An OCB topical subcommittee focused on Biogeochemical-Argo

Objective: This committee will serve as a focal point for US community input on the implementation of the global biogeochemical float array and associated science program development. This committee will also engage with and provide US input to the International Biogeochemical-Argo steering committee.
Oxygen profiles to Z>900 m (thru OMZ) from ships (World Ocean Atlas 2013) and floats (Argo GDAC)
Oxygen in the Southern Ocean From Argo Floats: Determination of Processes Driving Air-Sea Fluxes

Seth M. Bushinsky1, Alison R. Gray1,2, Kenneth S. Johnson3, and Jorge L. Sarmiento1
The Biogeochemical-Argo Implementation Plan (2016)

- An international plan
- 1000 profiling floats with $O_2$, pH, $NO_3^-$, bio-optics
- Observe seasonal and interannual change in carbon cycling, OMZ’s, nutrient flux, acidification, biological carbon pump, phytoplankton phenology
- Ocean management of living marine resources & carbon budget verification
- Sustaining 1000 floats requires ~250 floats/year
- US does half the array

http://biogeochemical-argo.org
Mid-scale Research Infrastructure-2 (Mid-scale RI-2)

PROGRAM SOLICITATION
NSF 19-542

Announced, Dec. 2018
Pre-proposals, Mar. 2019
Down select, May 2019
Final proposals, Aug 2019

Individual awards from $20 million to $70 million are anticipated. Duration of the award may be up to five (5) years.

The Mid-scale RI-2 program will NOT support proposals that include the following:

- Pre-implementation research and development and other community or technology
- Science research (except for validation of operational capability);
- Post-implementation research, operations, and maintenance; and
- General-purpose support systems and equipment that are not directly required of the proposed infrastructure.
Mid-scale RI-2 Consortium: Biogeochemical-Argo: A global robotic network to observe changing ocean chemistry and biology

- A pre-proposal to US NSF Mid-scale Research Infrastructure-2 solicitation
- Consortium of
  - MBARI – Johnson, PI
  - Univ. of Washington – Riser, PI
  - Scripps Institution of Oceanogr. – Talley, PI
  - Woods Hole Oceanographic Inst. – Wijffels, PI
  - Princeton Univ. – Sarmiento, PI
- 500 APEX, Navis, SOLO-II/S2A floats with O$_2$, NO$_3$, pH, bio-optics.
- $49,400,000 over 5 years
- One of 13 pre-proposals selected to submit full proposal
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<thead>
<tr>
<th>Name</th>
<th>Institution</th>
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<tr>
<td>Heidi Cullen</td>
<td>MBARI</td>
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<td>Andrea Fassbender</td>
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<td>George Matsumoto</td>
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<td>Yui Takeshita</td>
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<td>Alison Gray</td>
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<td>Todd Martz</td>
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All data will be freely available in real time
The US BGC Argo pre-proposal was invited to submit a full proposal. One of 13 projects spanning all of NSF. Perhaps 6 awards.
Year 1 – 15 on A16, 15 on P2, 30 So. Ocn.

All data will be freely available in real time.
How can the US OCB community help and participate?

1) If the proposal is successful, be prepared to write proposals to use the data stream (write proposals now to use the existing BGC-Argo data stream).

2) Provide input to committee members regarding deployment options/opportunities/priorities.

3) Comments to the committee regarding community oversight.

There will be a lunch gathering Wed. for community input.