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#### Statement of Interest for GEOTRACES Atlantic Section: Dissolved Iron and Iron(II)

We will submit a proposal to determine dissolved iron and iron(II) in water-column and surface-water samples, using shipboard flow injection analysis, with the aims of (1) testing specific hypotheses concerning the inputs, distribution and internal cycling of iron in the North Atlantic, (2) guiding water sampling strategy during the cruise, and (3) evaluating potential contamination of water samples during the cruise. In addition, we propose to analyze duplicate samples after the cruise by both flow injection analysis and high-resolution inductively coupled plasma mass spectrometry, with the aims of comparing these two analytical methods and of assessing the effects of extended storage of acidified seawater samples. The dissolved iron measurements will require 2 x 125 mL of 0.45 µm-filtered seawater from each depth sampled by the GEOTRACES clean rosette system, and from the discrete samples collected using the underway clean towfish system. The shipboard iron(II) measurements will require an additional unfiltered 60 mL sample drawn from the GO-Flo bottles as soon as possible after recovery, and from the towfish underway supply. To allow analysis and data processing in semi-real time, the project will require 3 berths. The project will also require approx. 2 x 8 feet of internal lab bench space, to accommodate 2 laminar flow benches and 2 flow analysis systems (no clean lab/bubble is required).