

Eric D'Asaro, Craig Lee,
Mary Jane Perry, Mark Benfield, + others

Autonomous studies of the subpolar North Atlantic

New focus: annual cycle of plankton, nutrients, carbon.

Builds on past success: 3-month study of 2008 spring bloom.

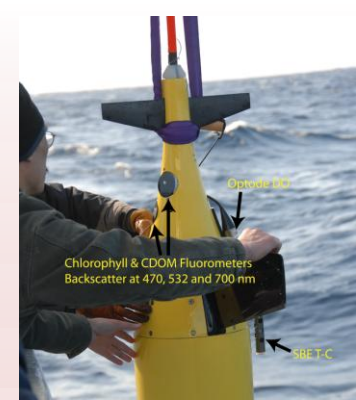
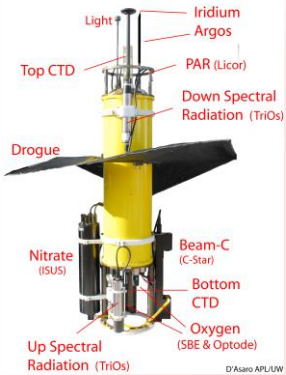
Recent papers suggest enhanced winter primary production, including
Raitso et al. 2005. *Extending the SeaWiFS chlorophyll data set back 50
years in the northeast Atlantic*. Geophysical Research Letters 32.

What really goes on during the late autumn and winter?

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Lagrangian Float

Configured for NAB08 Custom Built at APL/UW



Proposed Time Line

- Submit NSF proposal February 2011.
- NSF decision summer 2011; if successful, then
- Go in the water ~ April 2013 for ~ 15 months to study annual cycle bracketed with two spring blooms
- **Floats** and gliders with physics (CT), chemistry (O_2 and NO_3^-), optics (chlorophyll fluorescence, optical backscatter, **attenuation, PAR**), zooplankton (**acoustics** – new addition).
- Ships for calibrating sensors and validating proxies
 - deployment and servicing cruises for floats and gliders
 - process cruises for more biological & chemical measurements