



(Figure and figure caption from Cassandra Alexander, Kyle Ehmann, and Dr. Vaillancourt)

A 3-day SST map from 05/04/2014-05/06/2014. The Gulf Stream is shown intruding over the Pioneer Array (black rectangle) and onto the edge of the continental shelf south of New England. Map from NOAA's Coast Watch East Coast Node and processed through CoastWatch Data Analysis Tool.

within those areas, including plant life as well as marine animal life. The team also intensely studies levels of CDOM's because the influxes of these variables have a particularly unique effect on both the climate in and out of the water.

At the front where these two bodies of water meet, cause changes in water current and movement which 'kicks up' a lot of sediment from the ocean floor and carries with it an influx of nutrients. This among the other variables that differentiate fronts from other parts of our oceans (normally) create an ideal environment for phytoplankton, algae, and other organisms that photosynthesize. Organisms such as these are crucial for life in the ocean as well as on land because they are a vital component of the food chain. Likewise, they help to regulate the ocean's temperature by absorbing heat energy; they absorb carbon dioxide to produce oxygen. Since all of these organisms

photosynthesize and therefore contain chlorophyll, the team can study levels of chlorophyll to deduce information about the presence/productivity of these organisms in the area.

All the variables discussed are reliant on each other. It is evident how pertinent this information is to studies of climate change, habitat destruction, and fishery productivity. The team wants to begin working more with the gliders in the Coastal Array. Gliders used in this study can travel up to 20 nautical miles per day and can move to different depths by controlling their buoyancy levels. Ehmann, Alexander, and Dr. Vaillancourt want to use the information from the gliders over a larger area of the shelf break and study it over several different time periods. The research team at Millersville University, run by Dr. Vaillancourt, still has a lot of work to do and a lot of goals they aim to reach in the future.