Title: Development of Robust Spectral Derivative Algorithms for Phytoplankton Pigment Concentrations on Local to Global Scales

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Goal: Develop hyperspectral methods for quantifying marker phytoplankton pigments

Approach:

- Explore “spectral gap” between phytoplankton IOPs & other IOP signals
- Remove low-order info from hyperspectral Rrs in order to assess high-pass (hopefully phytoplankton) reflectance signals
- Account for covariability among pigments & their spectral signatures
- Focus on both local (PnB; Santa Barbara Channel, CA) & global scale models
- Test the validity of pigments for quantifying phytoplankton community composition

Deliverables:

- Highly-curated global & local hyperspectral data for PACE model development
- Robust & documented algorithms for phytoplankton marker pigments for PACE