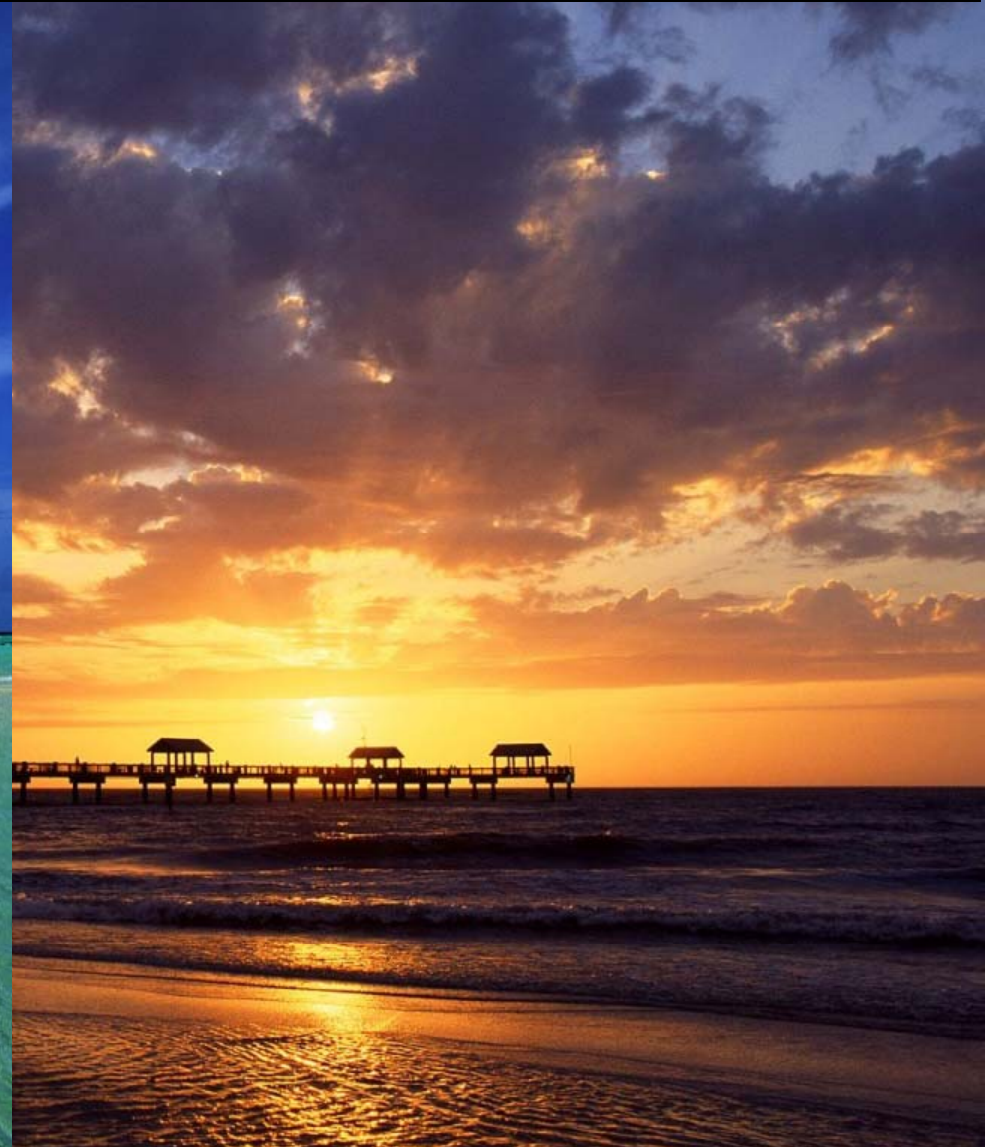




Scientists in the Schools

Part 1: The Great Gulf of Mexico &
Phenomenal Physical Oceanography

Meet the Gulf of Mexico: *Hello Beautiful!*



Facts About the Gulf:

- 9th largest body of water in the world.
- 2/3rds of freshwater from U.S. drains into the Gulf.
 - Contains 50% of all wetlands in U.S.
- Gulf fisheries are some of the most productive in the world. The Gulf supports a multi-billion \$ seafood industry.
- Averages 5,000 feet deep. Deepest point is 12,425 feet (Sigsbee Deep).
- Most of the oil and natural gas produced in U.S. is from the Gulf.

Deepwater Horizon Oil Spill

April 20 – July 15, 2010



**4.9 million
barrels of oil
spilled**

**Largest
accidental oil
spill in history**

**8 National Parks
& 400 marine
species
threatened**


**“Worst environmental disaster the U.S. has faced” -
Carol Browner, White House Energy Advisor**




Deep-C

CONSORTIUM

100+ scientists studying the deep sea to coastal areas in the northeastern Gulf of Mexico



GULF OF MEXICO
RESEARCH INITIATIVE



Deep-C Consortium Activities



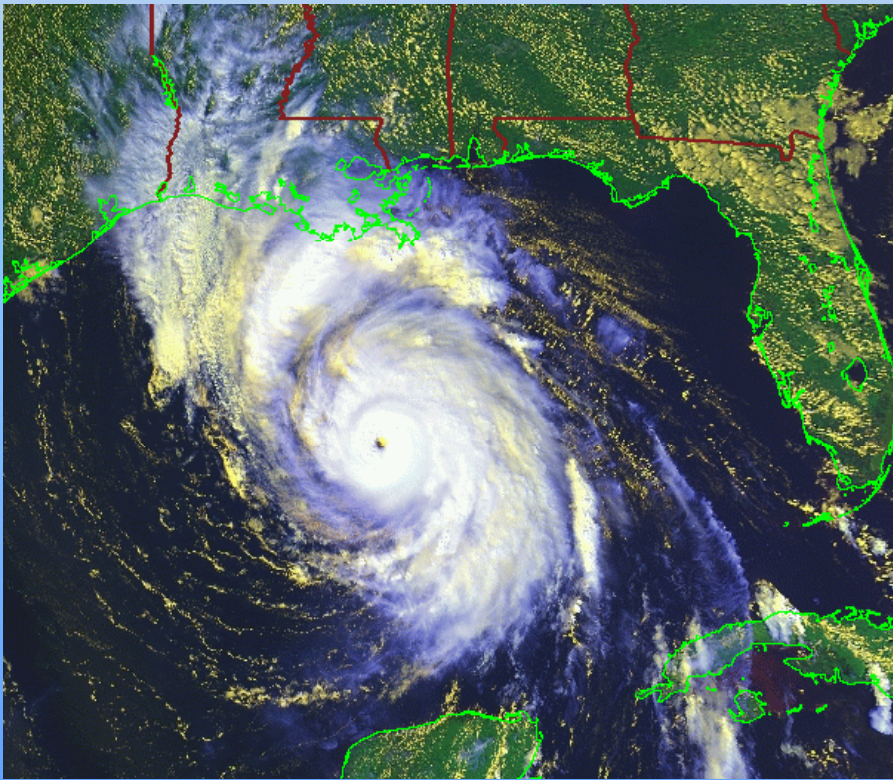
- Observe and analyze Loop Current movements
- Develop models of canyon flow
- Deploy moorings and floats to collect data
- Collecting samples of fishes
- And more!

Physical Oceanography

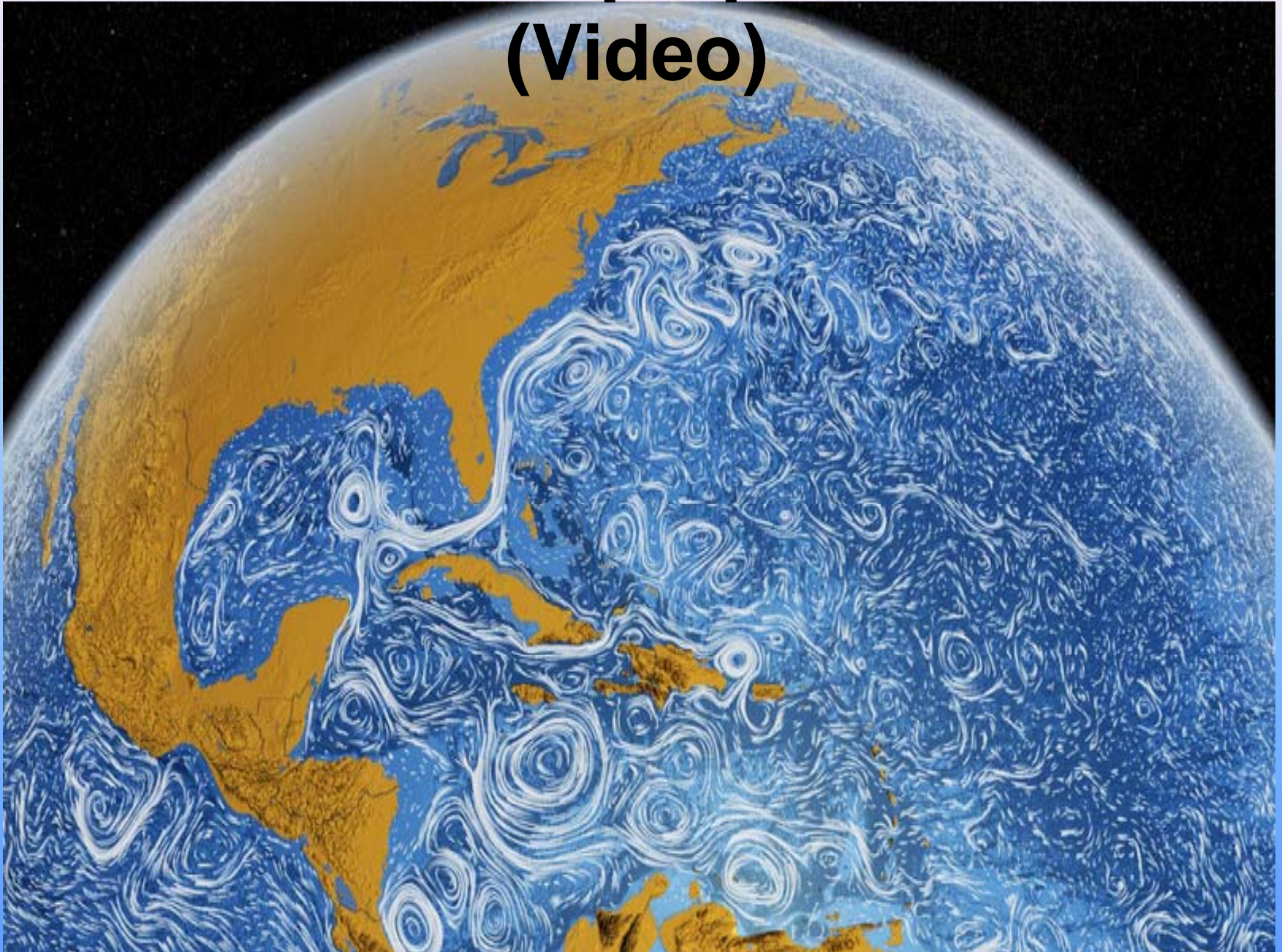
How water moves (seasonally and annually) and what impact do events such as storms have on water flow

Objective

To understand how ocean currents move things around



The ocean is in perpetual motion! (Video)



Tools for Collecting Data

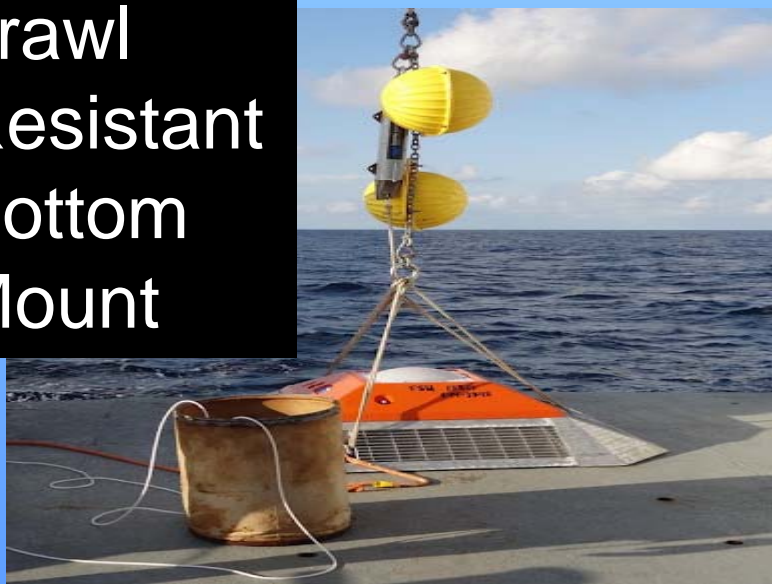
Buoys



Drifters/Floats



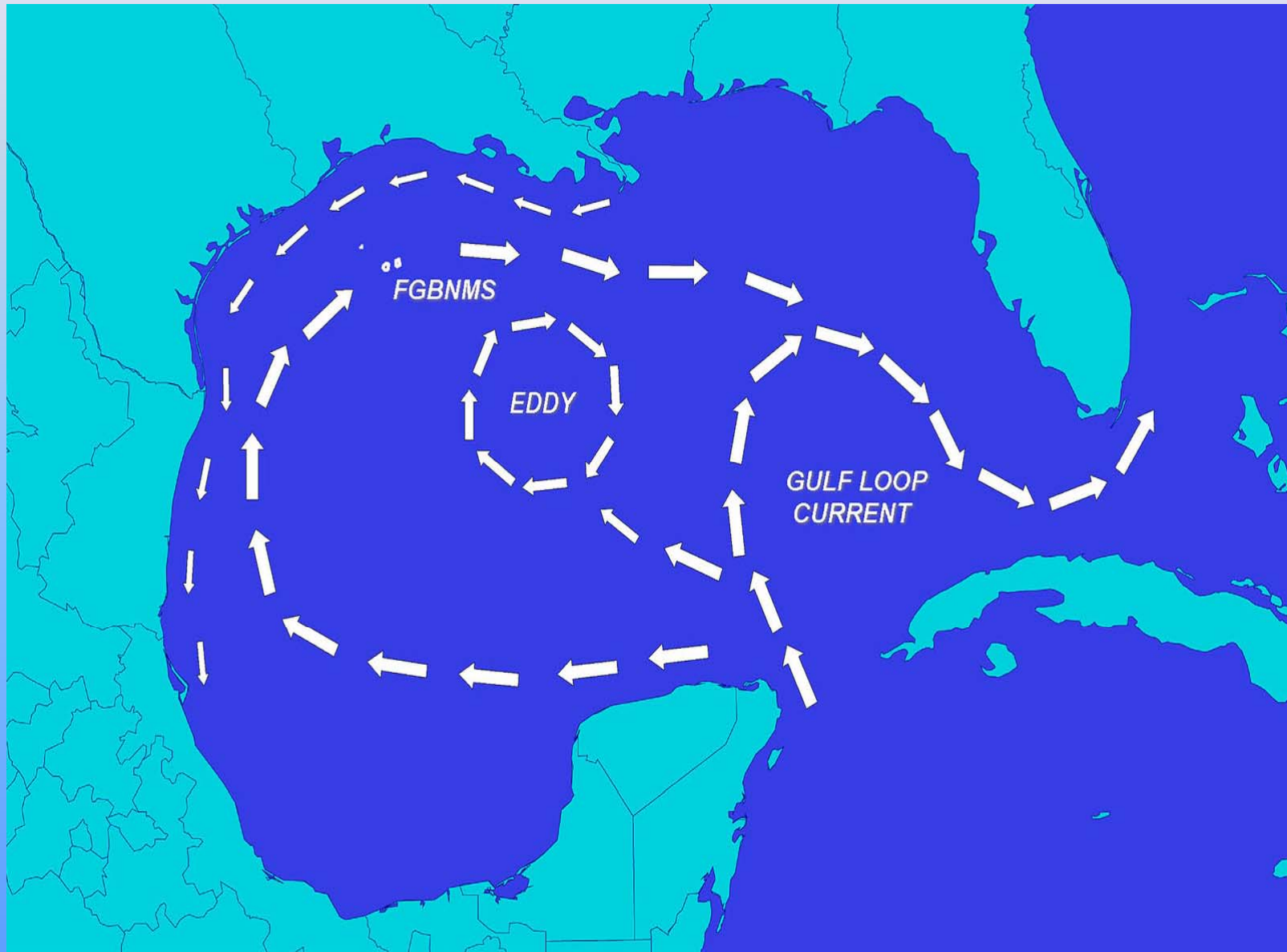
Trawl
Resistant
Bottom
Mount



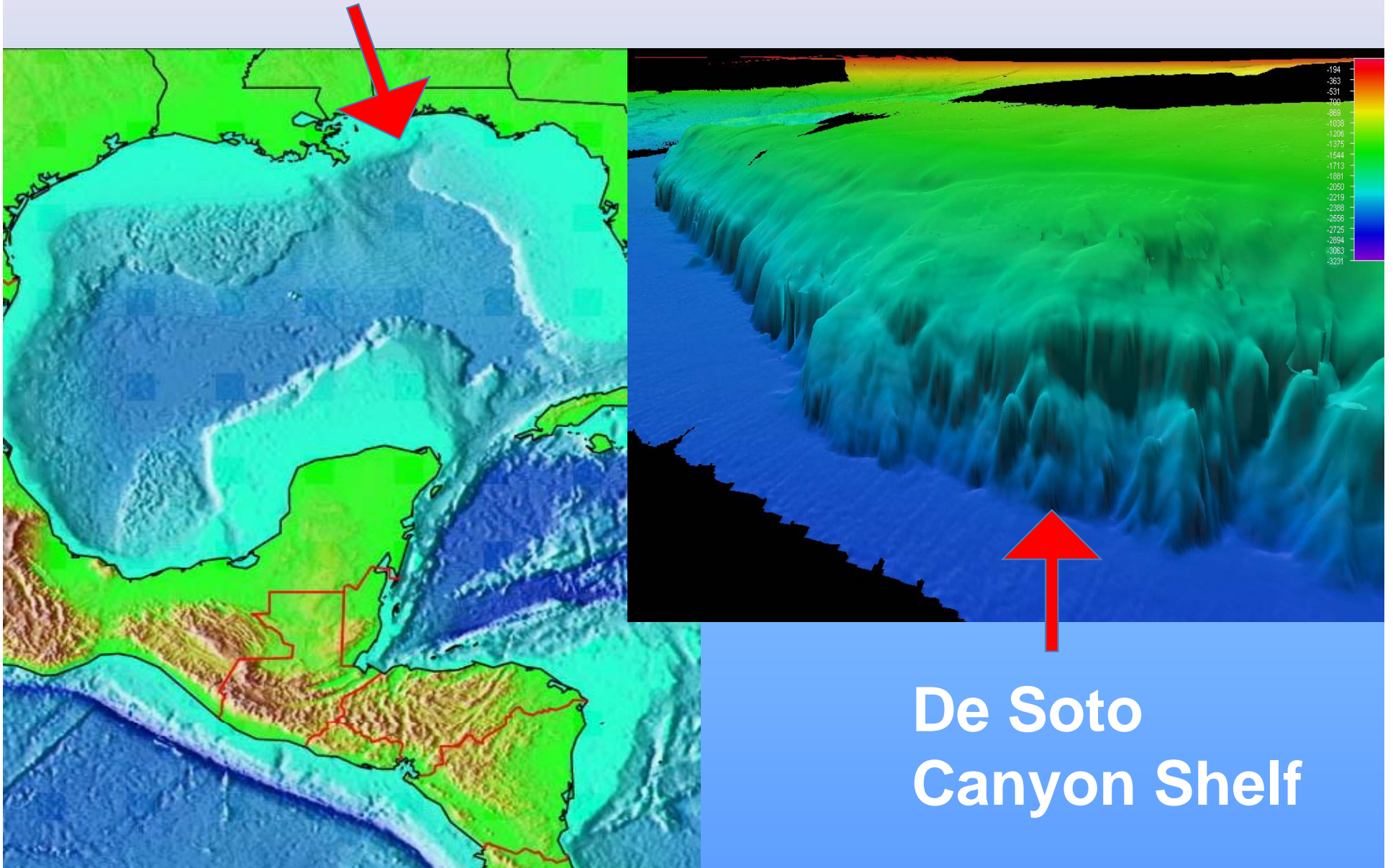
SailBuoy



The Loop Current: A Major Player

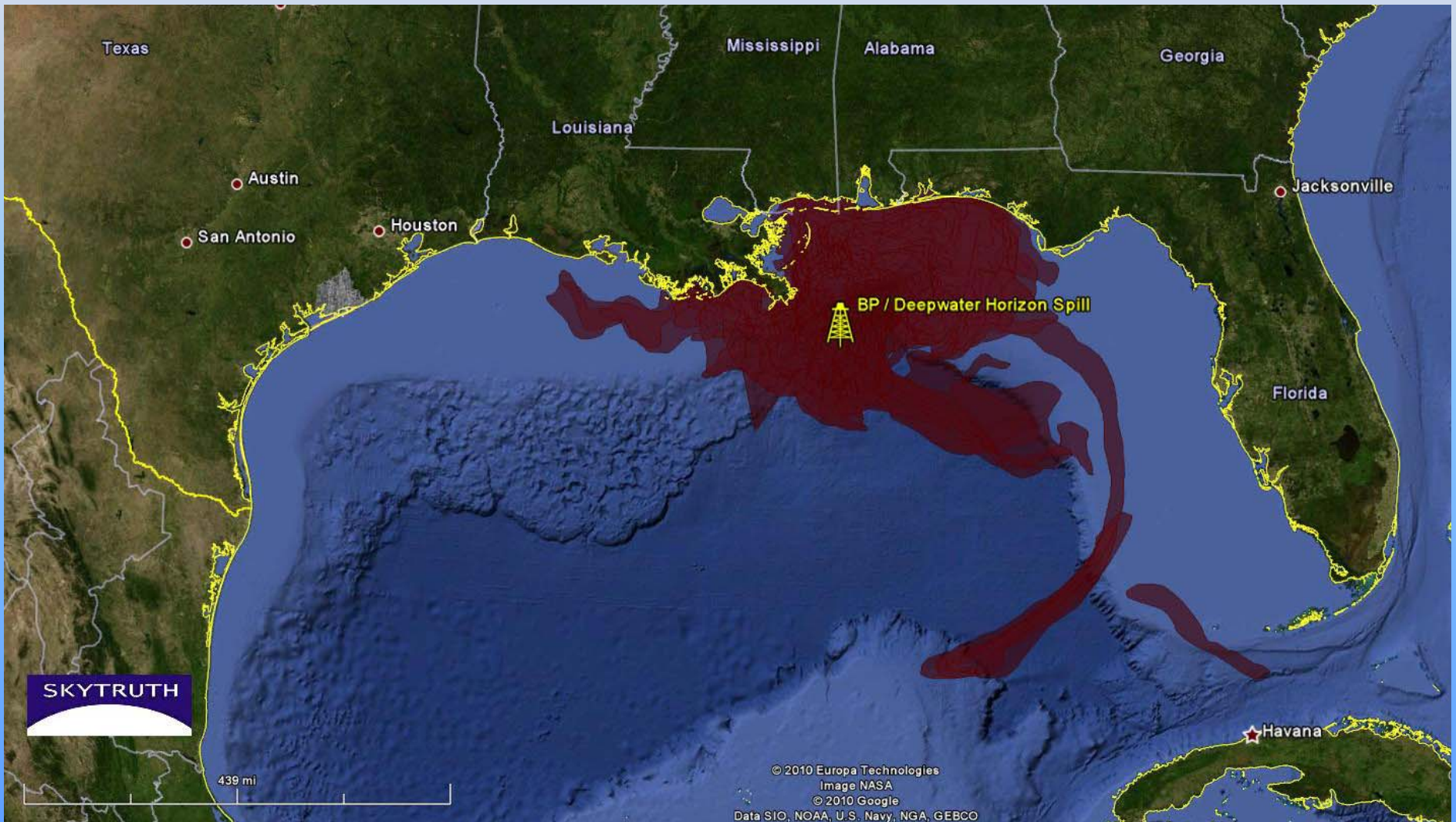


De Soto Canyon



Oil Spill Footprint (April-July)

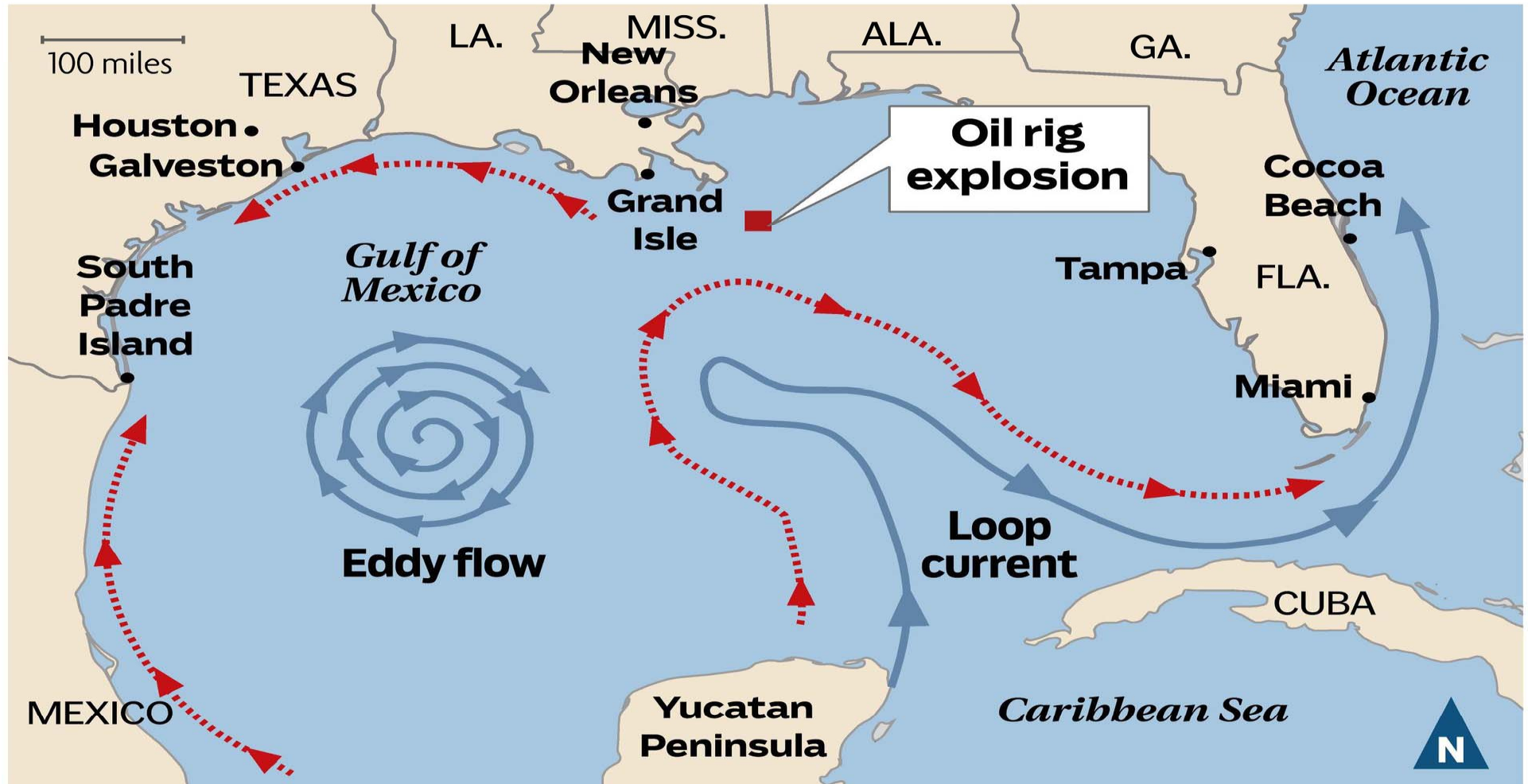
68,000 square miles of ocean



SPILL'S EFFECT ON FLORIDA

It was unclear how the oil rig explosion off Louisiana's coast might affect the beaches on Florida's west coast. In the past, though, experts have pointed out that currents would carry spilled oil toward the Keys.

.....▶ **Currents**▶ **Loop Currents**



Tribune graphic; Sources: Los Angeles Times, Texas A&M University, University of Miami, www.roffs.com

There are 50,000 wells & about 43,000 miles of pipeline in the Gulf (shown in red)



Let's Make An Ocean!

Keywords: Salinity, Temperature, Density

