



Gulf Stream Note #4

June 16, 2021

**The Gulf Stream near the Rhumb Line Newport to Bermuda
An Analysis of Conditions**

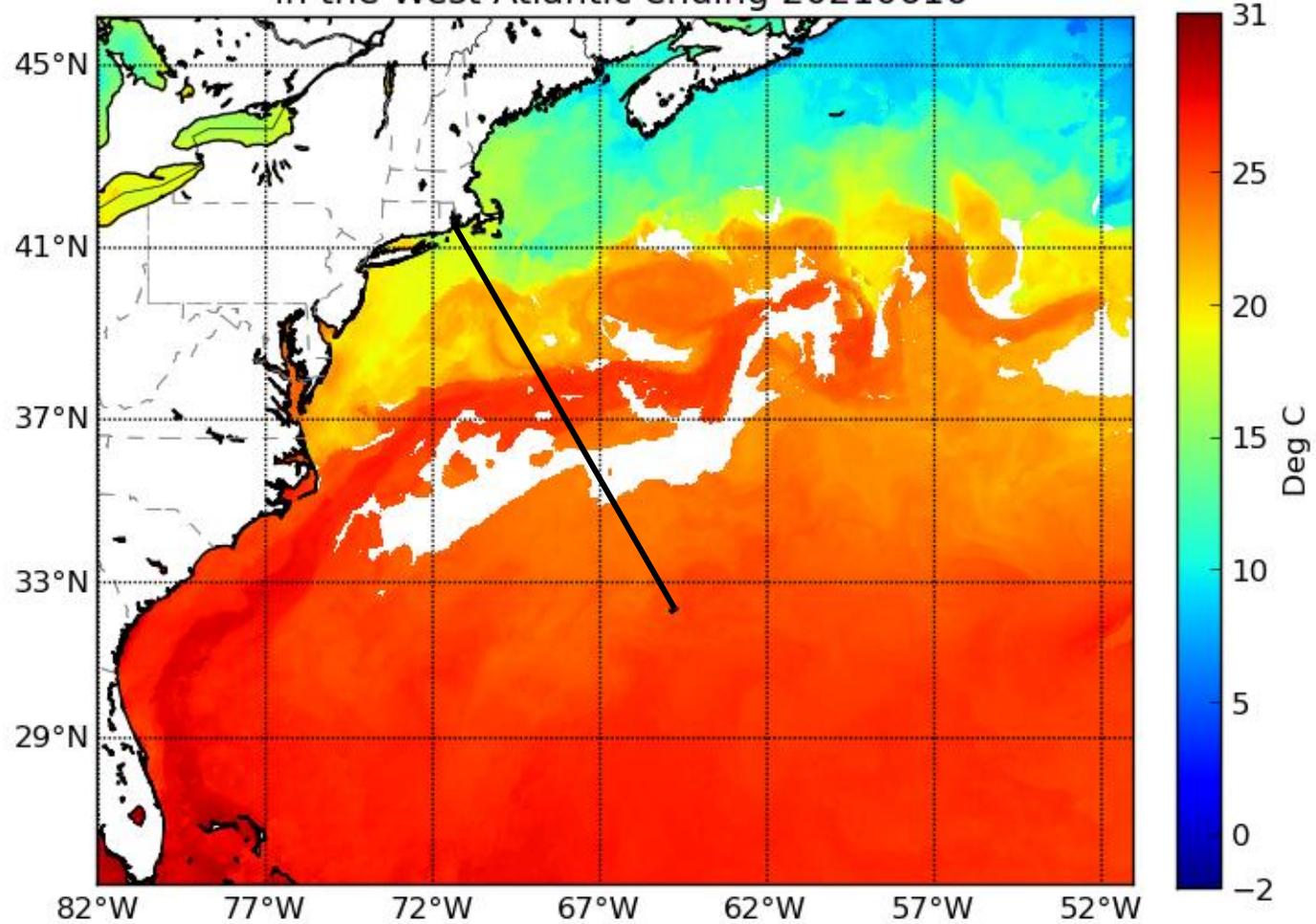
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At the risk of sounding like a broken record, I must again say that “clouds continue to limit satellite IR views of the Gulf Stream and much of the Newport Bermuda course”. Our best view is provided by the 4 day composite provided by the Ocean Prediction Center (Fig.1). This shows only minor changes in Gulf Stream structure and position since the start of the Bermuda 1-2 on 5 June. The main body of the Stream crosses the rhumb line at a near right angle in the vicinity of 38° N. To the north, approaching the continental shelf parcels of warmer water remain in place and show some consolidation/organization resulting in a clockwise rotating flow with maximum speeds of approximately 1 kt. The composite image provides no indication of the flow regime to the south of the main body of the Stream.

Examination of the altimetry based model results for 16 June (Fig.2) also show little change in the character of the flow field between Bermuda and Newport relative to that observed on 5 June and experienced during the Race to Bermuda. A pair of clockwise rotating features result in southeast to northwest flows along much of the rhumb line from Bermuda to near 37° N where a counterclockwise flow associated with a cold core ring is established. This ring looks to have moved slightly west over the past two weeks but close contact with the main body of the Stream has slowed and continues to slow normal progress.

Beyond the ring and through the main body of the Stream, the model shows the clockwise rotation associated the warm water patch. Overall, the stability of the sea surface temperature patterns over the past two weeks favor little change over the next seven days.

GOES SST 4 Day Most Recent Composite
in the West Atlantic ending 20210616



**Figure 1 Four Day Composite Image – Northwest Atlantic Ocean
June 16, 2021**

Black Line Shows Newport Bermuda Rhumb Line

https://ocean.weather.gov/Loops/ocean_guidance.php?model=GOES&area=MidAtl&plot=sstrec&day=0&loop=1

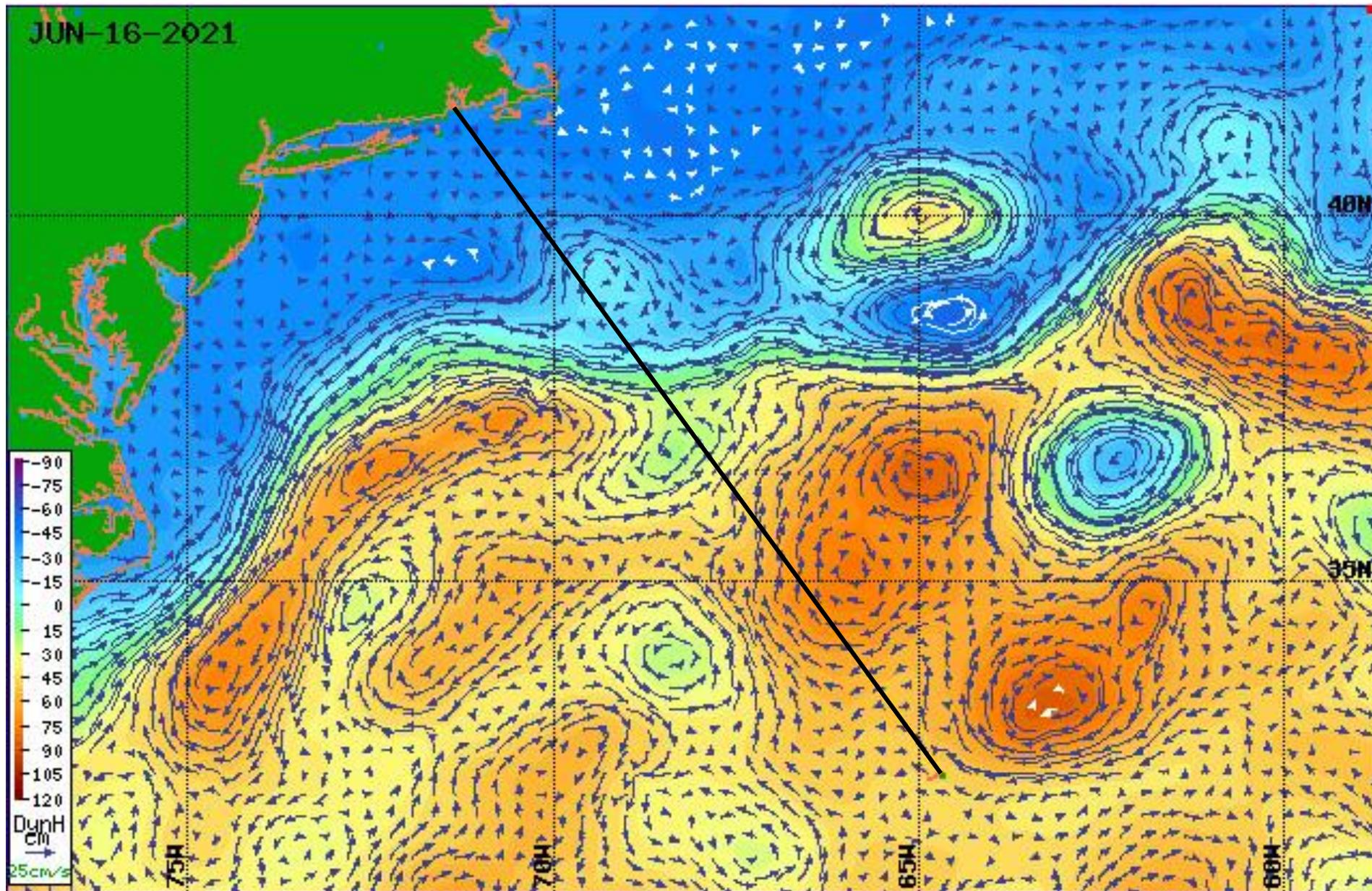


Figure 2 Satellite Altimetry Derived Surface Currents- NW Atlantic Region- June 16, 2021

Black Line shows Newport-Bermuda Rhumb Line

<https://cwcarribbean.aoml.noaa.gov/CURRENTS/index.html>