

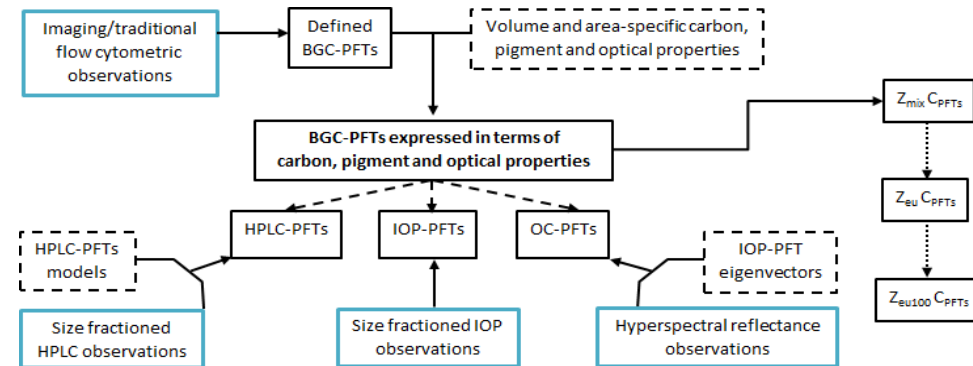
# Phytoplankton community structure, carbon stock, carbon export and carbon flux: What role do diatoms play in the North Pacific and North Atlantic Oceans

## SCIENCE GOALS

- Construction of validation data structure for hyperspectral remote sensing phytoplankton functional type (PFT) products
  - Optical
    - phytoplankton absorption
    - Pigments
    - Size distribution
  - Imaging
- Collect underway survey observations for inclusion in the validation data structure
- Link PFT-specific optical properties to biogeochemical properties
- Quantify the contribution of diatom carbon to phytoplankton community stock, export and flux

## TEAM MEMBERS

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# Phytoplankton community structure, carbon stock, carbon export and carbon flux: What role do diatoms play in the North Pacific and North Atlantic Oceans

## LOGISTICS

- Survey ship
- Above-water hyperspectral radiometry
- Underway optical/imaging flow-through system (in-line size fractionation)
- Biogeochemical analyses associated size-fractionated discrete samples

## MEASURED PARAMETERS

- $E_d(\lambda)$ ,  $L_w(\lambda)$
- $a(\lambda)$ ,  $c(\lambda)$ ,  $b_b(\lambda)$ ,  $F_{chl}(\lambda)$
- Single cell enumeration, imaging, feature analysis
- Spectrophotometry
- HPLC
- POC

