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GEOTRACES Atlantic Section: $\delta^{30}\text{Si-Si}(\text{OH})_4$ across the North Atlantic ocean:

I plan to submit a proposal on February 15th 2009 to measure $\delta^{30}\text{Si}$ of dissolved silicon at each of the 22 full stations planned. This will require 1 Liter samples of filtered seawater (< 0.6 microns) collected by the standard Niskin rosette at each of the 24 depths planned for the full depth stations. I would like to coordinate for someone on the ship to take the samples so that I would not need a berth. If logistics allow direct filtering of samples off of the Rosette this sampling will not require any laboratory bench space. This project will provide the first East-West transect of silicon isotopes distribution in the Atlantic ocean. The objectives are 1) to determine the distribution of $\delta^{30}\text{Si}$ in the North Atlantic different water masses (NADW, AAIW, AABW...) and 2) to evaluate potential variation in the fractionation factor through the regional gradients in biological productivity.

In addition, I would like to coordinate to obtain particulate samples from in situ pumps but only for a limited number of stations (4-8). This would provide the first measurements of silicon isotopes in sinking particles.