

Tom Church (University of Delaware) tchurch@udel.edu
Mark Baskaran (Wayne State University) <Baskaran@wayne.edu>
Gillian Stewart (Queens College) <gillian.stewart@qc.cuny.edu>

We plan to submit a collaborative proposal to measure dissolved and particulate activities of ^{210}Po and ^{210}Pb at each of the 22 full-depth stations planned for the North Atlantic transect. We also propose to measure ^{210}Po and ^{210}Pb in a suite of aerosol filters (Quartz, Whatman and Impactor) to quantify the atmospheric input to the surface ocean.

We generally require 20-L water samples of filtered water collected using standard Niskin rosette at each of the 24 depths planned for each full depth station. At selected depths, replicates will be collected for quality control. We request one berth for this sampling endeavor. The person will be responsible for filtering water from the Niskin rosette and conduct preliminary preconcentration onboard. The person will also be able to help collect and distribute samples to other groups and will work closely with other radionuclide group. We are flexible to work with other groups and share data (such Pb-210 data in its utility as tracer for other stable isotopes of Pb).

We will request the PIs responsible for in-situ filtration an aliquot of filter for particulate material as well as filters from large-volume filtration. We also will request aliquots of aerosol filters (Quartz, Whatman and Impactor) for the measurements of ^{210}Po and ^{210}Pb to quantify their atmospheric input. Processing of samples will be equally divided among the three participating laboratories.

The aerosol component of the work and the measurements of dissolved and particulate ^{210}Po and ^{210}Pb will be divided among the three groups, with one group taking a lead on one component of the work.

We will submit a collaborative research proposal for the 15 August 2009 target date.