

# Biography

## RESEARCH INTERESTS

- Ocean circulation and air-sea interaction
- Remote sensing
- Data assimilation
- Ocean's role in the climate system

## DEGREES

- PhD in Meteorology and Physical Oceanography, University of Miami, USA
- Bachelor's Degree in Marine Science, Ocean University of China

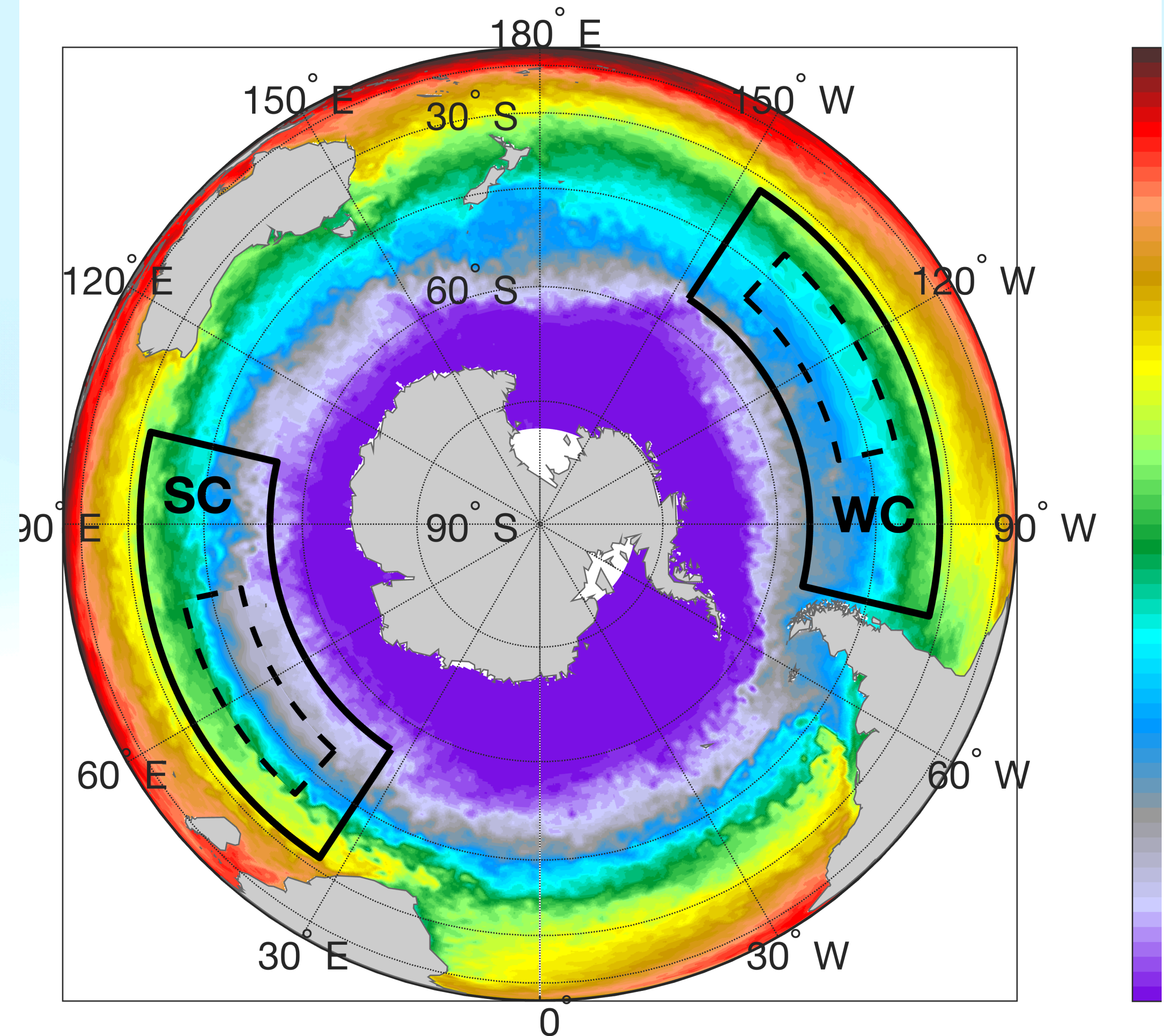
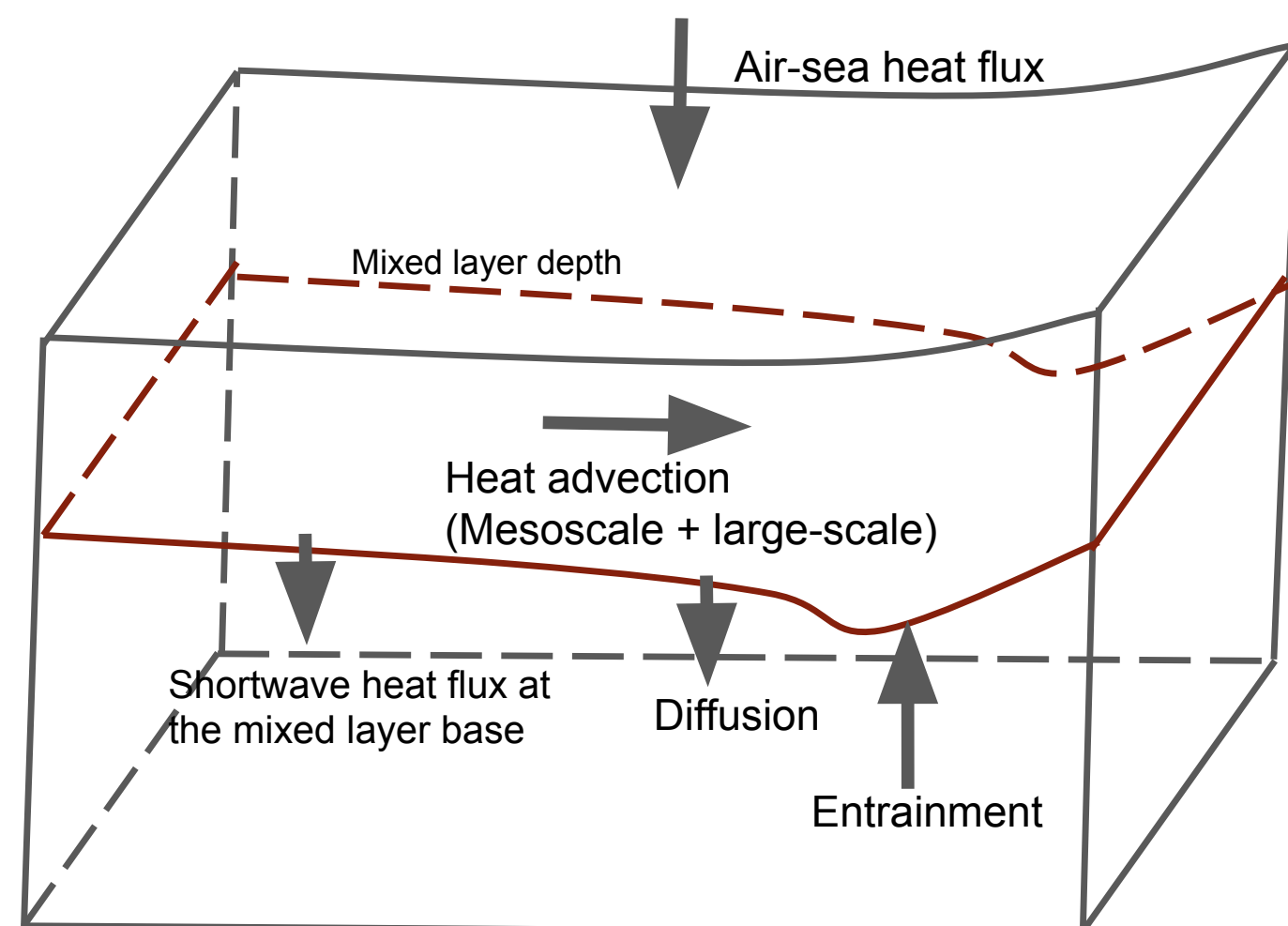


Yu Gap, Postdoc  
Scripps Institution of Oceanography



# Mesoscale Air-sea Interaction in the Southern Ocean

- I modeled and analyzed mesoscale heat budget and air-sea interaction in the Southern Ocean using both a regional coupled model and a global climate model.
- I study how the ocean dynamics drive the SST variability, air-sea heat exchange, and mixed layer variability.

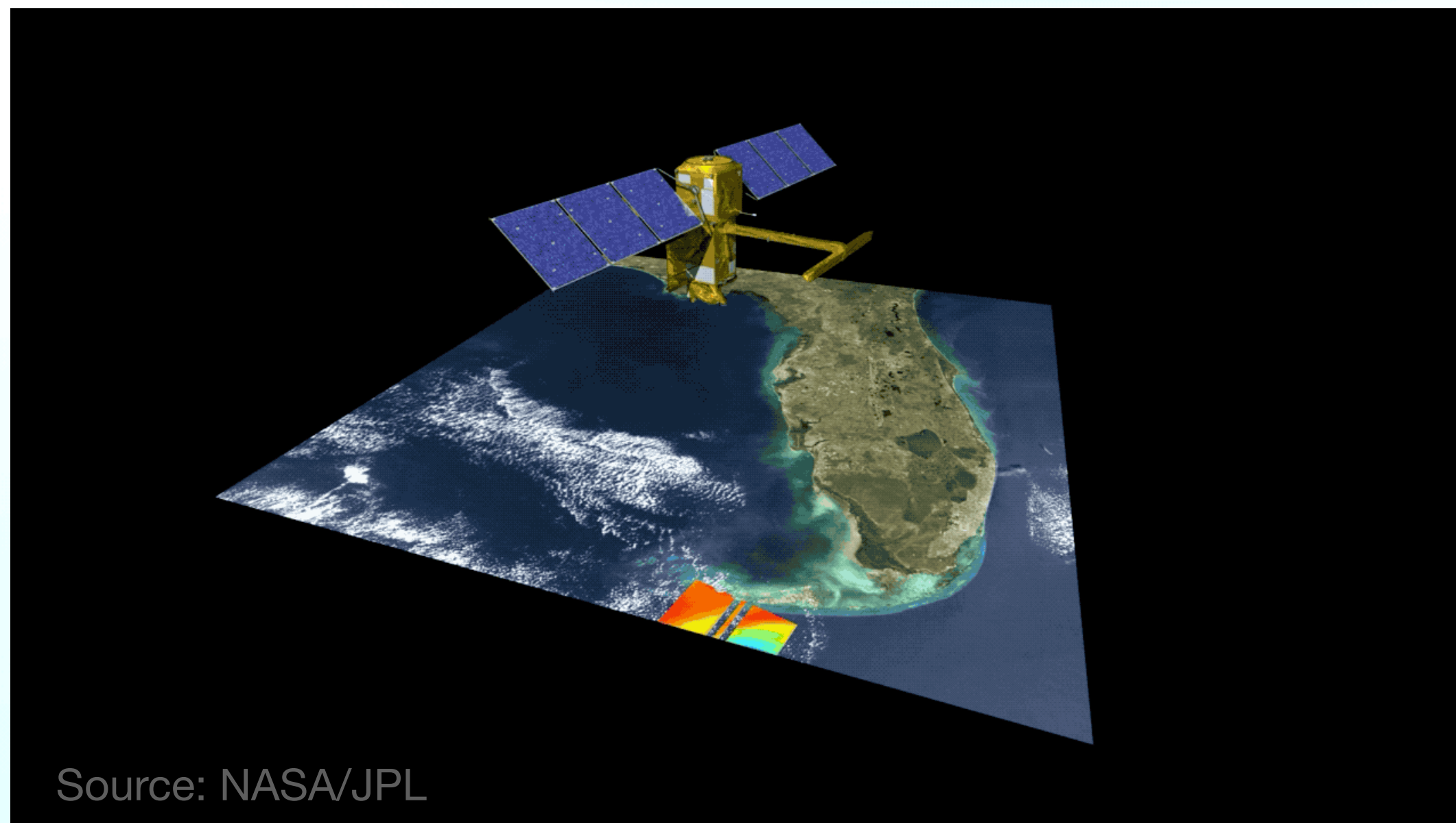


- Perlin, N., Kamenkovich, I., Gao, Y., Kirtman, B.P., (2020). A study of mesoscale air-sea interaction in the Southern Ocean with a regional coupled model. *Ocean Modelling* 153, 101660. <https://doi.org/10.1016/j.ocemod.2020.101660>



# Surface Water and Ocean Topography (SWOT) data assimilation

- SWOT is a satellite that measures the topography of the world's oceans and freshwater bodies.
- SWOT produces high-resolution sea surface height data.
- I analyze the SSH data and use data assimilation to fill spatial and temporal gaps in the SWOT observation.
- I develop new methods to reduce the sampling errors for SWOT.



Assimilating SWOT SSH data in California Current State Estimate

