

Gulf Stream and Weather Information on the WEB

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****National Weather Service <https://www.weather.gov/>

or

<https://ocean.weather.gov/>

The National Weather Service site and the Ocean Prediction Center site both with an abundance of products including marine forecasts and satellite imagery. Valuable resources for the study of weather. Look particularly at the NWS Ocean Prediction Center and their Probabilistic Guidance. **These sites must be studied !**

Environmental Modeling Center <https://www.emc.ncep.noaa.gov/emc.php>

The National Weather Service's Environmental Modeling Center and home to the Global Real Time Ocean Forecast System model (RTOFS) [Global RTOFS High Resolution Oceanic Model \(weather.gov\)](#)

Since many use this model in routing it's useful to compare model results to direct satellite observations to develop confidence in model simulations. This model provides 1/12 degree resolution and is the result of collaboration between NOAA and the U.S. Navy Research Laboratory and others. Also see:

https://ocean.weather.gov/Loops/ocean_guidance.php?model=NCOM&area=Useast&plot=current&day=1&loop=0

****Rutgers University Coastal Ocean Observation Lab <http://rucool.marine.rutgers.edu>

A site maintained by Rutgers University which includes a variety of satellite data some specific to the Gulf Stream. Entry to the site may be confusing at first. From the main menu select Data to find Satellites and then Satellite Data and select the region of interest. The products now are all derived from the GOES 16 satellite providing lower Stream detail than available at this site in the past when cloud corrections were added.

USN Ocean Feature Analysis https://www.ncei.noaa.gov/jag/navy/data/satellite_analysis/gsnofa.gif?id=768

This is the current site for the U.S. Navy ocean features/ Gulf Stream analysis. The accuracy of this analysis must be carefully evaluated by comparison with satellite imagery and altimetry . This site has been irregularly updated lately and for a time was not available.. The colored version can be found at

https://www.ncei.noaa.gov/jag/navy/data/satellite_analysis/gsncofa.gif?id=75957

NASA Satellite Images [SPoRT Viewer](#)

Seven day composite images of SST. Although the 7 day averaging obscures some features. useful product for the study of rates of Gulf Stream evolution and position change.

**** [Copernicus Marine Service](#) [Copernicus Marine Data Store](#) The home of the Mercator-Ocean International (MOI) Daily Global Physical Bulletin. Use requires patience. Start with [Global Ocean Physics Analysis and Forecast](#) tab. View Product and on the menu that comes up enter Sea Water Velocity. Click next on background chart and use scroll wheel on your mouse to zoom in. The bottom bar (axis) allows date and time to be selected. This provides the results of their 1/12° (horizontal resolution) model (see - [Global Ocean Physics Analysis and Forecast](#)) detailing a number of parameters including sea surface temperature and currents. Comparisons of this model with observations and both the NOAA altimetry based model and the NOAA GROFS results show it to be very accurate.

**** [Near Real Time Altimeter - NOAA/AOML](#) <http://tinyurl.com/y93ku8m8>

.This is a dynamic link that can be used to obtain a plot of the surface vectors at a selected location you specify by entering Lat and Lon coordinates and the appropriate year, month and day in the address line.. These plot are the result of using satellite altimetry observations to model currents. (Requires JAVA on your computer). Although application requires care, these model results allow analysis of Gulf Stream conditions when cloud cover limits direct observation of SST. These model data also provide the best indication of conditions in the Sargasso Sea from the Stream to Bermuda. This model result and those above (GROFS etc) require study to assess navigational utility. Comparison with surface thermal data (e.g. Rutgers above) and any direct observations of surface currents is recommended. This product and the utility of the numerous parameters (e.g. height contour, currents, vel field, bathy etc.) warrants careful study and has proven to be quite accurate over recent years

[Bermuda Weather](#) <http://www.weather.bm>

Bermuda Weather's site. Provides continuing weather analyses and forecasts for the immediate vicinity of the island. It's often interesting to compare these observations to conditions indicated by the larger area weather maps such as the NWS weatherfax charts of the northwest Atlantic. Also, see Yacht Charts under Marine Forecast as well as tidal data for Bermuda.

[Environment Canada](#) https://weather.gc.ca/marine/index_e.html

The source for Canadian weather and sea state analyses and forecasts. . See https://weather.gc.ca/model_forecast/wave_e.html for wave analyses.

[ASCAT- Advanced Scatterometer Observations of Ocean Surface Winds](#)

<https://manati.star.nesdis.noaa.gov/datasets/ASCATData.php> These data allow direct confirmation of wind speeds and directions provided by the Surface Analyses from the National Weather Service and the variety of GRIB model data. The scatterometer data are often particularly useful in the vicinity of the Gulf Stream. This system represents the alternative to our QuikScat which is no longer operational.

[NOAA Tides and Currents](http://tidesandcurrents.noaa.gov/) - <http://tidesandcurrents.noaa.gov/>

A listing of tidal elevations and tidal currents at a number of stations throughout the U.S. Particularly useful for coastal and nearshore passages

[NWS Archived Marine Weather Charts](https://www.ncei.noaa.gov/data/ncep-charts/access/)

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For those wishing to look at the conditions during previous races this provides an archive of the NWS data back to the 1950s.

**** *Designates sites of most value to the small boat navigator*