

Dr. Robert Anderson / GEOTRACES
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4 October 2013

Dear Bob,

This letter is to inform you of my interest in participating in a GEOTRACES/Arctic proposal in coordination/collaboration with Paul Quay (University of Washington). Paul would quantify the total dissolved inorganic carbon content and related stable carbon isotopic analyses ($\delta^{13}\text{C}$) and on ampoules of CO_2 prepared by Paul, we would be determining the $\Delta^{14}\text{C}$ of ΣDIC via ^{14}C -AMS.

Scientific goals include but are not exclusive to:

Determining the carbon and related isotopes content of total dissolved inorganic carbon.
Relate the carbon content and the uptake and redistribution of 'bomb- ^{14}C ' to anthropogenic CO_2 , including Suess effect ($\delta^{13}\text{C}$) and carbon transfer.
Determine carbon particulate export (budget).

Anticipated collaborators:

All PIs using transient tracers (eg., $^3\text{H}/^3\text{He}$, CFCs, etc)

All PIs using tracers/observations that explore or require knowledge of the movement of carbon.

Berths and Logistics:

It is not anticipated that the ^{14}C side of the project would require berths.

Sample would come from the ΣDIC samples

Water needs are minimal (1 liter) and could be from the non-trace metal clean casts.

Sincerely,
Tom Guilderson

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