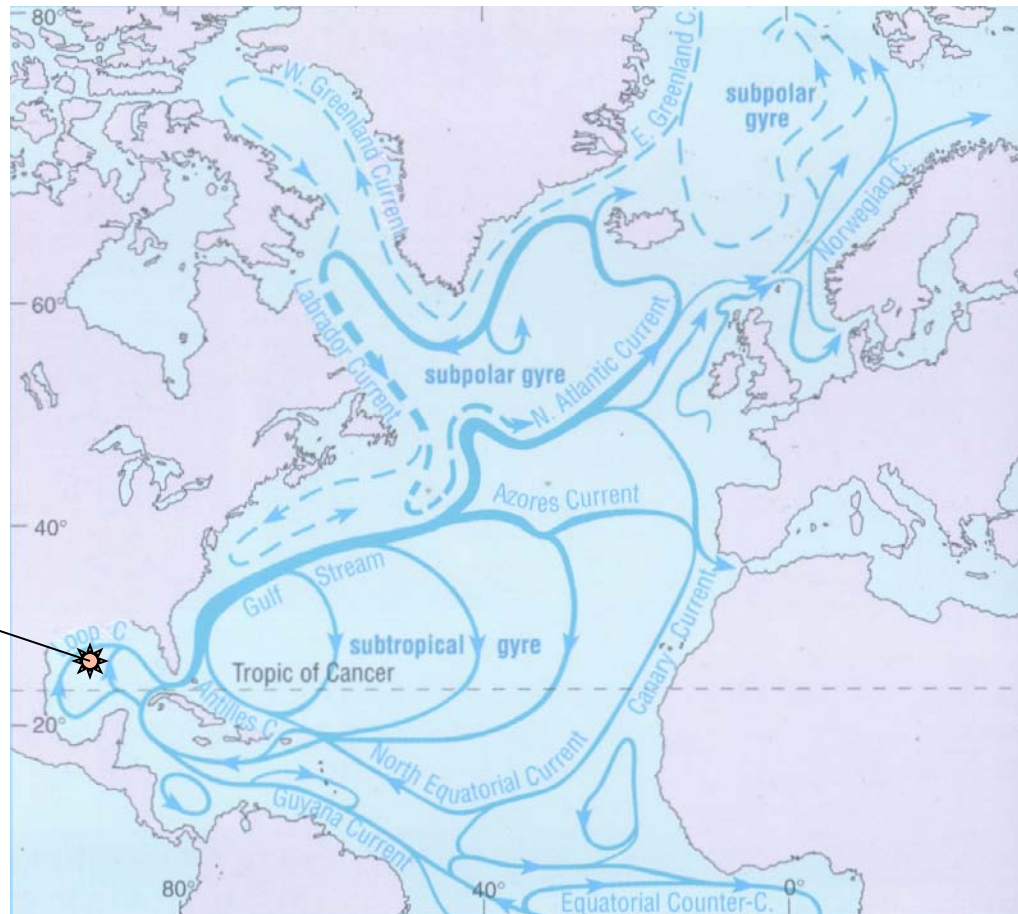


# Physical Oceanography of the Straits of Florida and Oil Spills

Alex Soloviev  
Associate Professor  
Oceanographic Center  
Nova Southeastern University

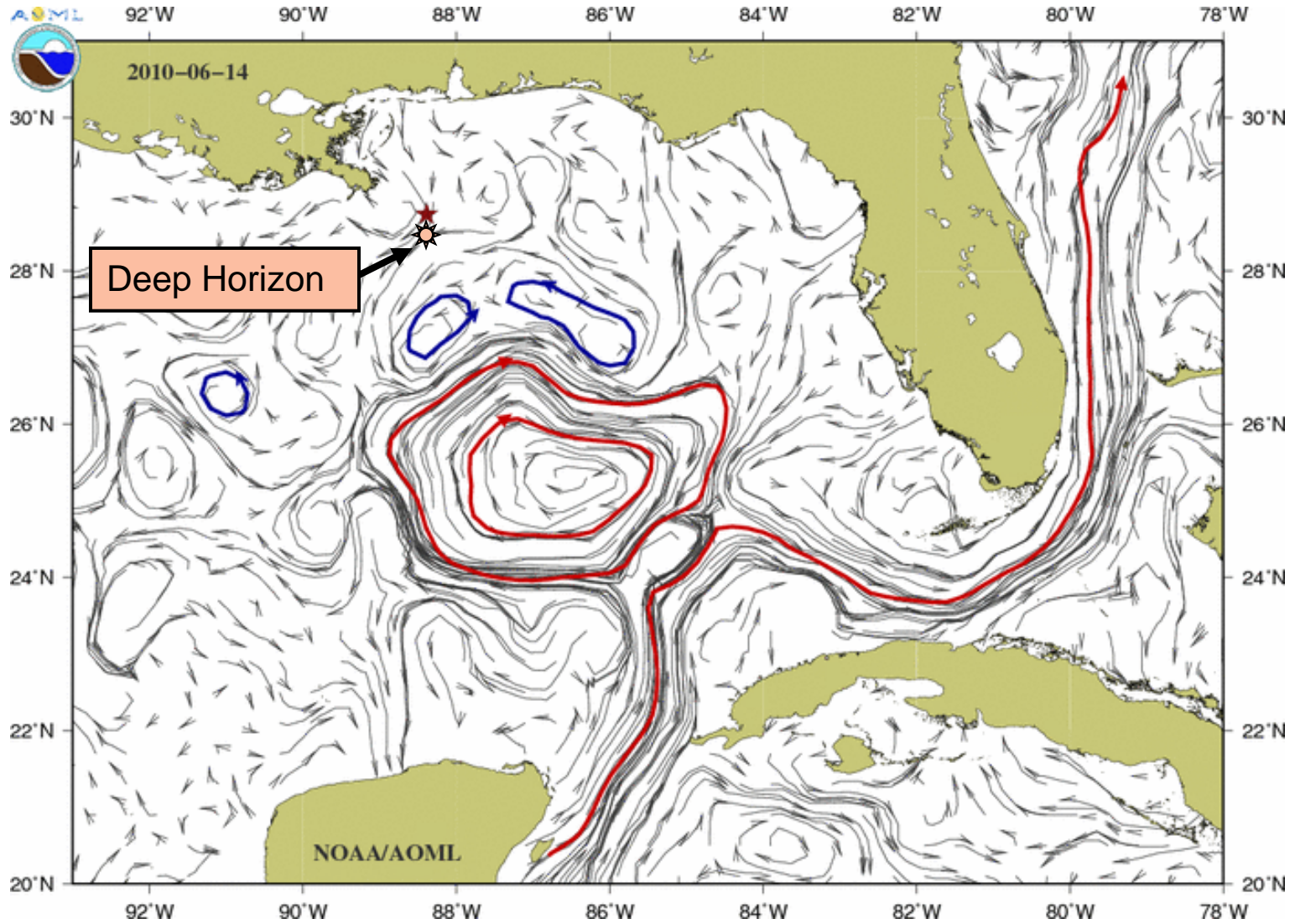
# The Atlantic Subtropical Gyre and the Western Boundary Current System



Deep  
Horizon

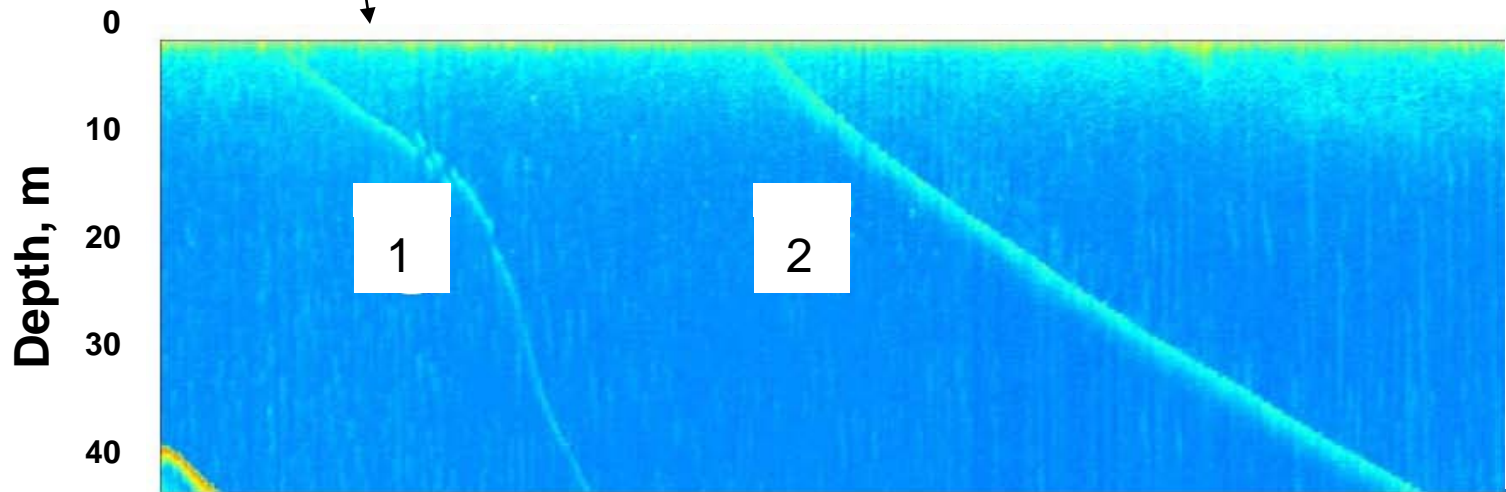
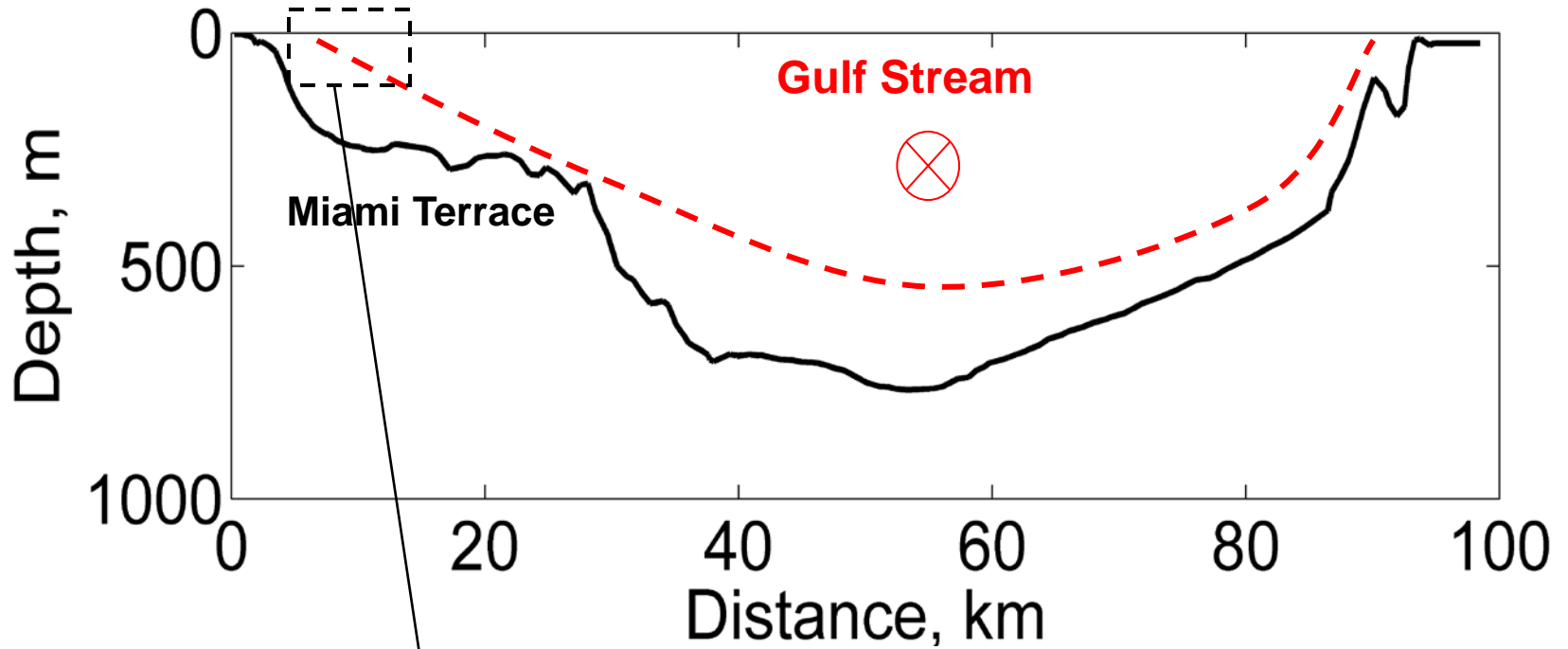
Due to dependence of the Earth rotation effects on latitude, the oceanic gyre takes an asymmetric shape including a strong and narrow western boundary current passing through the Gulf of Mexico as the Loop Current and then through the Straits of Florida as the Florida Current.

# Current Ocean Conditions in the Gulf of Mexico



Tracking the oil spill

# Florida Straits



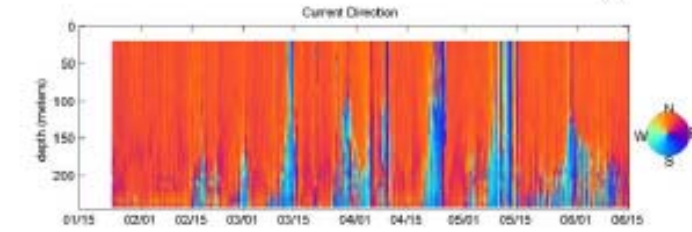
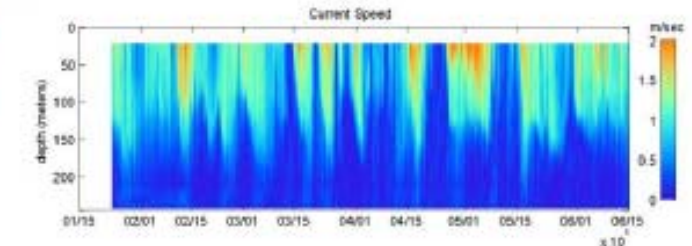
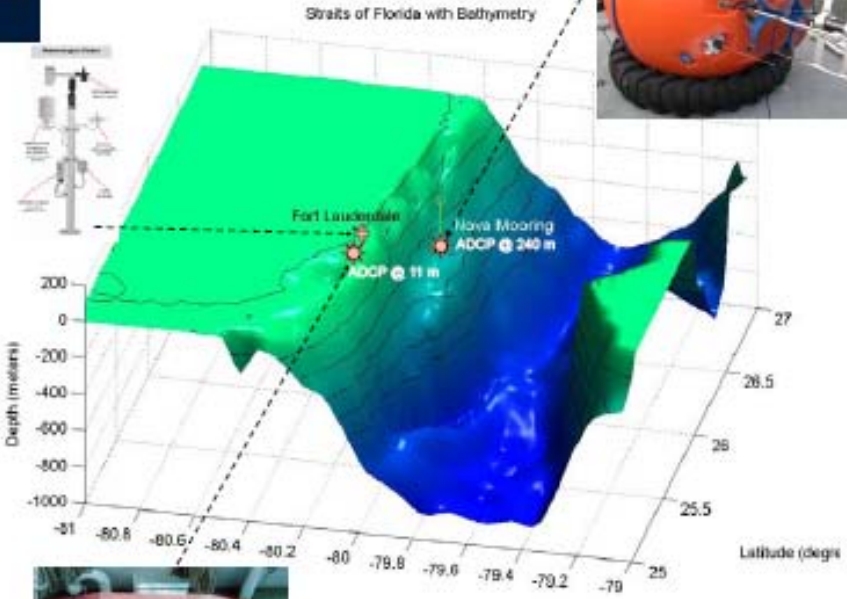
# NSUOC Ocean Observing System in the Straits of Florida



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Nova Southeastern University  
Oceanographic Center  
Dania Beach FL 33004



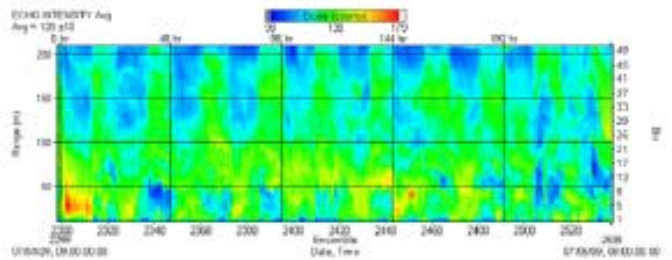
Stripmap, 3 m resolution. Credit to the German Aerospace Center (DLR).



Long Ranger  
Acoustic Doppler  
Current Profiler



Sentinel Acoustic  
Doppler Current  
Profiler



The background is a smooth blue gradient. On the left side, there is a bright, glowing area that resembles a sun or light source, with a vertical reflection of light extending downwards. The rest of the background is a deep, uniform blue with some subtle, wispy cloud-like patterns near the top.

Thank you!