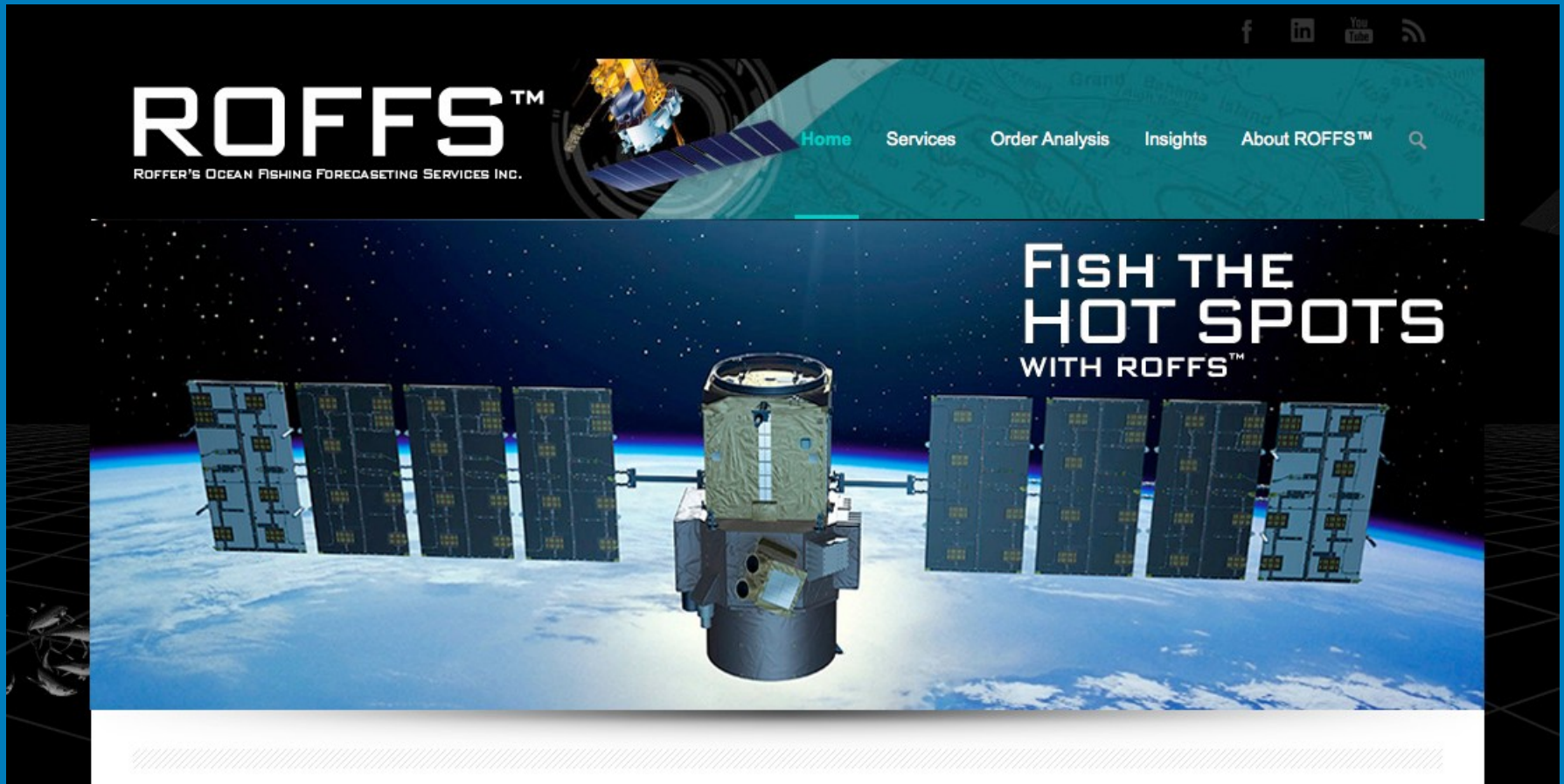


# Questions ?



[tunadoctor@me.com](mailto:tunadoctor@me.com)

321-723-5759

West Melbourne, FL

[www.roffs.com](http://www.roffs.com)

# Other Items Of Interest

- Understanding ecosystem dynamics
  - Fisheries Management
  - Satellite and In-Situ
- Finding Sargassum

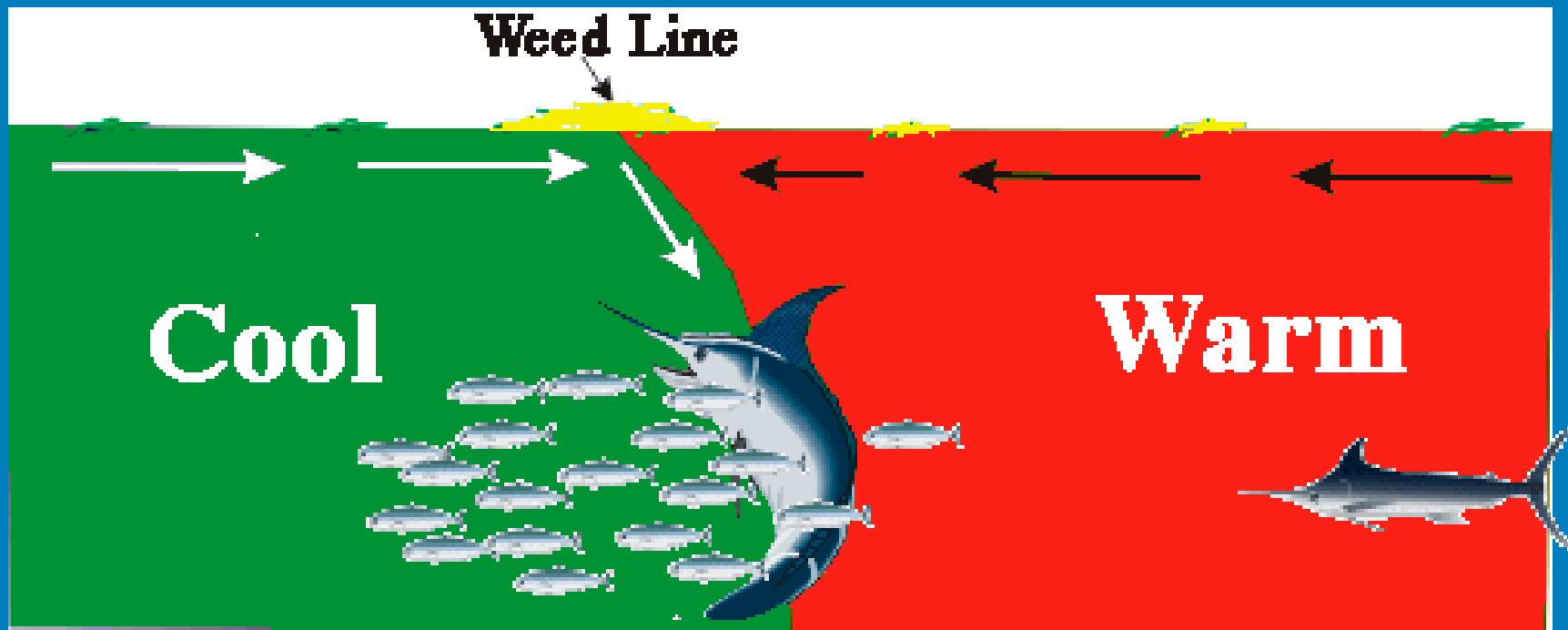
## Integrated Products



# Ocean Fronts

## Water Mass Boundaries

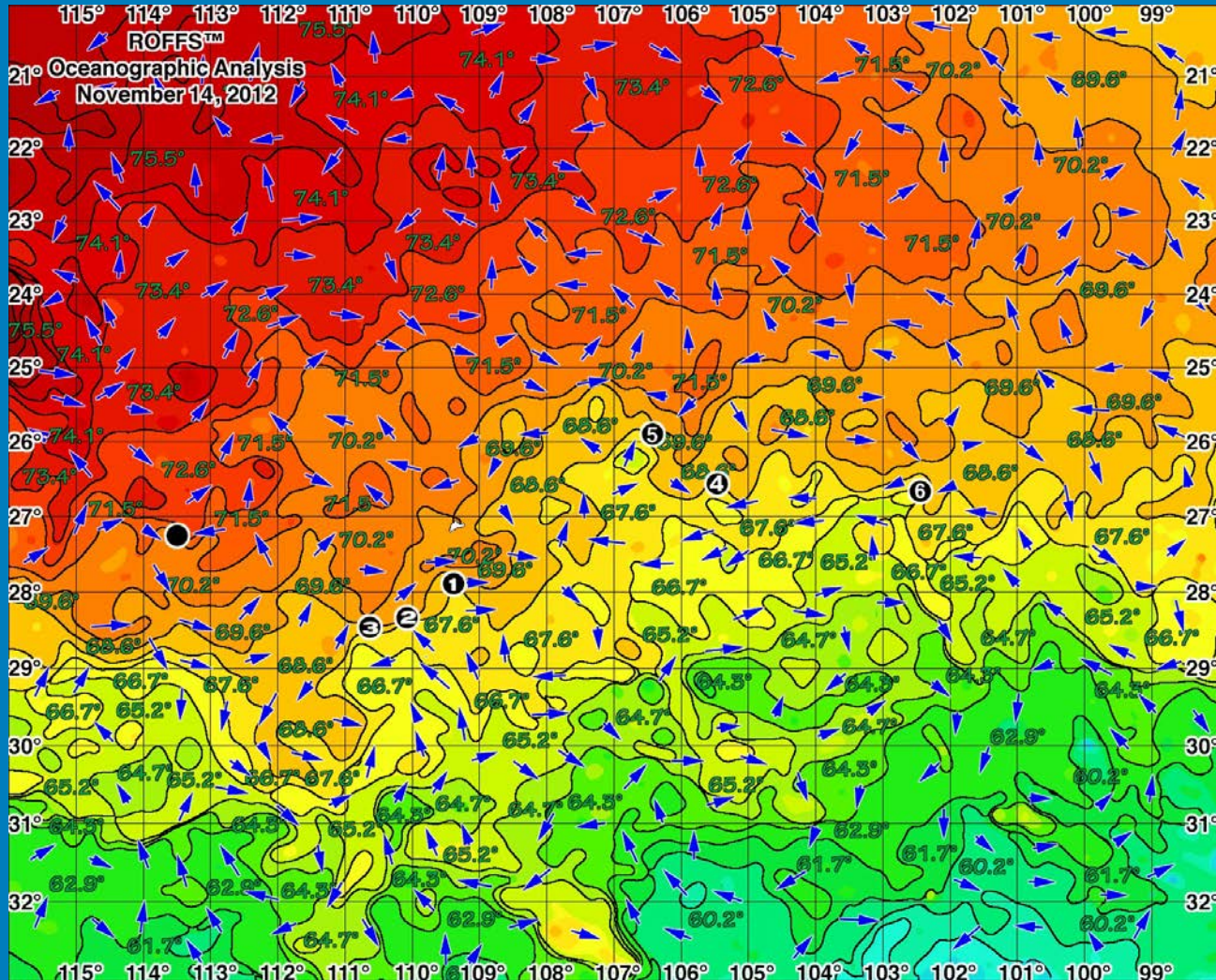
Density Difference & Mixing



**PERSISTENT CONVERGENCE**



# Fisheries Enforcement Using Fishing Forecasting Analyses



➤ **Easter Island November 14, 2012**

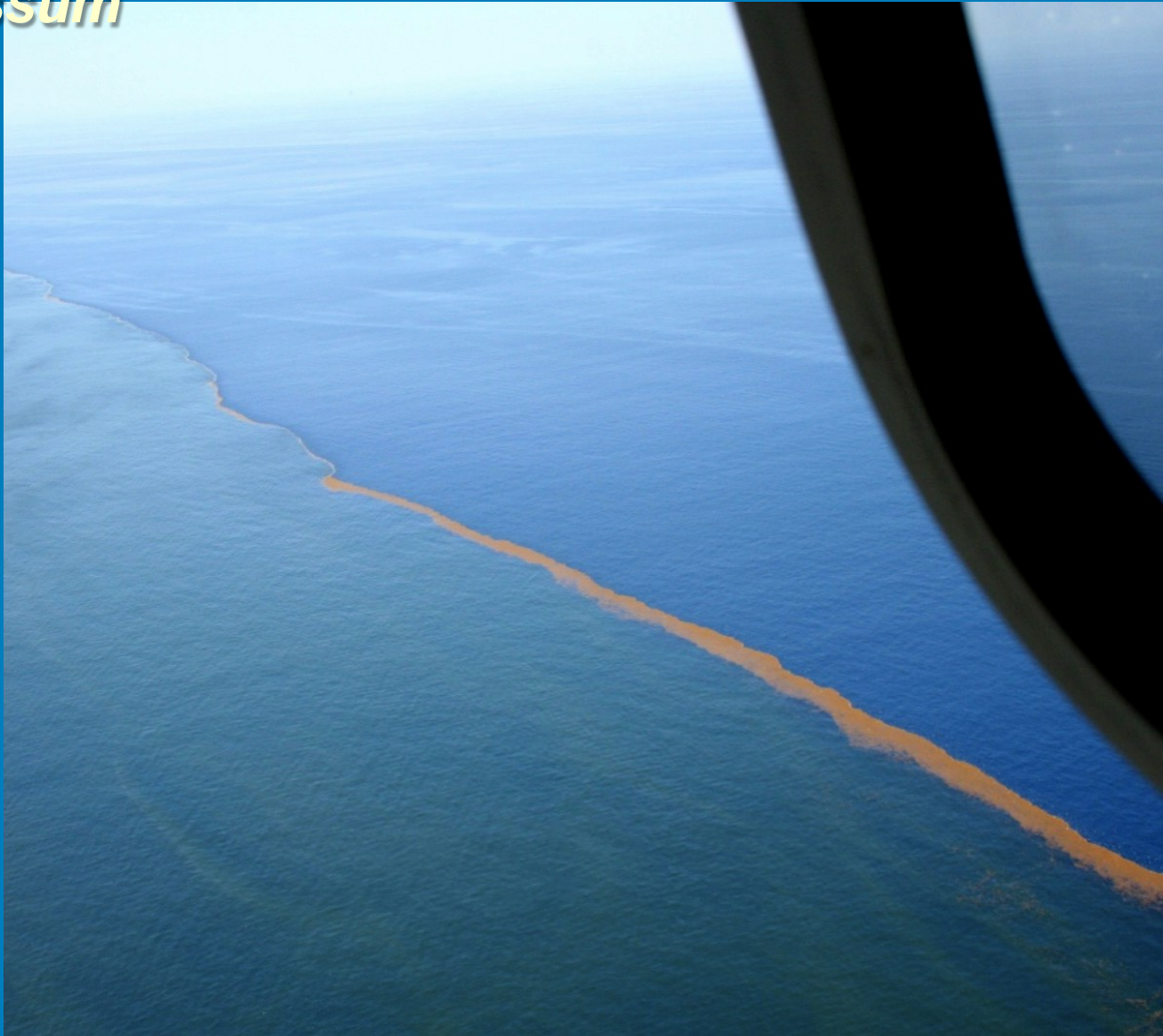


# Sargassum: A Major Issue



© 2011 Richard Roach

# Northern Gulf of Mexico frontal boundary with pelagic *Sargassum*





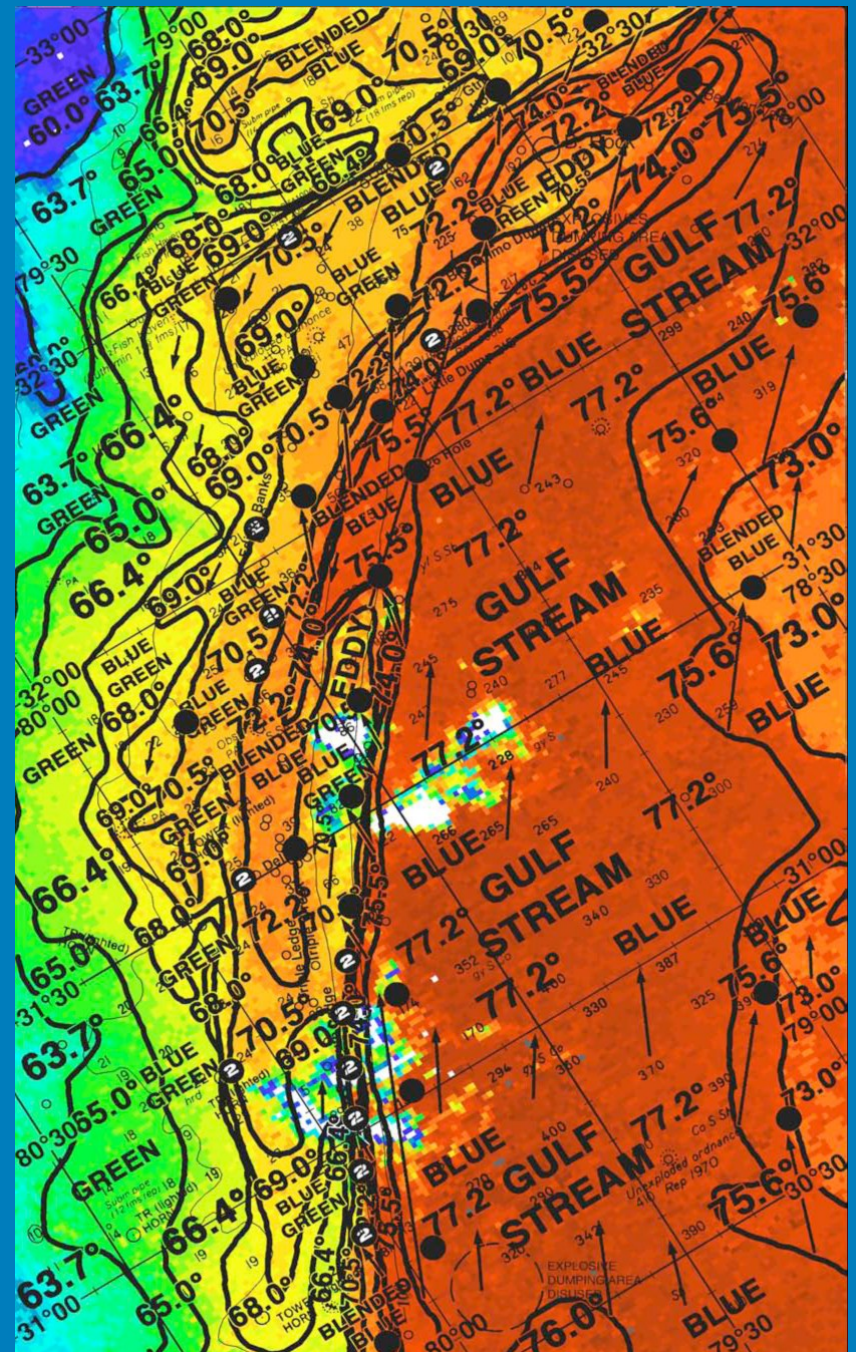
# Research Needed with Other Bands and Techniques

- **RGB: In and Away from Glint**
- ⊘ **Other Spectral Combinations**
- ⊘ **JPSS, Sentinel Satellites**
  - **Night-time Visible (Ship Lights)**
  - **Future?**
- **Combination of LandSat, SAR, IR, Ocean Color.**
- **In Situ Verification**



# Combined Products

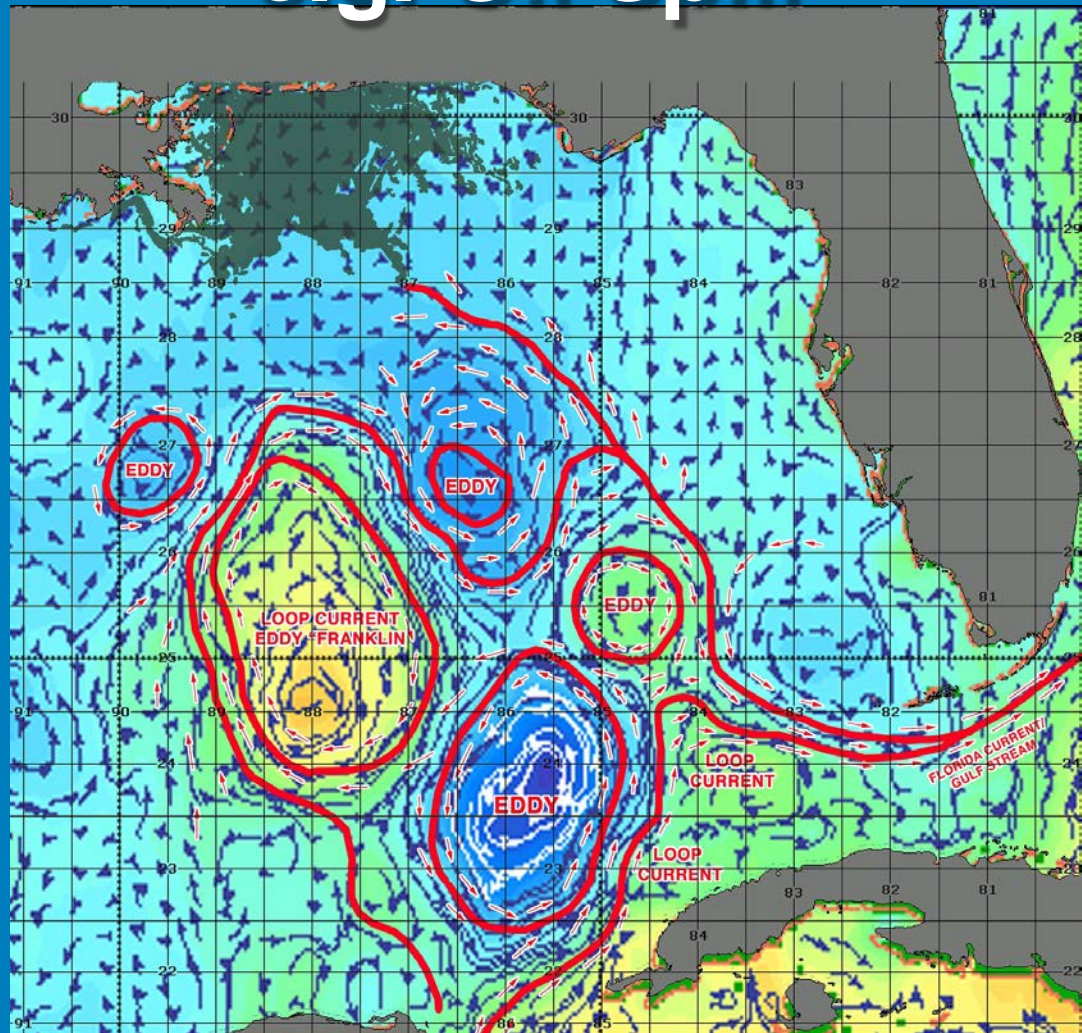
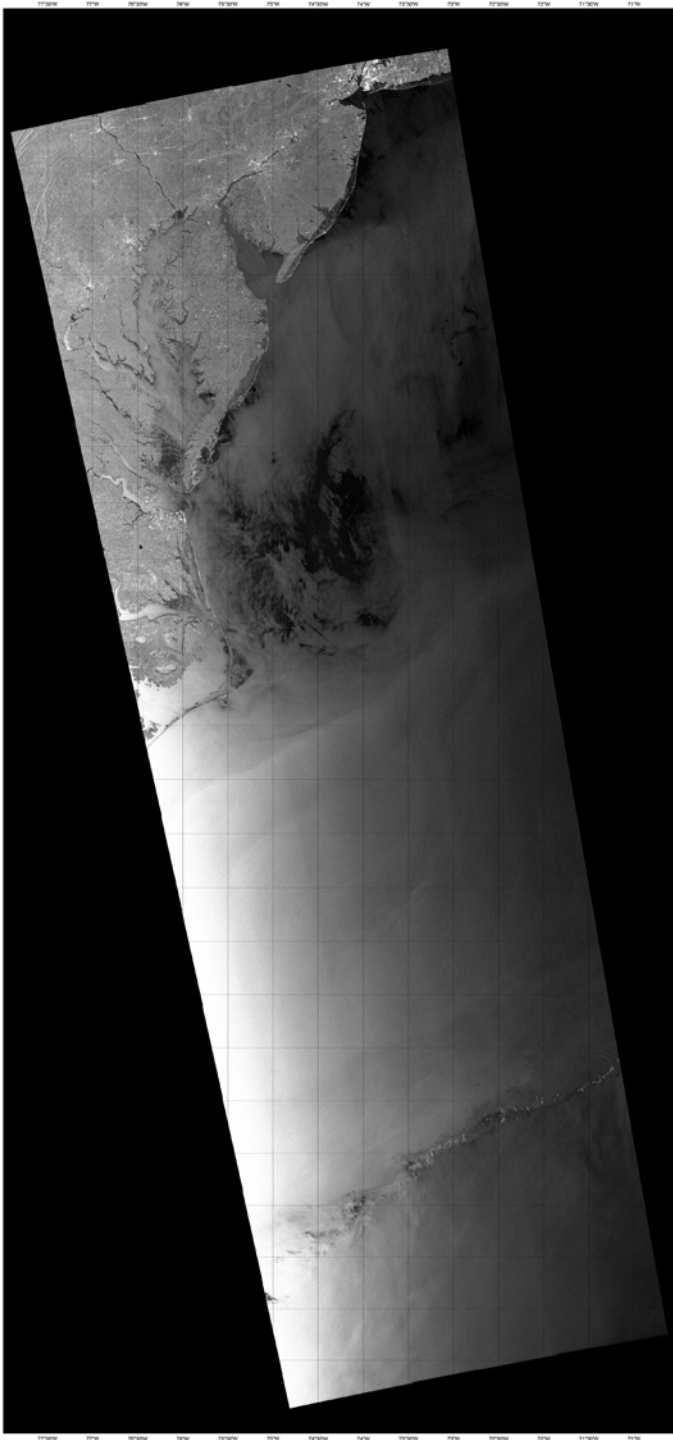
- SST
- COLOR
- CURRENTS
- HOT SPOTS
- TIME HISTORY
- BOTTOM



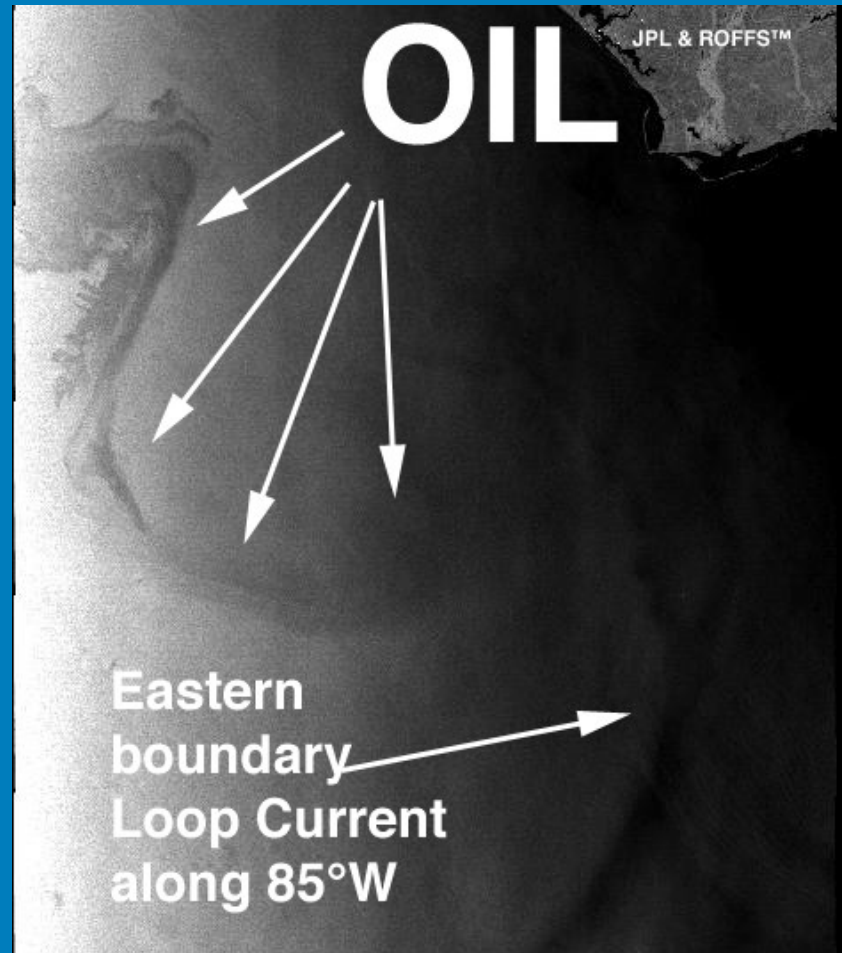
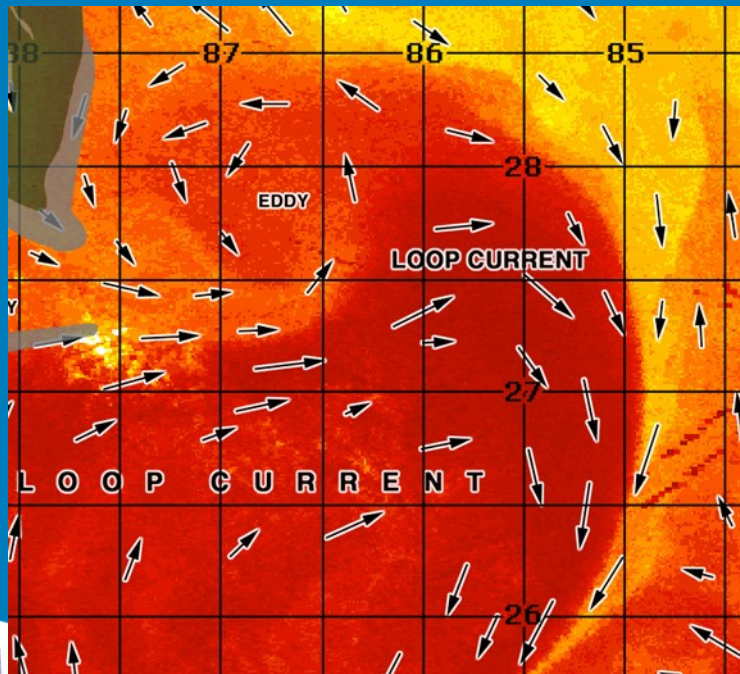


# Combined: SAR & Currents

e.g. Oil Spill



# SAR CONFIRMS IR & VIS





# CONVENTIONAL WISDOM

Can't Use IR or Ocean Color Data in the Caribbean & GULF In Spring/Summer

Where Would We Be Today If They Had Followed The “Experts” And Politicians Of Their Time?

