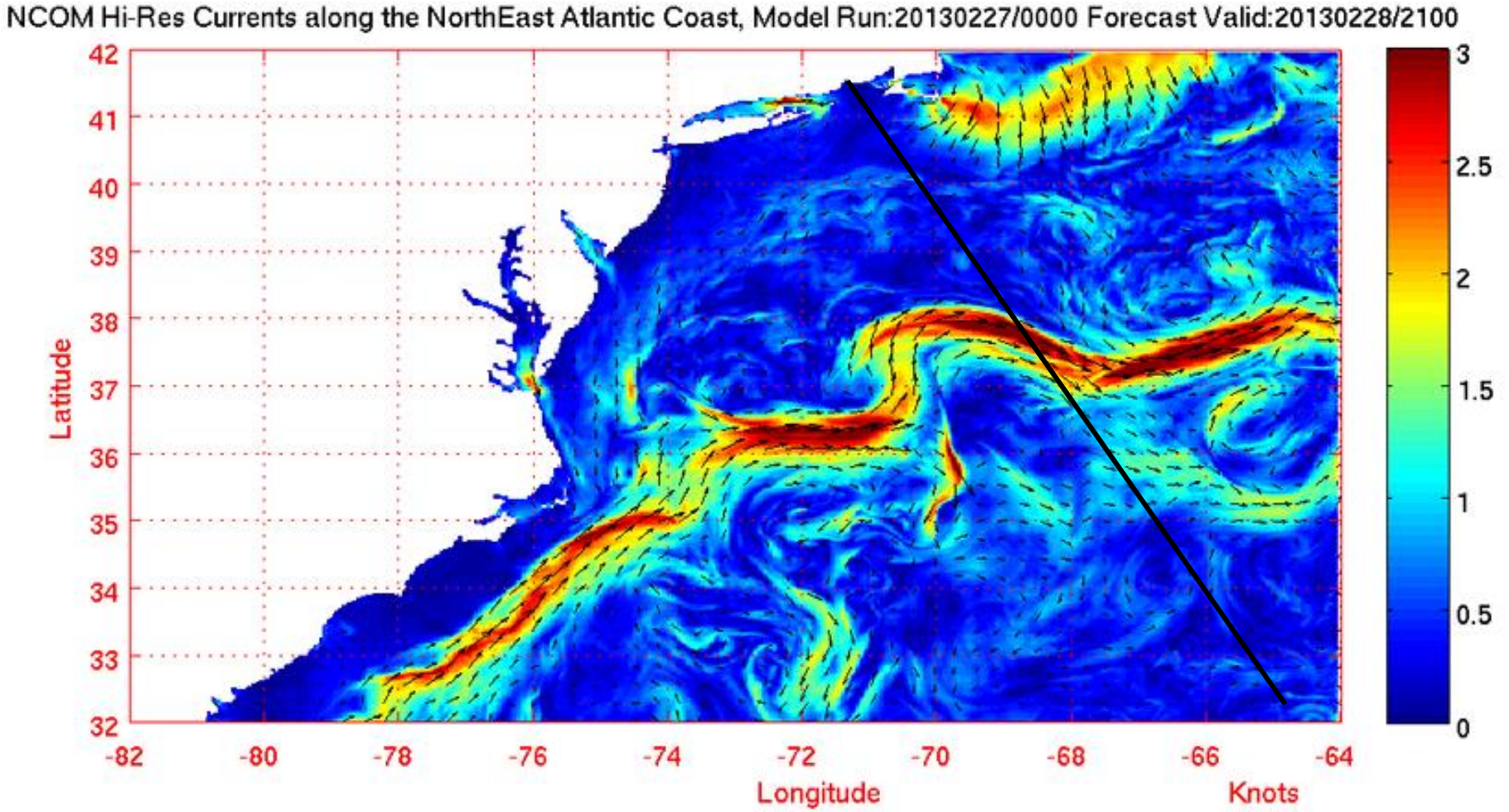

REAL-TIME OCEAN FORECAST SYSTEM (ATLANTIC)
Surface Horizontal Current (m/s)
00-hour Nowcast
valid 00Z 28 Feb 2013
Max: 2.94 at 37.7°N 64.5°W
Min: 0.00 at 19.6°N 96.3°W
NCEP/EMC/MMAB 28 Feb 2013
45
40
35
30
25
20
15
-100
-95
-90
-85
-80
-75
-70
-65
-60
3
2.5
2
1.5
1
0.5
0
Surface Horizontal Current (m/s)



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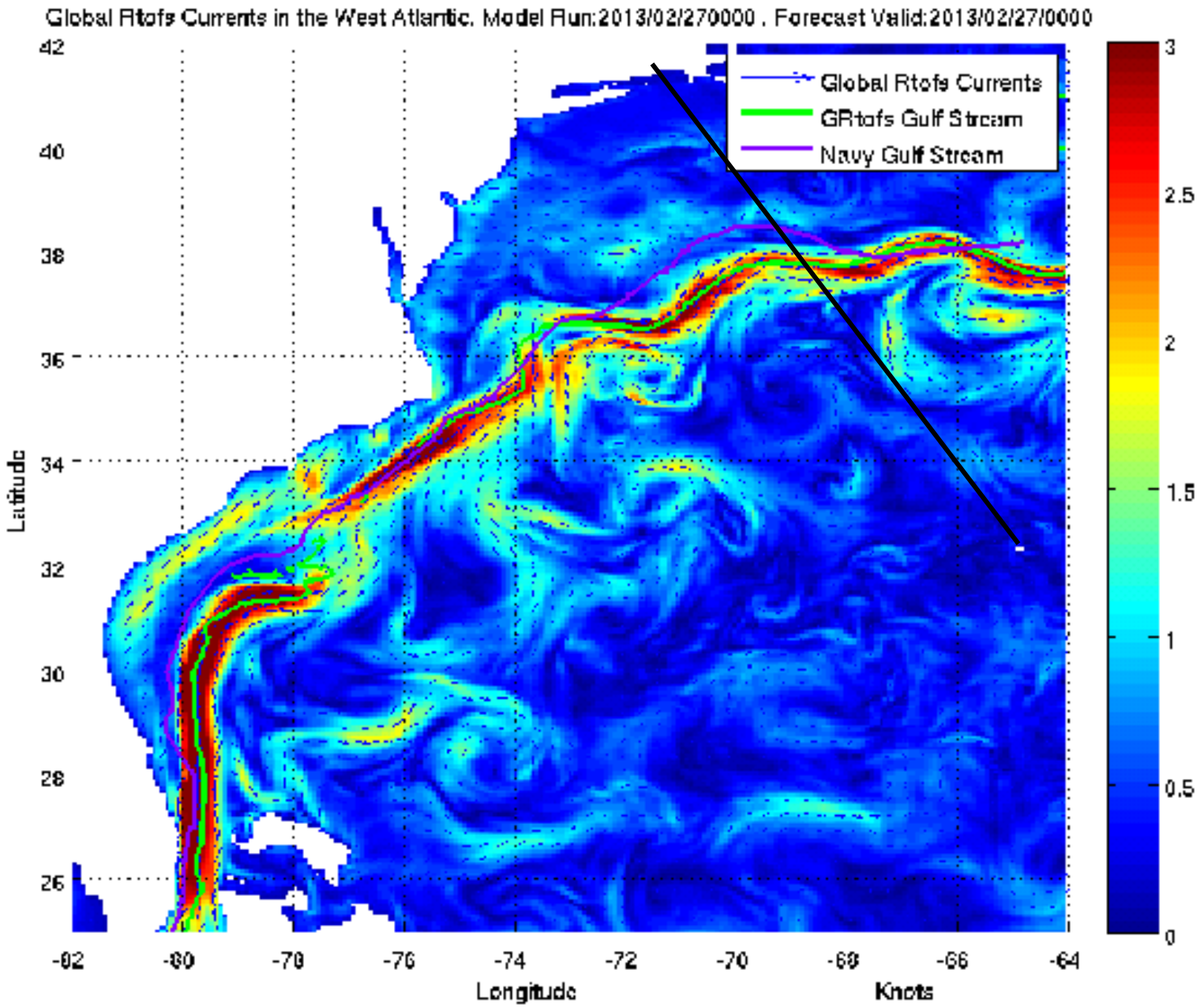

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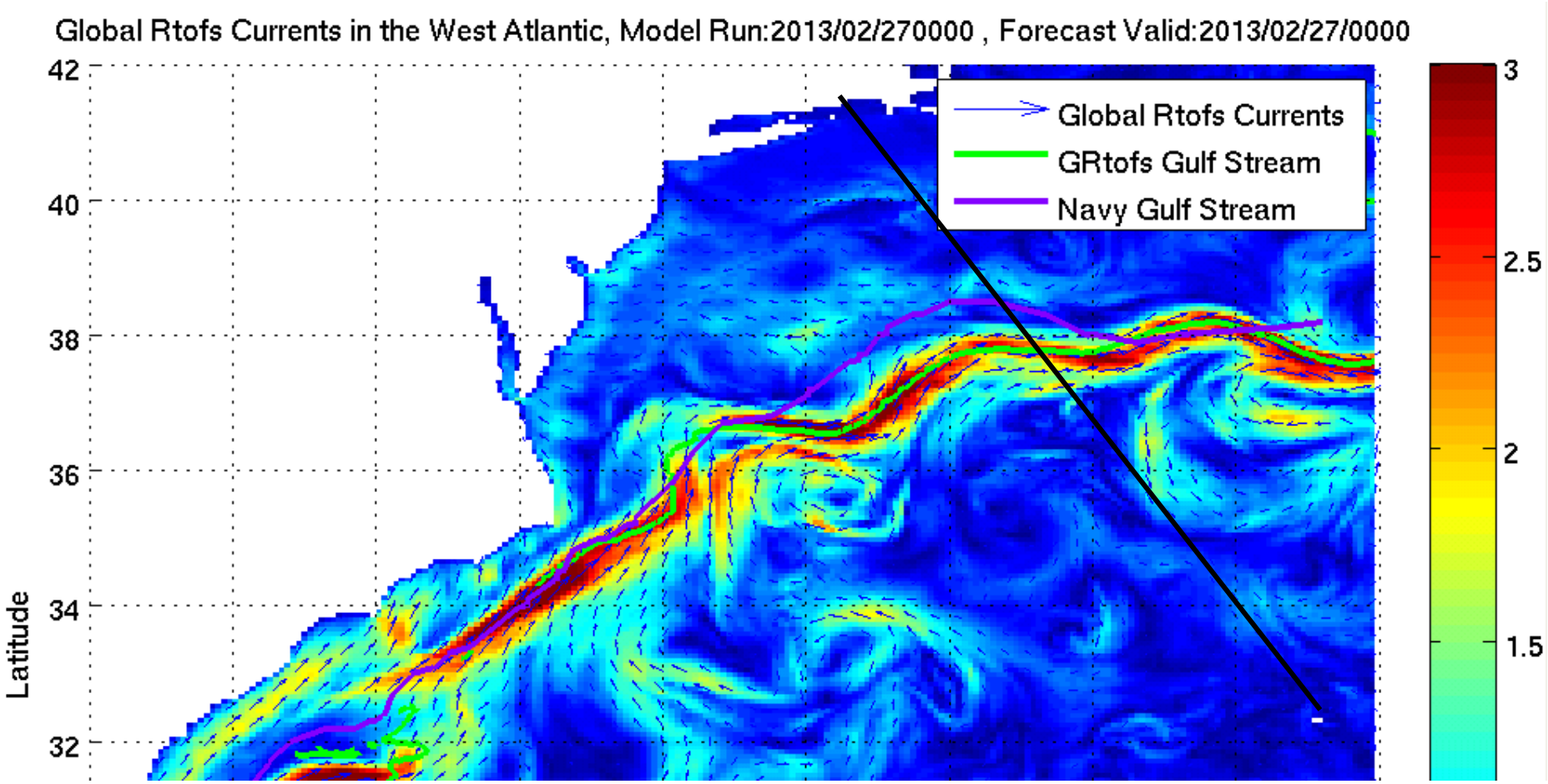

http://www.opc.ncep.noaa.gov/sst/images/gulfstream/GRtofsCurrWatlGS.png

GULF STREAM COMPARISON

1.** ***Experimental Product*** **

The Gulf Stream location in the Global Real Time Ocean Forecast System model (RTOFS) and in the Navy Coastal Ocean Model (NCOM) is compared to the Naval Oceanographic Office (NAVO) Gulf Stream analysis. The Gulf Stream north wall position for ocean models is estimated from the 12 degrees C isotherm at 400 meters. The NAVO Gulf Stream north wall is estimated by analysts using satellite AVHRR SST, ship and buoy data. The NAVO Gulf Stream Analysis can be found at the Naval Oceanography Portal:

http://ecowatch.ncddc.noaa.gov/JAG/Navy/data/satellite_analysis/gsnofa.gif?id=3110

http://www.opc.ncep.noaa.gov/sst/GulfStream_compare.shtml

Summary

- North Atlantic winds drive a clockwise circulation in which the Gulf Stream forms the western boundary

- The Gulf Stream is a prominent thermal boundary, narrow in width, variable in space and time

- The main body of the Stream in the vicinity of the Newport-Bermuda Rhumb Line is often accompanied by a number of rings shed north and south of it

- The development of optimum strategies for crossing the Gulf Stream requires study over several months incorporating direct observations and models