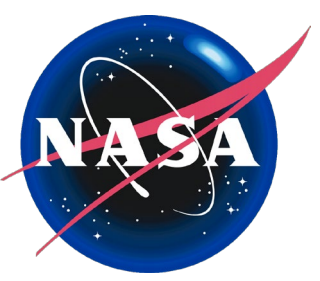


# Ocean Emerging Technology: Barriers, challenges, and potential mechanisms that expand opportunities for public-private partnerships

Government Perspective  
(Mostly Carlos' perspective)

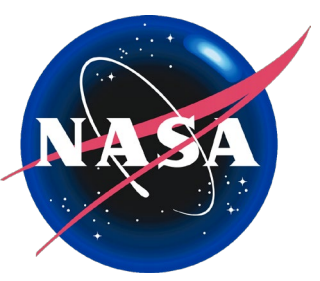
Carlos E. Del Castillo  
Chief, The Ocean Ecology Laboratory  
NASA Goddard Space Flight Center  
Greenbelt, MD

Ocean Policy Committee, Ocean Research Advisory Panel  
December 3-4, 2024 Washington DC

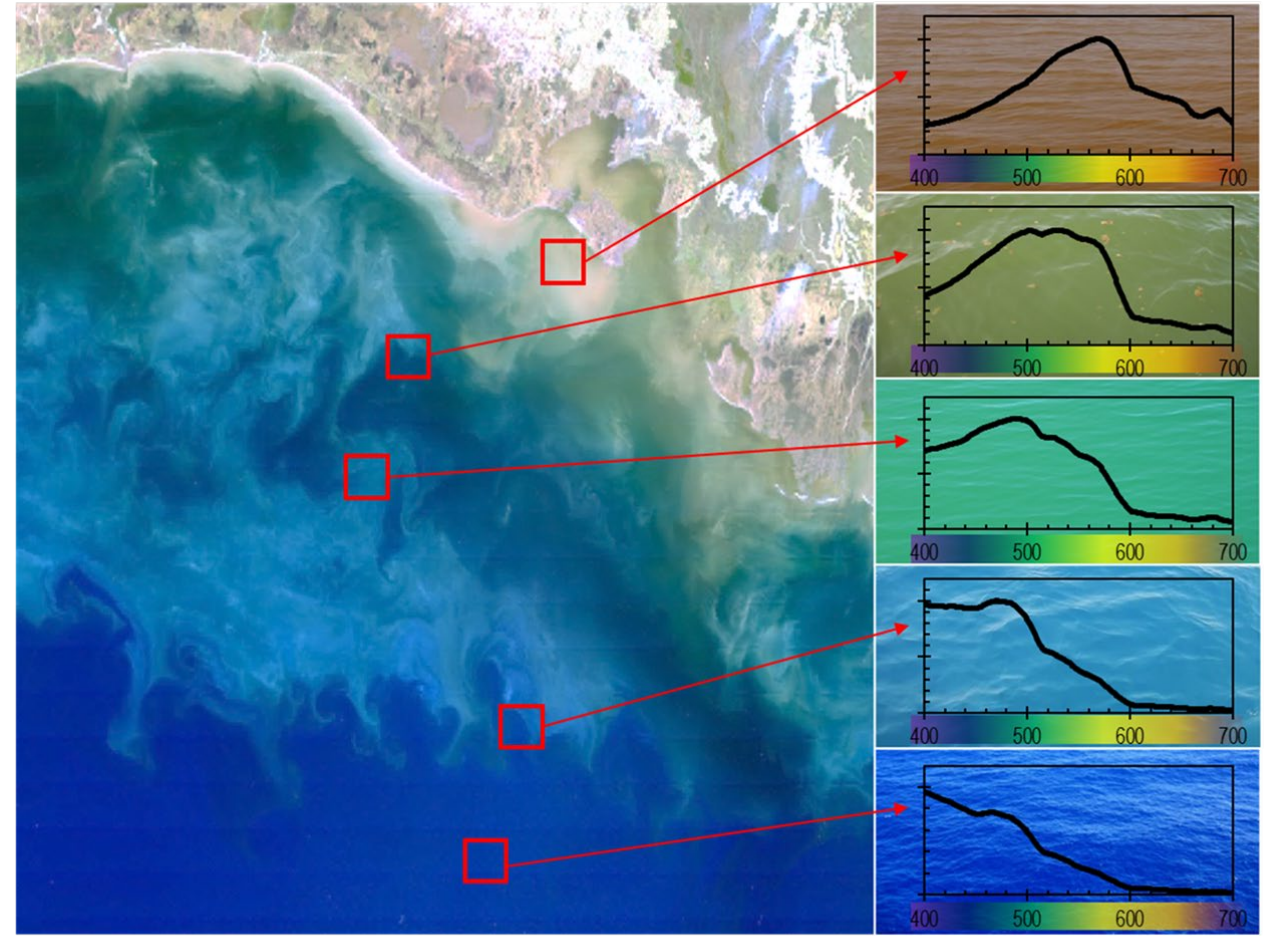
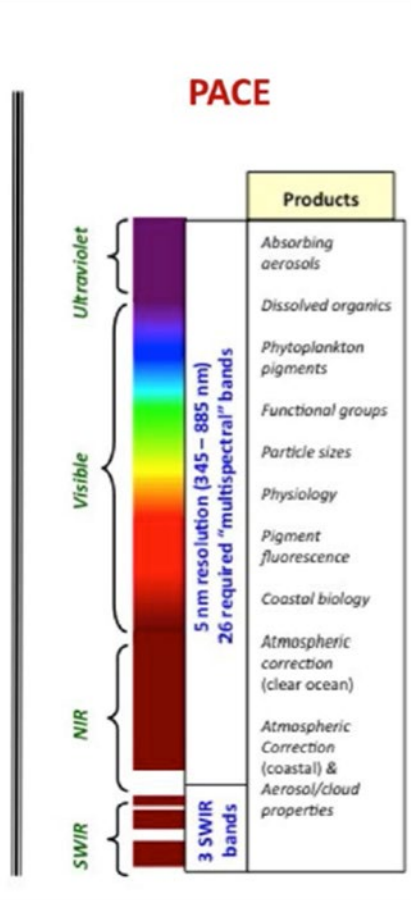
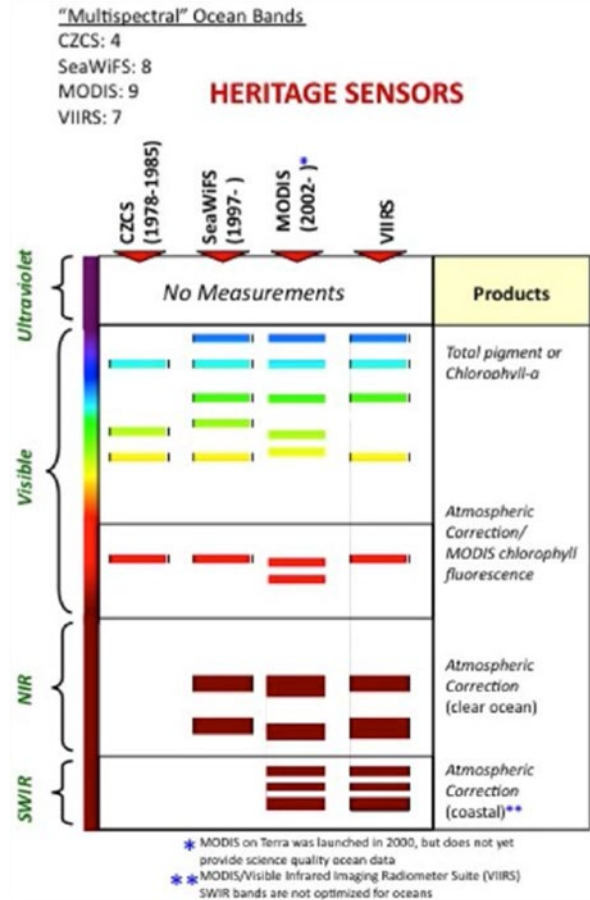


## Summary:

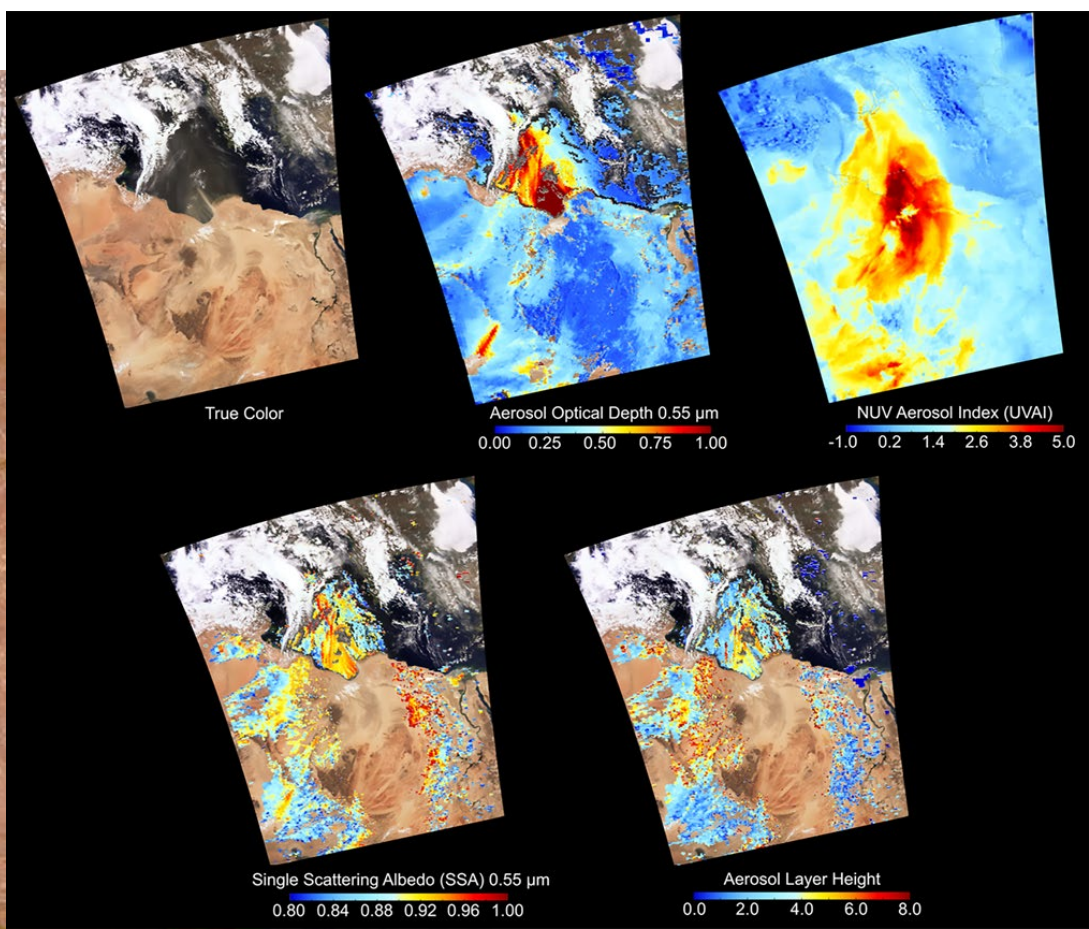
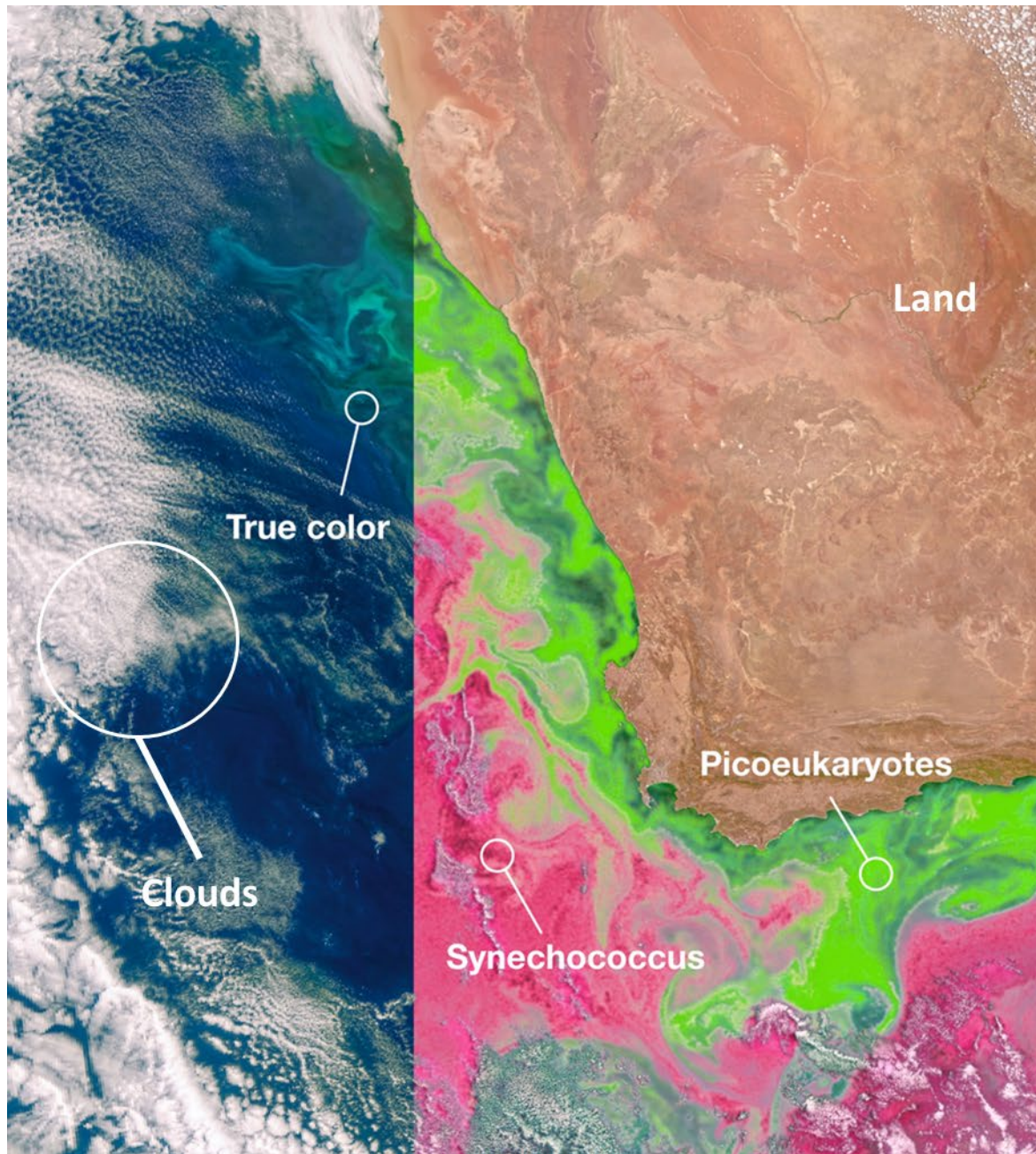
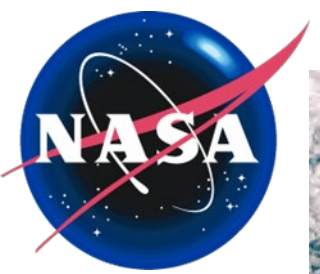
- 1- What are the new ocean technologies that we are deploying and exploring at The Ocean Ecology Laboratory?
- 2- Discussion about barriers and opportunities to public-private partnerships.
- 3- Questions?



# Plankton, Aerosol, Cloud, ocean Ecosystem

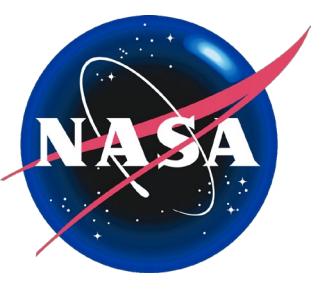






Additional data products to be released pending review by Project and PIs





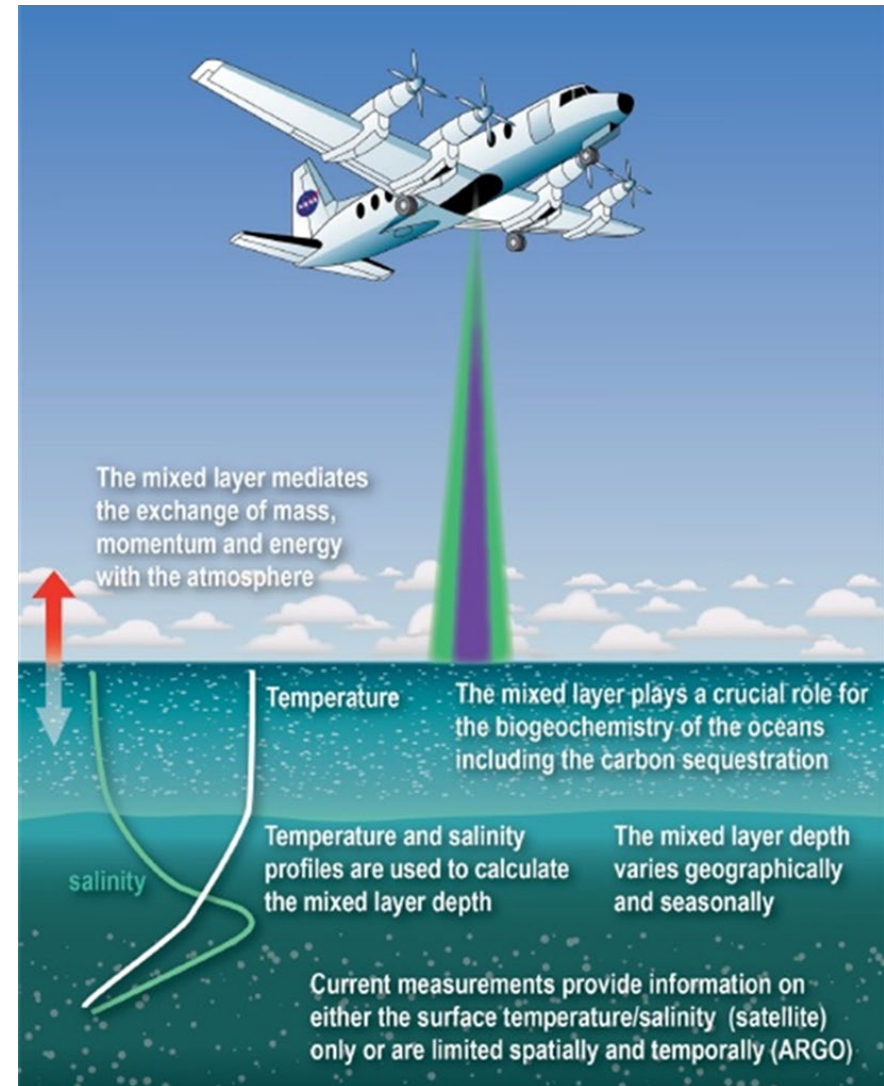
# Newer things we are working on:

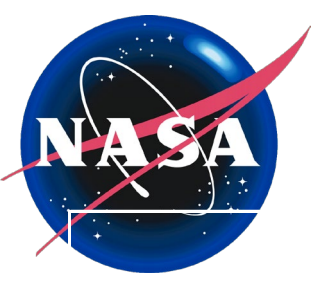
NEW field calibration and validation technologies for hyperpolarimetric data

Geosynchronous Littoral Imaging and Monitoring Radiometer (GLIMR) + GEO-XO

ML-AI

## New LiDAR applications





## Challenge

Open Science-Open Data = our data are free.

Questions about commercial remote sensing data: licensing, accessibility, calibration, georeferencing.

We need advance field instrumentation to validate advanced satellite measurements but funding mechanisms are not ideal.

Government cannot move at the speed of some agile, private companies (we are dealing with tax \$\$, not private \$\$).

## Opportunity

Our data are free, well-calibrated and maintained, well-distributed. Opportunity for partnerships to add value (e.g. weather data, fisheries). Benefits from early private-government engagement (e.g. NASA Early Adopters Program).

Early engagement during system design phase with NASA, other potential user agencies to explore solutions to these issues, particularly data characteristics.

Active, early engagement between Agencies, data users, private sector. Need new mechanisms.??????

Broad conversation to accelerate agreements processes, procurements, etc.