

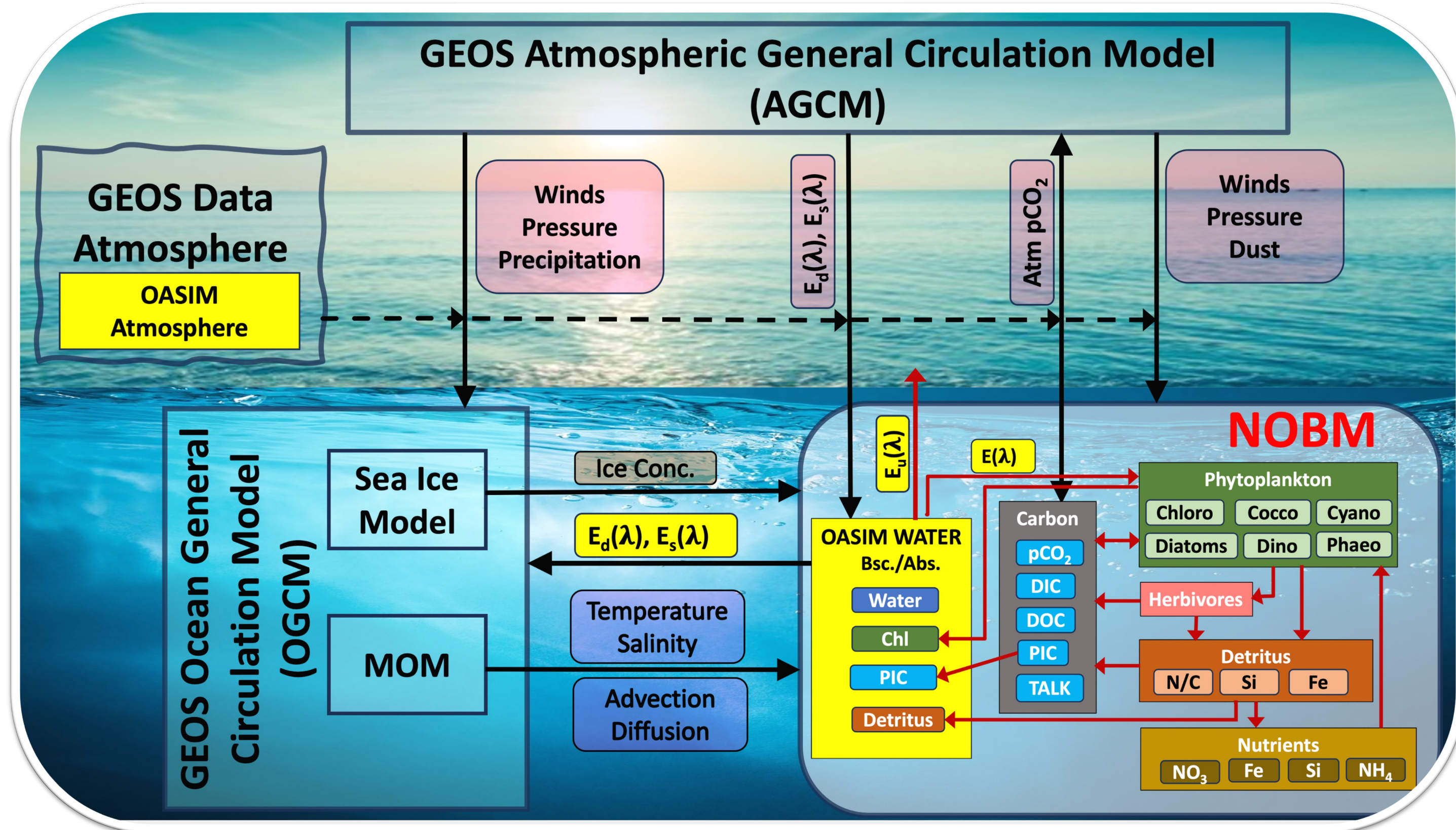
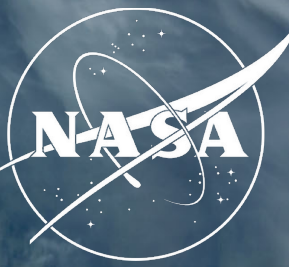
Ocean Ecosystem and Biogeochemical Modeling at NASA Goddard Space Flight Center

Lionel A. Arteaga

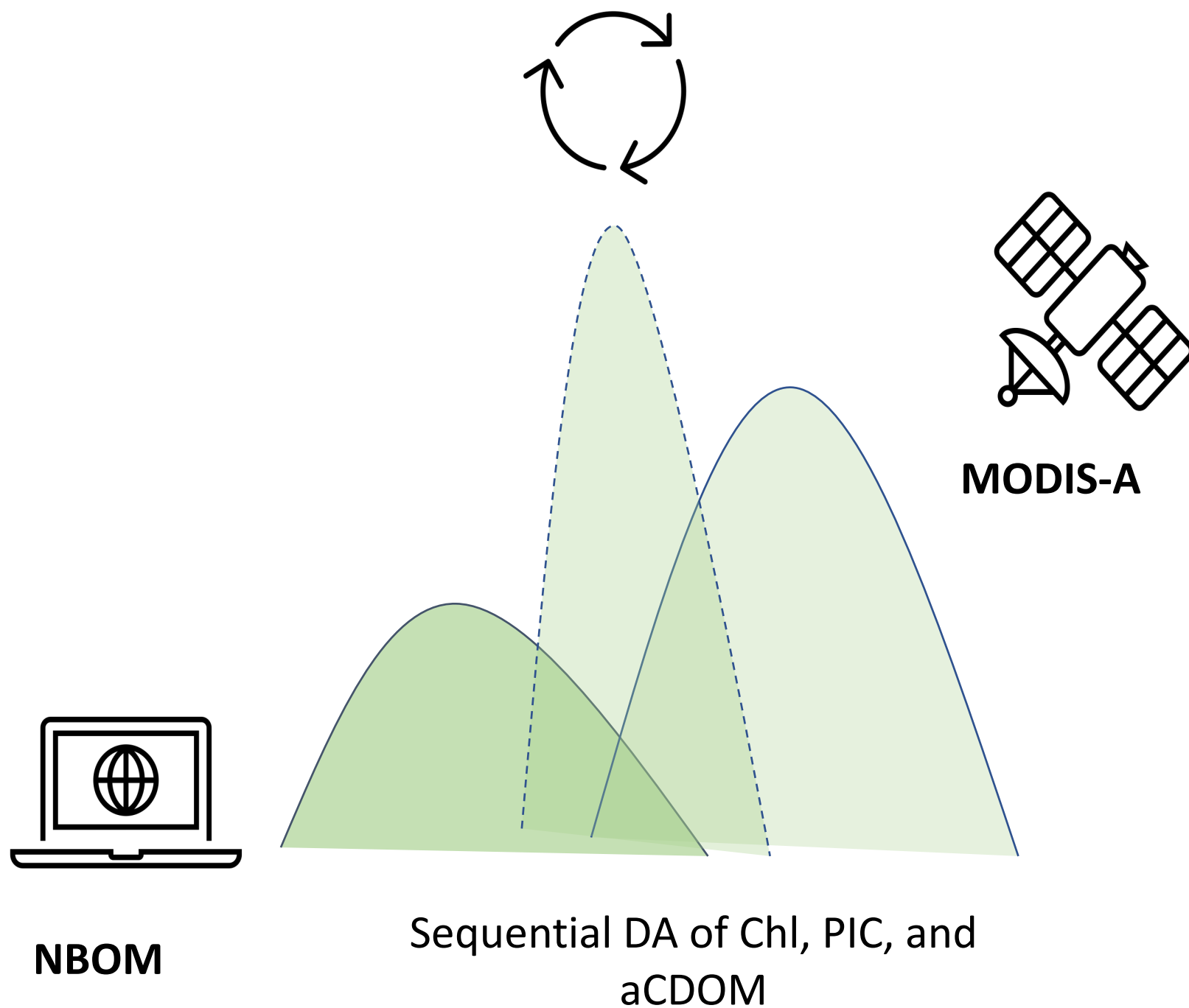
Global Modeling and Assimilation Office (NASA GSFC) / UMBC

Cecile Rousseaux (Ocean Ecology Lab) and Michael Mehari (GMAO)

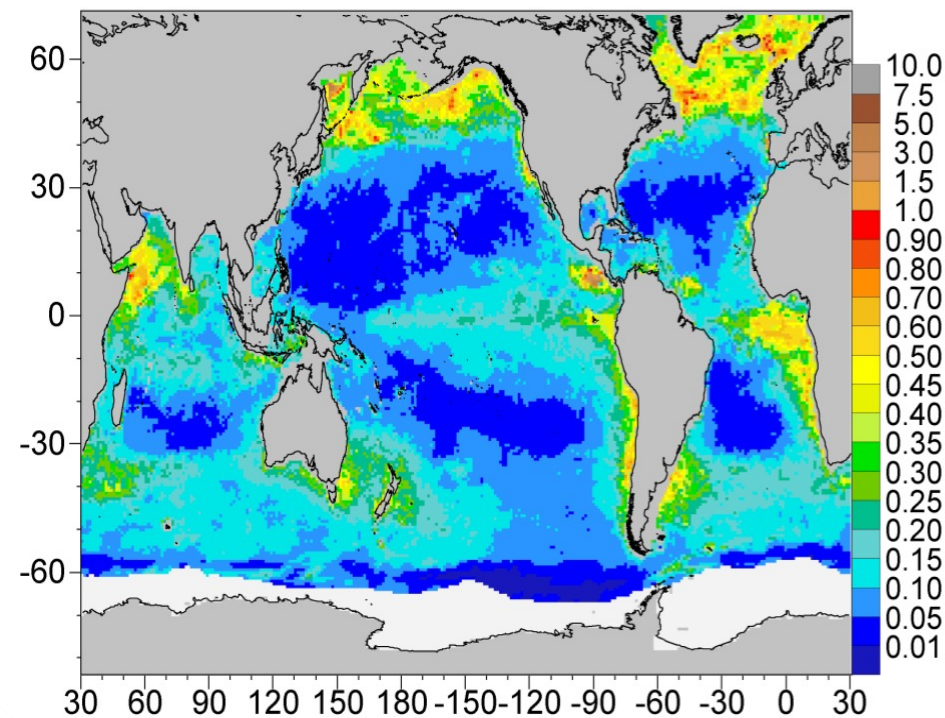
NASA Ocean Biogeochemical Model (NOBM)



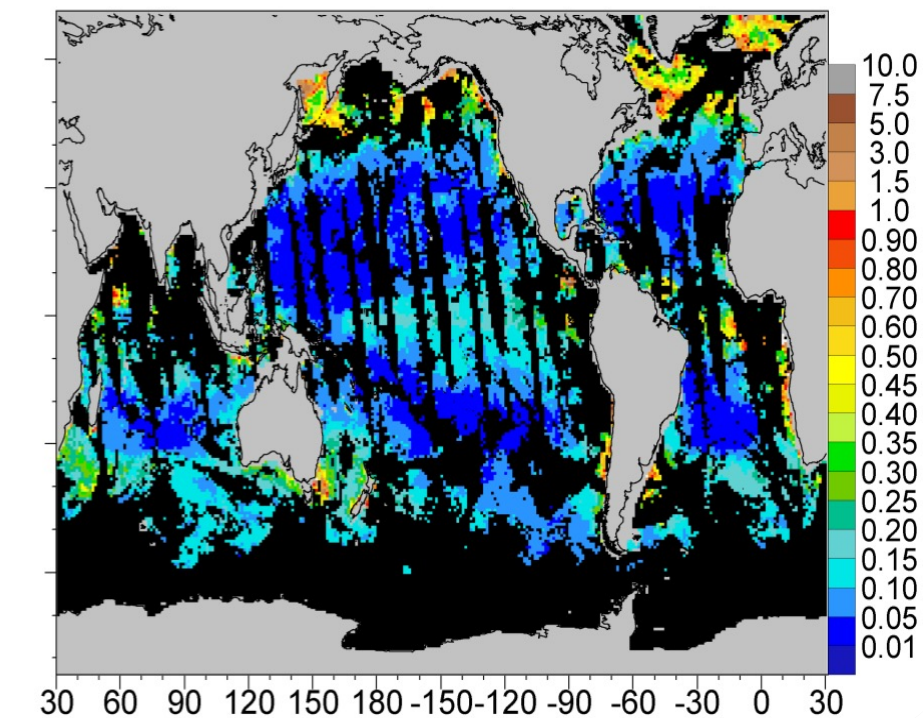
DA-NOBM



Assimilated VIIRS Chlorophyll Sep 1 2013

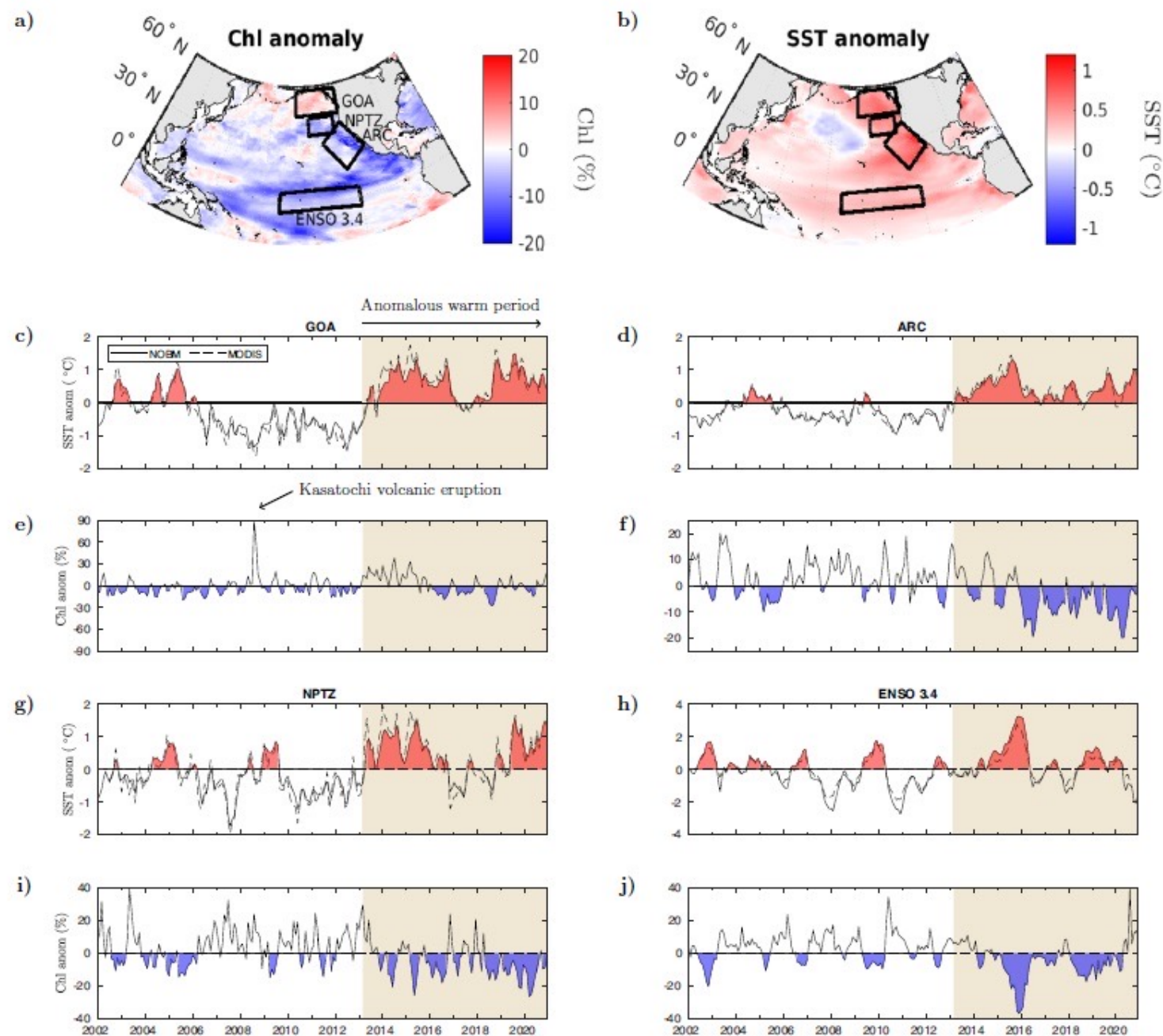


Daily VIIRS Chlorophyll Sep 1 2013



Level-4 products: Fill gaps in satellite retrievals and provide data that cannot be derived from current sensors

Assess the impact of climate and environmental changes on ocean ecology and biogeochemistry



communications biology

ARTICLE

<https://doi.org/10.1038/s42003-023-04645-0>

OPEN

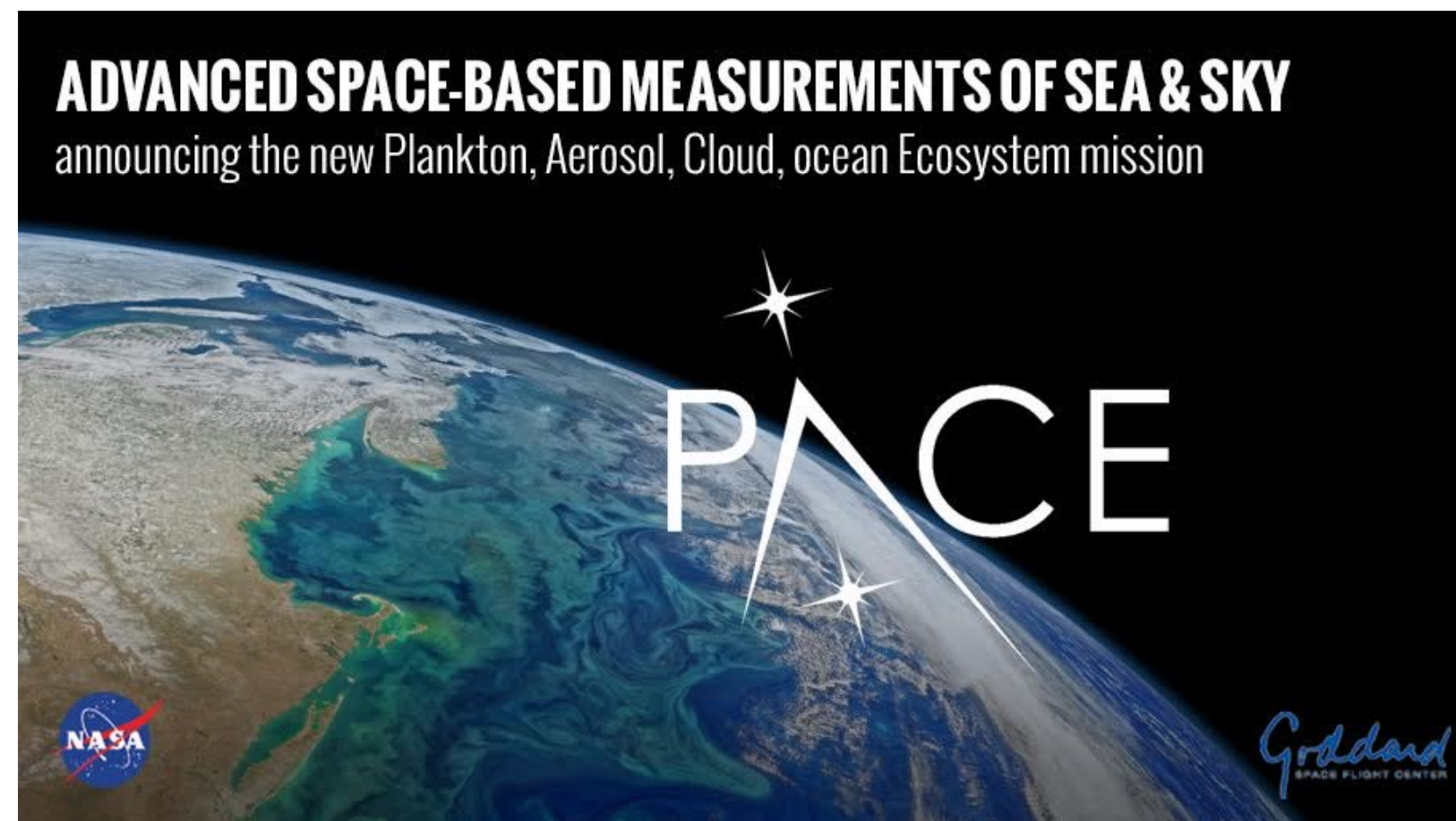
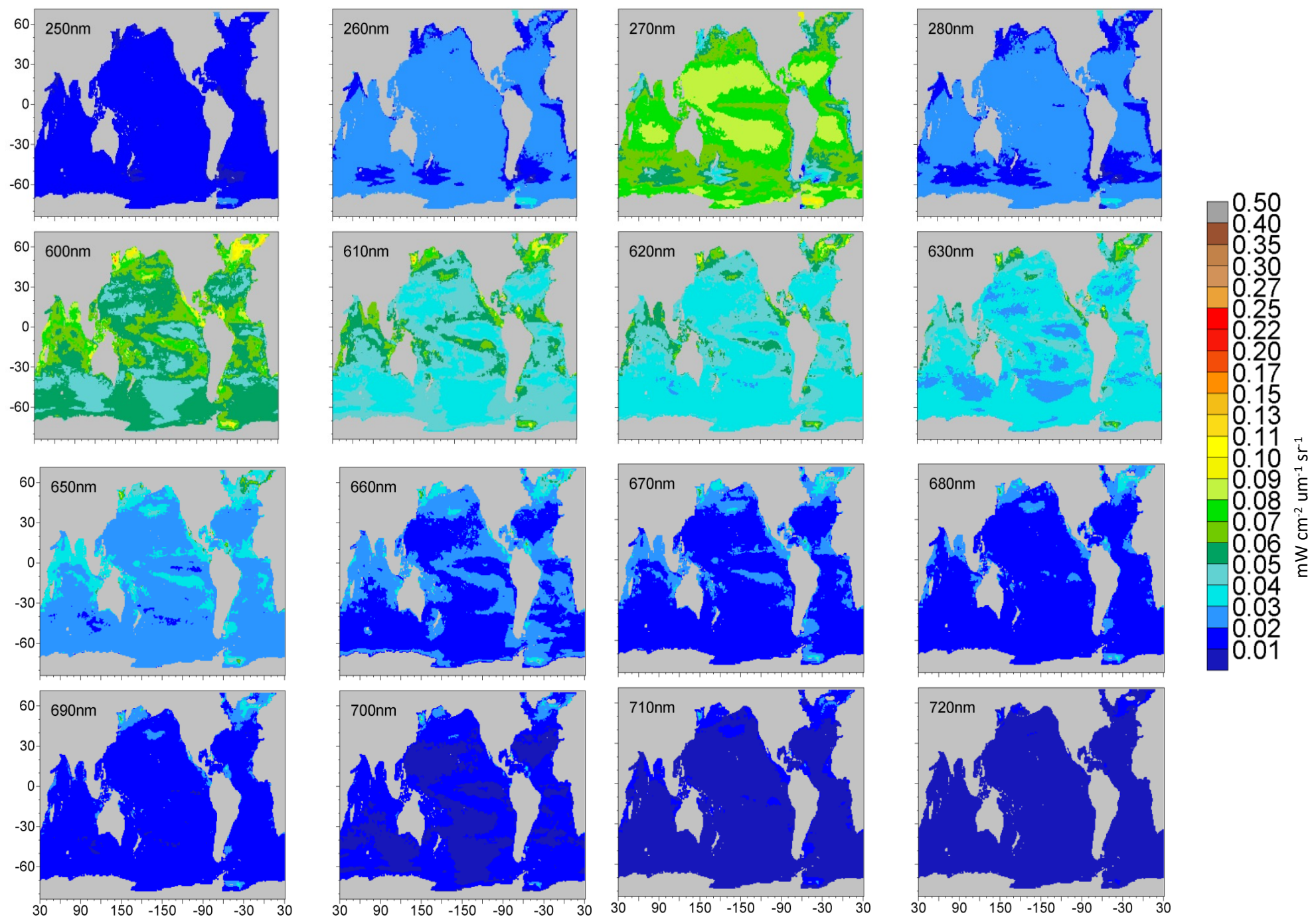
Impact of Pacific Ocean heatwaves on phytoplankton community composition

Lionel A. Arteaga^{1,2} & Cecile S. Rousseaux³



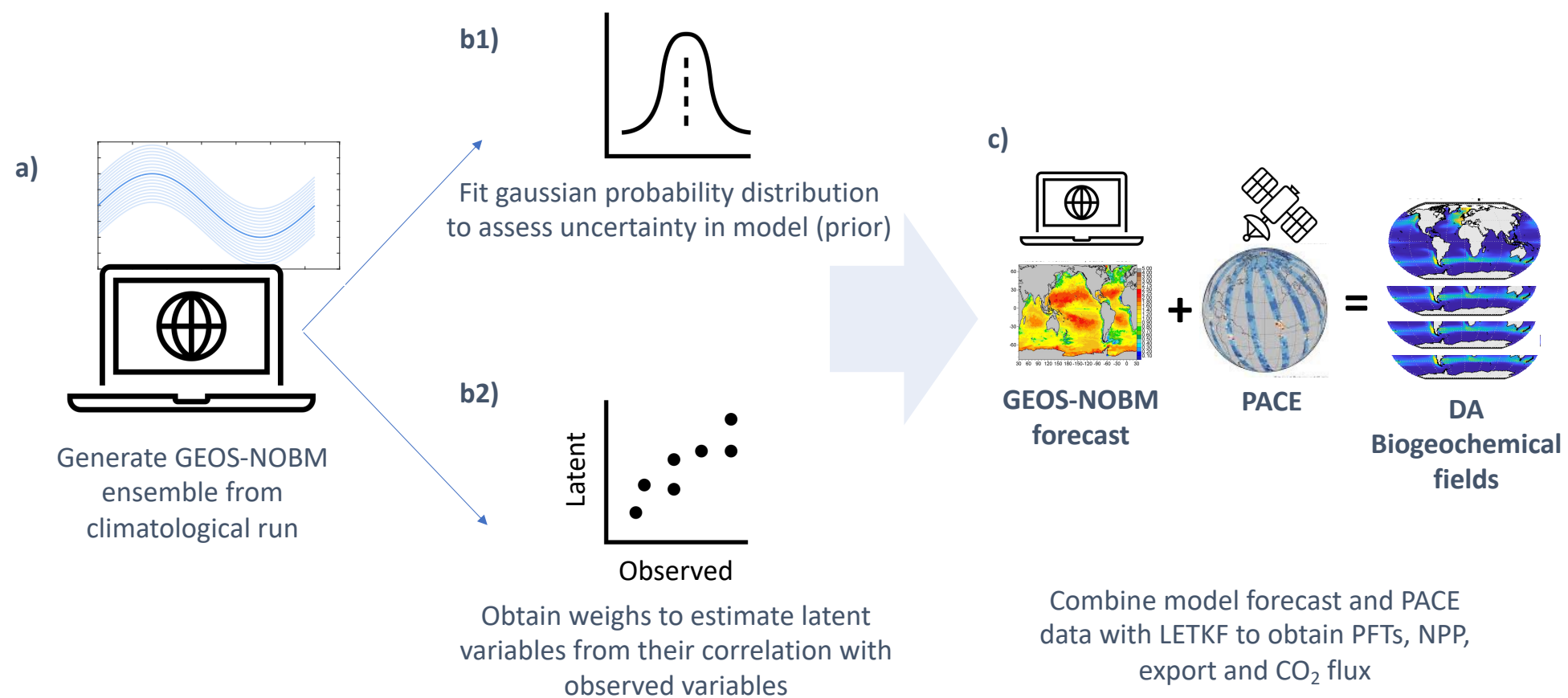
Tomorrow 9:14am – Hall C-1, First Floor
Session on “Phytoplankton Ecology at Large Scales”

Inform satellite mission development



Model normalized water-leaving radiances for selected wavelengths in the ultraviolet, long visible, and near-infrared region.

New DA system GEOS-NOBM + PACE



Wish list

- Validation data sets of phytoplankton community composition
- Depth-resolved information from space (e.g., lidar)