

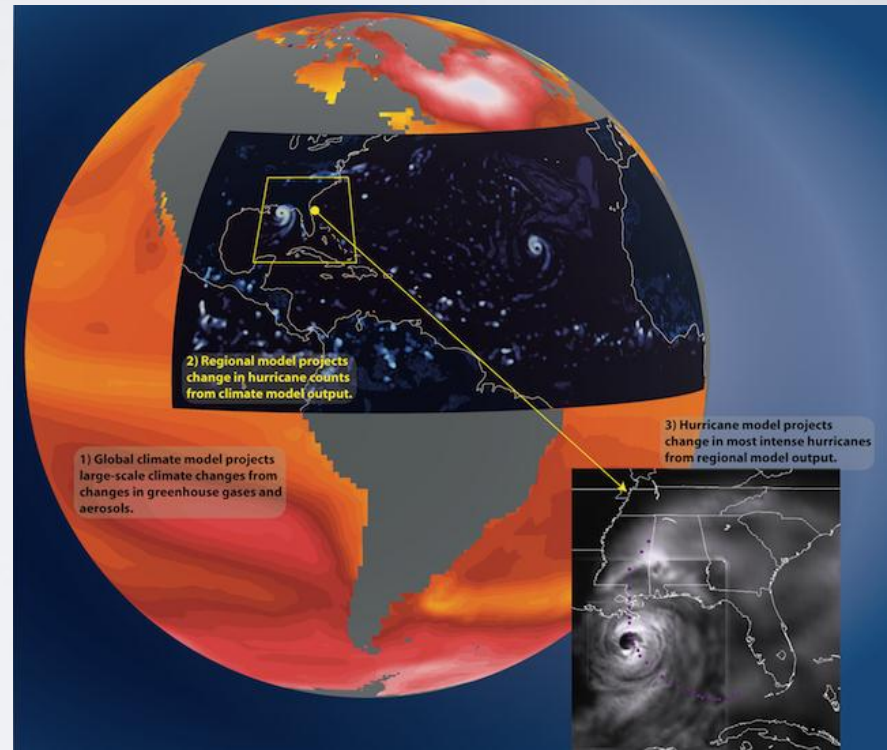
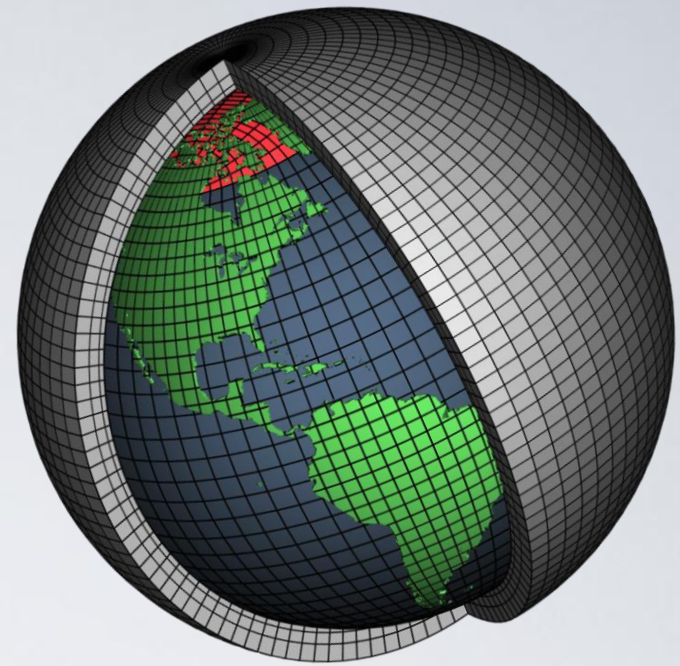
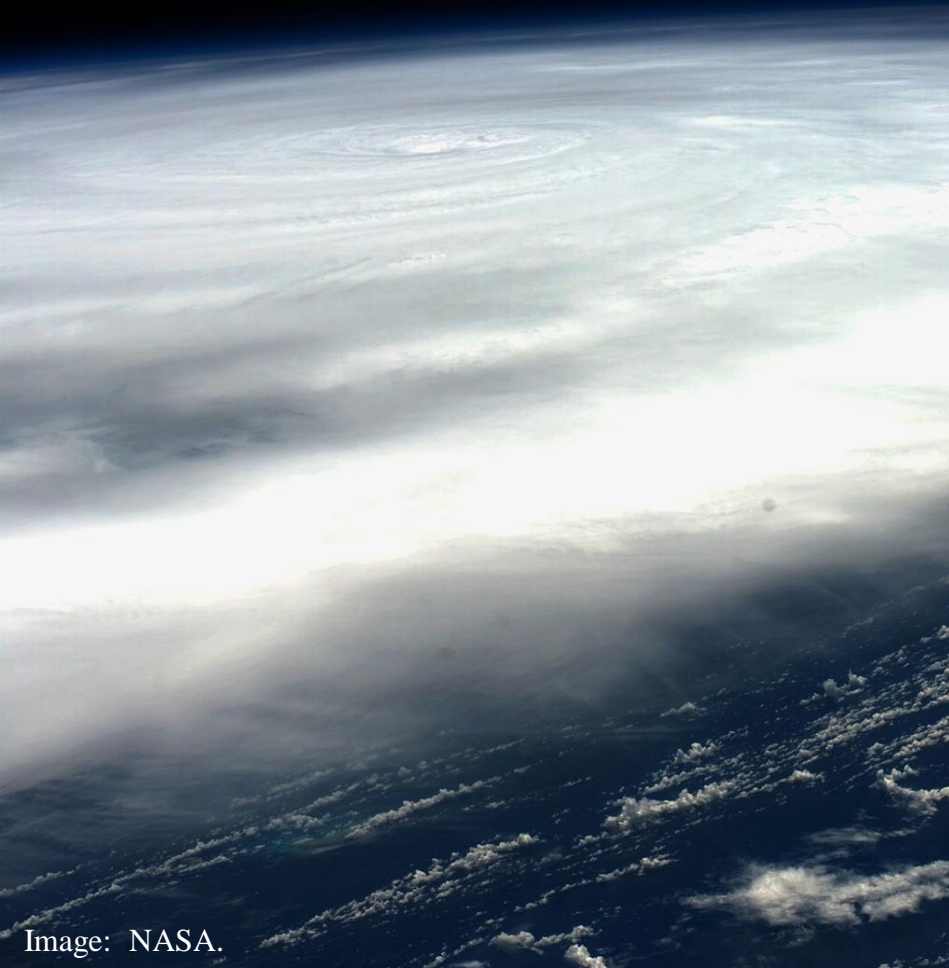
IOOS & Climate: A User's Perspective

Gabriel A. Vecchi

NOAA/GFDL

Princeton, NJ

Gabriel.A.Vecchi@noaa.gov



Key observational issues for climate applications

- Data continuity: **sustained observations**
- Real- or near-real time reporting and QC
- Global coverage
- Deep ocean observations
- Biogeochemical sensors
- Data synthesis research & application (assimilation techniques)

Merge multiple tools and understanding to build experimental long-lead hurricane forecast system: skill from as early as October of year before

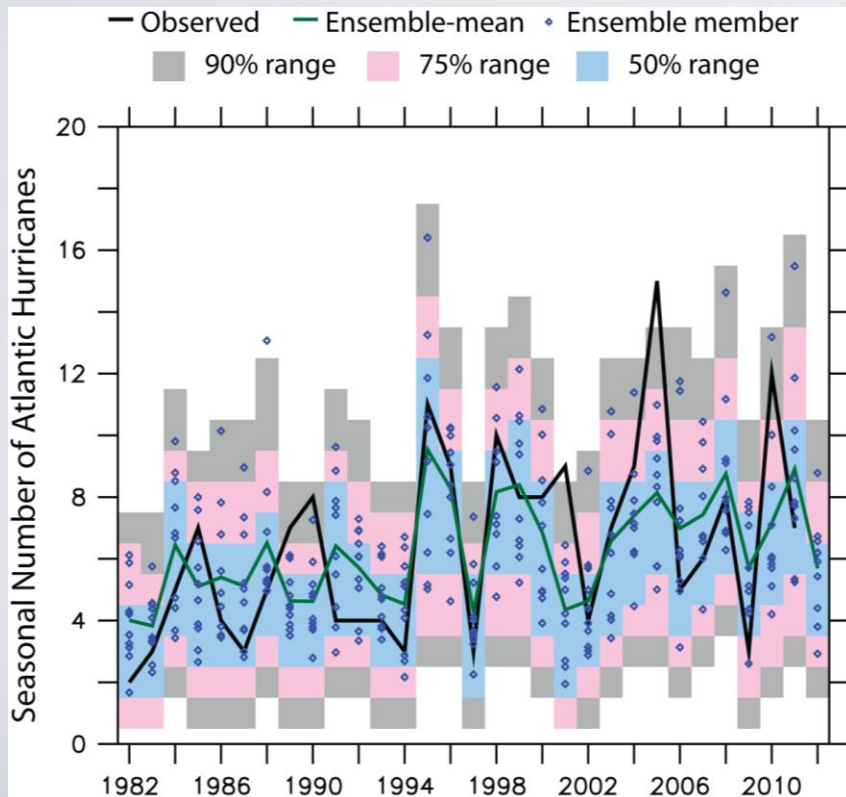
April & onward forecasts fed to NOAA Seasonal Outlook Team

Hi-Res AGCM in many different climates.
Count storms.

Build statistical model of the response of hurricanes in HiRAM

Use initialized coupled model to forecast future values of SST

Initialized January: $r=0.66$



HyHuFS

Apply Stat model to Predicted SST

Make Prediction of Full PDF of Hurricane Activity

<http://gfdl.noaa.gov/hyhufs>

The Downscaling Problem: Observations are crucial

