

# Development of a 5-Year Daily, Cloud-Free Sea Surface Temperature (SST) and Chlorophyll-a Reconstruction

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23 May 2018

# Project Overview

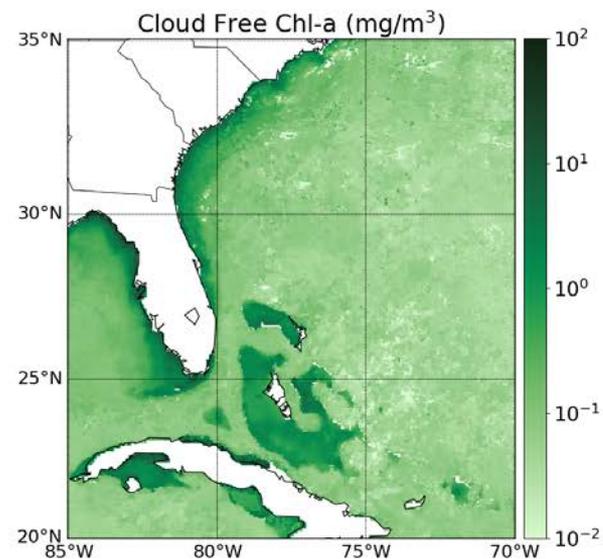
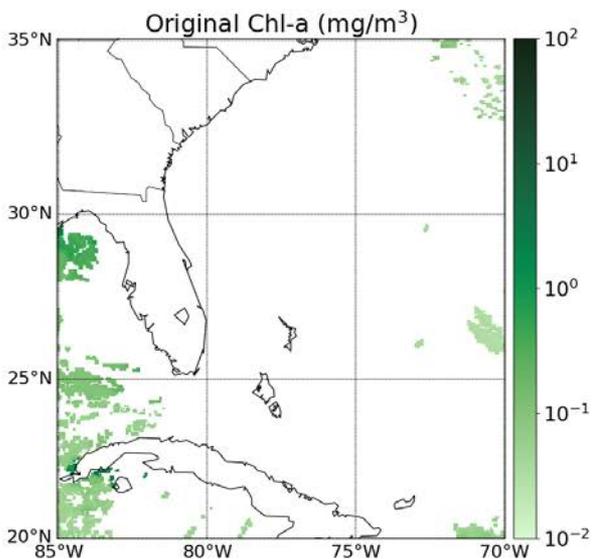
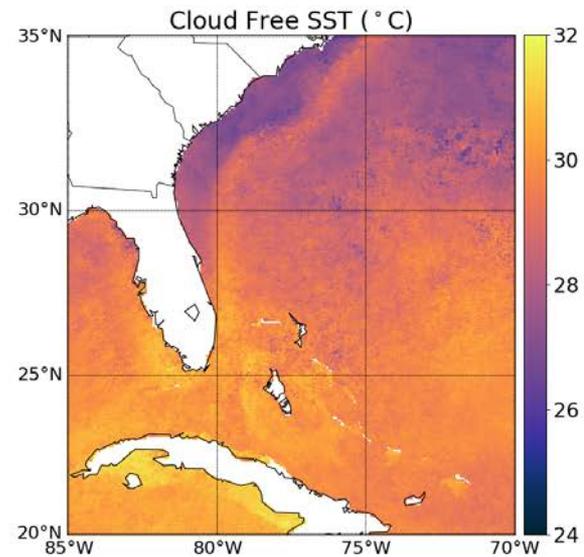
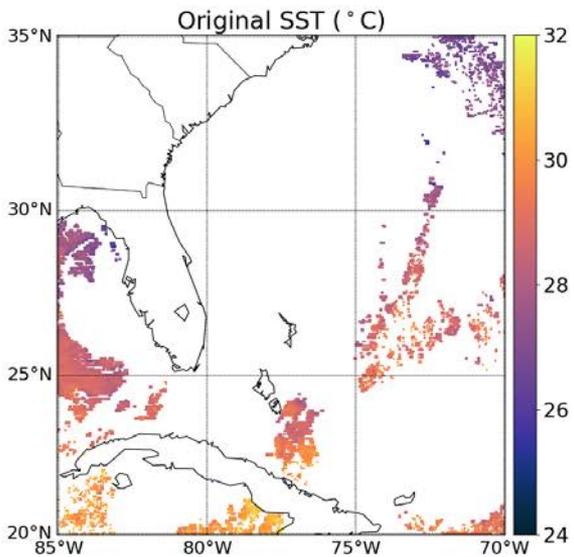
- Proposal
  - Statistical EOF-based methods to fill in gaps in MODIS SST and Chlorophyll-a imagery for 2012 through 2017
- Input Data Overview
  - MODerate resolution Imaging Spectrometer (MODIS) satellites Aqua/Terra
  - Daily 4km Global SST and Chlorophyll-a images
  - QC'd to remove data points contaminated by cloud

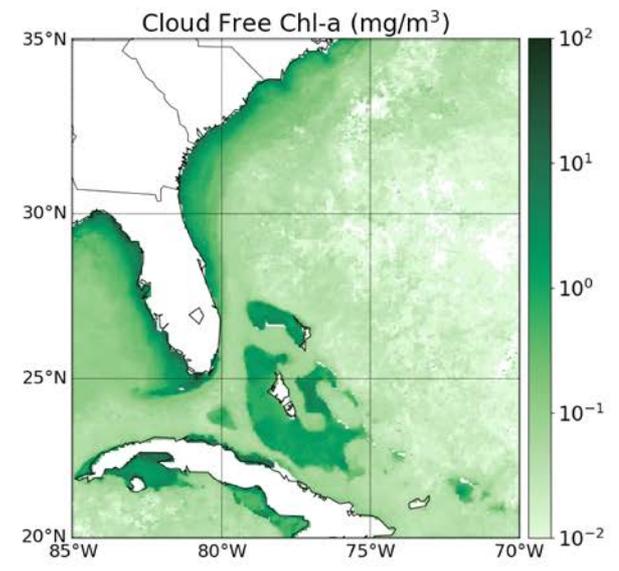
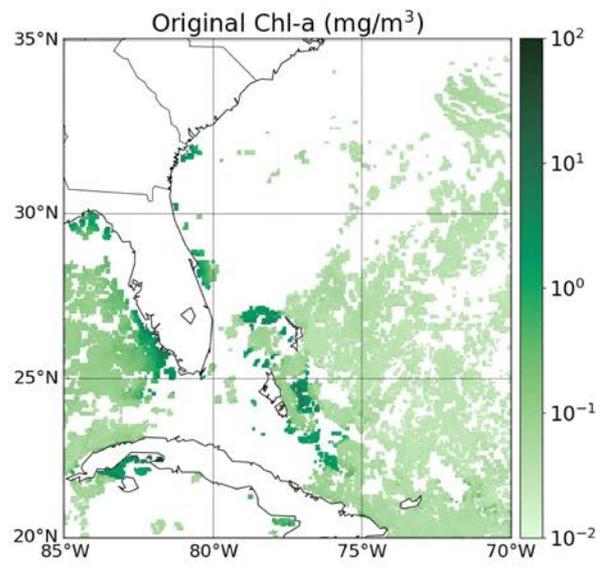
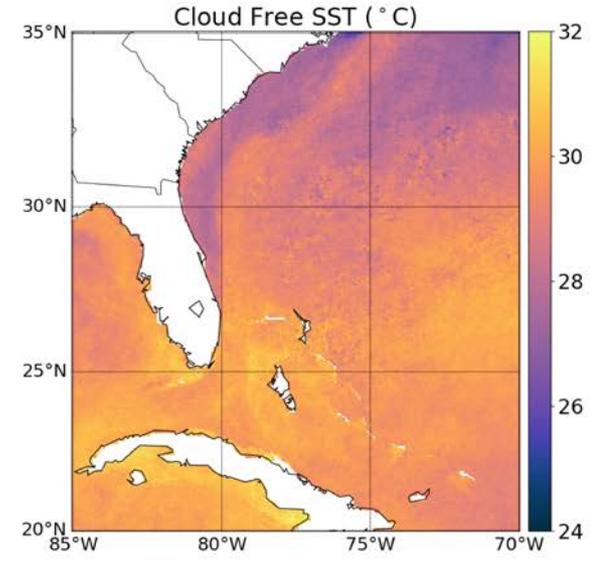
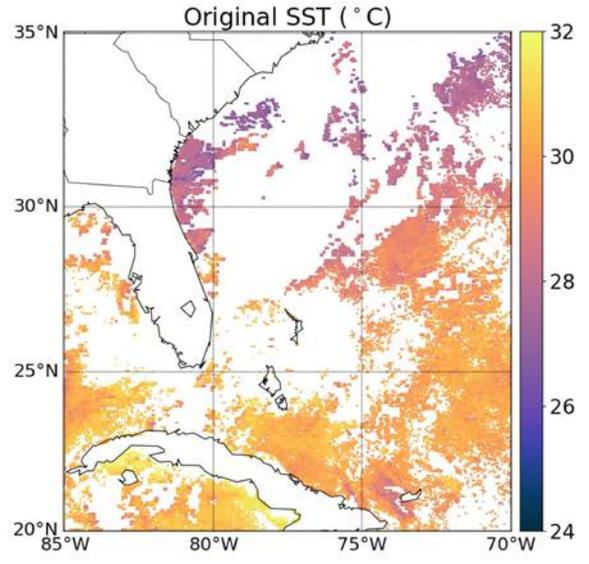
# Project Overview

- Results
  - Cloud-free SST and Chlorophyll imagery for 2012-2017
- Future work
  - Can be iterated daily to offer data in real-time and/or for different spatial domains
  - Apply same methods to 1km NOAA-18, NOAA-19 satellite retrievals
  - Simplify workflow using Python

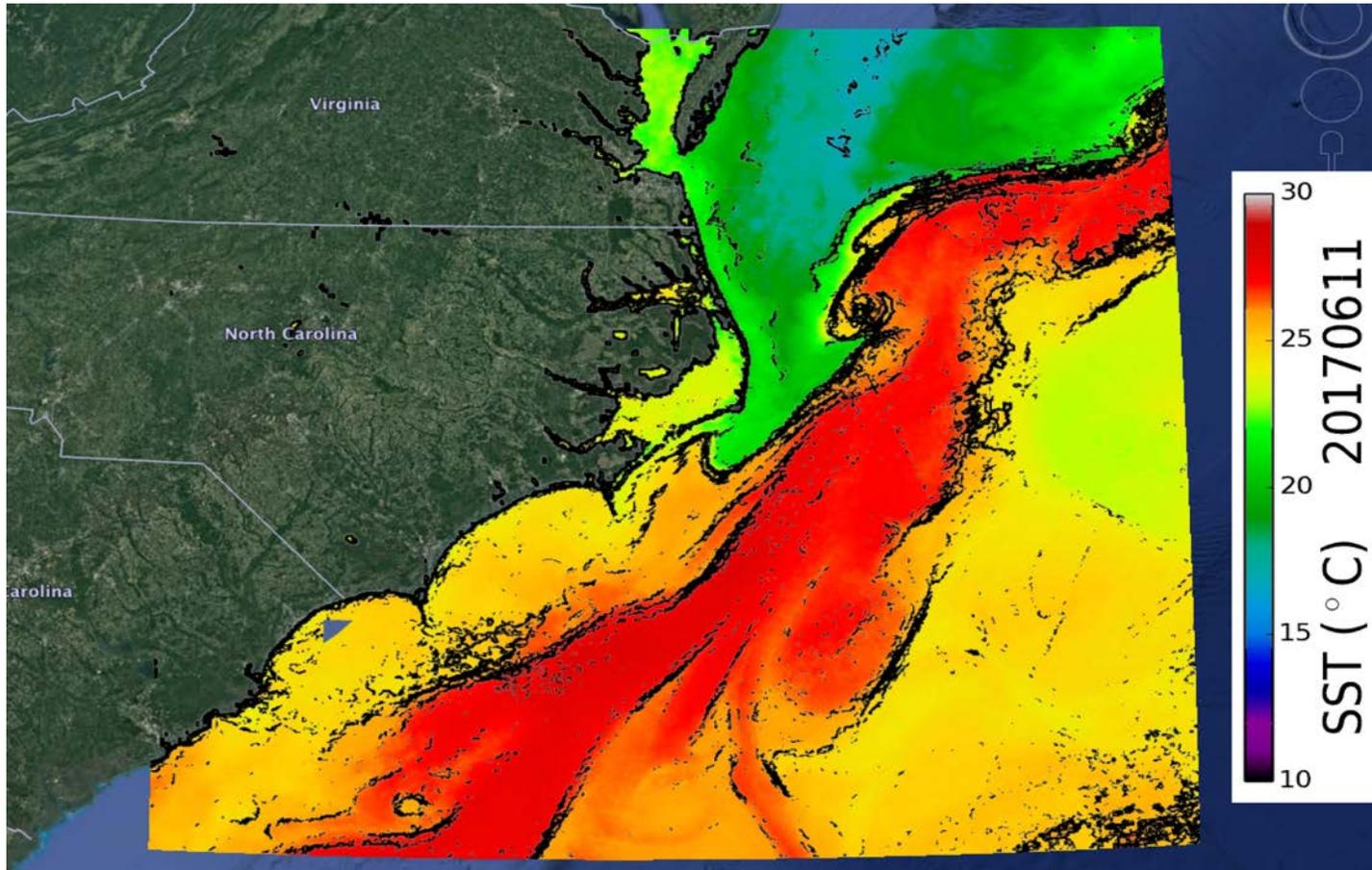
# Impacts

- 10-yr (2005-2015) MODIS SST, Chlorophyll-a monthly climatological dataset
- Cloud-Free SST, Chlorophyll-a Imagery for nowcast ocean surface conditions
- Identify features (i.e. surface fronts, eddies, meanders) in real-time
- Utilize statistical interpolation to fill in gaps and provide more data for stakeholders



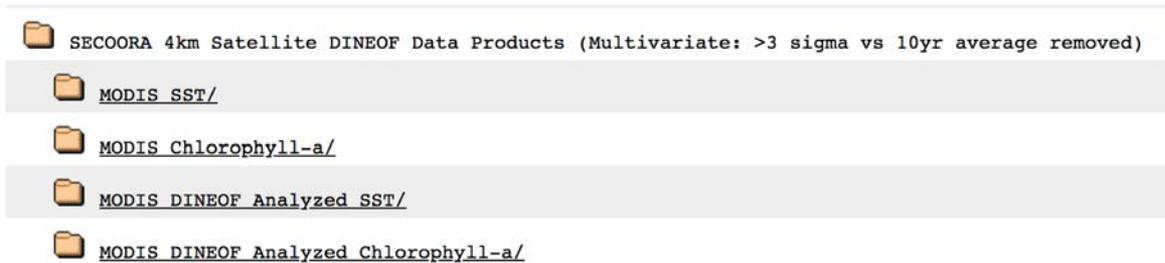


# 11 June 2017: Front Analysis



# Data Access

- Direct Download (4.4GB)
- THREDDS, OPeNDAP



- GitHub page  
jzbambon@ncsu.edu



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## Popular repositories

[secoora\\_DINEOF\\_snapshot](#)

Plots a snapshot of DINEOF analysis for SECOORA domain

Python ★ 1