



## 2020 AGU Fall Meeting Town Hall

### [TH096 - Current and Future Biogeochemical–Argo Programs and Planning](#)

**Wednesday, 16 December 2020, 7:00 - 8:00 AM PST (10:00 - 11:00 EST)**

The ocean provides critical services to life on the planet, absorbing 93% of the heat from anthropogenic warming and a quarter of human CO<sub>2</sub> emissions each year. Yet these services come at a price: ocean temperatures rise, pH and oxygen levels fall, currents change, nutrient concentrations shift. Long-term investments of government agencies and private foundations have produced a set of key BGC sensors to track these changes and their impacts on biogeochemical cycles and carbon dioxide uptake. Argo profiling floats equipped with BGC sensors can operate for years, observing the distributions of chemical and biological properties from 2000 m depth to the surface. The NSF-funded [Southern Ocean Carbon and Climate Observations and Modeling \(SOCCOM\) program](#) has deployed over 180 BGC floats since 2014, has developed BGC state estimation, and has applied float results to new understanding of the Southern Ocean's role in BGC cycles; this has been central to growing modeling and model analysis components. The success of this program, with some 100 peer-reviewed papers and multiple Ph.D. theses, demonstrates that the major operational challenges for a global, international BGC-Argo network have been overcome.

Success of the SOCCOM program has led to funding of the [Global Ocean Biogeochemistry \(GO-BGC\) Array](#) by the US NSF. GO-BGC will deploy an additional 500 BGC profiling floats throughout the world ocean. In combination with extensive international efforts, an array of 1000 profiling floats in waters deeper than 2000 m will be established. In this Town Hall for the entire oceanographic community, we will review past efforts and future plans for the [BGC-Argo program](#). The success of the BGC-Argo observing system development rests on strong science goals and funded science analysis - we seek community input on issues ranging from data access to mechanisms to interact with process oriented science projects.

#### **Speakers:**

##### **SOCCOM Overview**

Lynne Talley, SOCCOM Observations Lead (University of California, San Diego) & Joellen Russell, SOCCOM Modeling Lead (University of Arizona)

##### **GO-BGC Program and Plans**

Ken Johnson, GO-BGC Director & Biogeochemical-Argo Co-Chair (Monterey Bay Aquarium Research Institute)

##### **International BGC-Argo**

Hervé Claustre, Biogeochemical-Argo Co-Chair (Laboratoire d'Océanographie de Villefranche)

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