

# Synthesis topics shared by Themes

## – Role of ligands:

- Bioavailability
- Mobilization
- Scavenging
- Buffering TEI concentration
- Residence times and  $K_d$  values
- Preformed ligands?

# Synthesis topics shared by Themes

- Role of dust:

- Scavenging and removal of TEIs
- Export efficiency (C-org and TEIs)
- Regeneration length scale (C-org and TEIs)

# Synthesis topics shared by Themes

- Preformed TEI concentrations & stoichiometries:
  - Improve end-member compositions
  - Transport & inverse models
  - Optimum multi-parameter analysis
  - Impact on:
    - Water column ratios
    - Cell stoichiometry
    - Export & regeneration stoichiometry
    - Inferred rates and mechanisms of regeneration

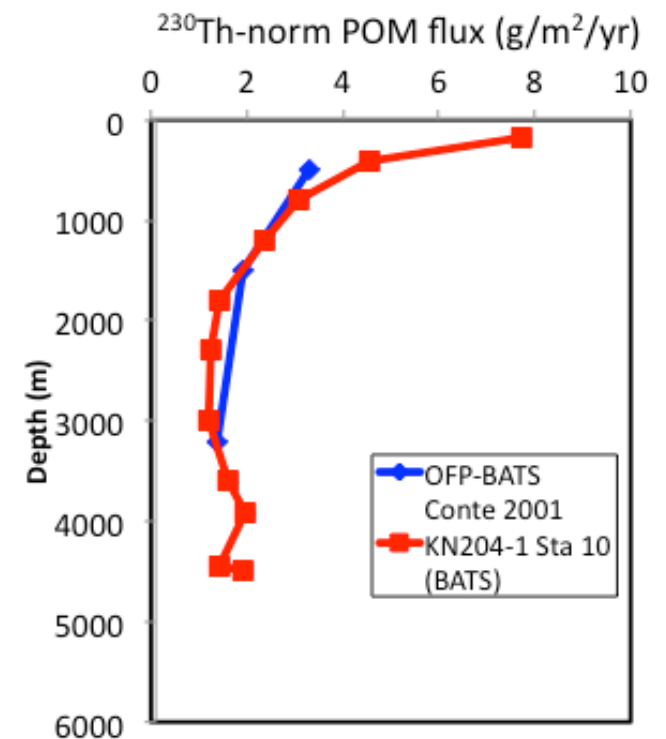
# Other topics for development (Theme 3)

## – TEI – AOU relationships:

- Resolve regeneration component & stoichiometry
- Compare/contrast different biogeochemical regimes
- Implication for regeneration length/time scale (C-org and TEIs)
- Combine with circulation tracers & models to estimate rates

# Other topics for development (Theme 3)

- Regeneration rates and length scale:
  - POC and TEIs
  - Combine multiple Th isotopes
    - $^{230}\text{Th}$  (deep),  $^{234}\text{Th}$  (shallow),  $^{228}\text{Th}$  (nearshore)
    - Crosscheck and intercalibrate at crossover depths
    - Assess sensitivity to vertical and lateral transport
      - » Models and circulation tracers



# Cross cutting - now

- Theme 1 (Comer 1st floor; split to 4th floor)
- Ligand Summit (Seismology 2nd)
  - Kristen Buck (kristenbuck@usf.edu)
- Particle continuum summit & Th (Seismology 1st floor)
- AOU – Stoichiometry (here & Monell 205)
  - Preformed (later move to round table)
  - Later bring in Theme 1 stoichiometry people to form a cross cutting stoichiometry group
- Round-Table discussion
  - Dust