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Anitra Ingalls and David Stahl intend to submit a proposal to Chemical Oceanography to investigate the role of marine archaea in the internal cycling of trace metals, particularly Fe and Cu. While we are not proposing to make any of the core measurements stated in the GEOTRACES science plan, our participation in the North Atlantic Section would further our understanding of microbes in the internal cycling of trace metals, a stated GEOTRACES objective. We are submitting a statement of interest so that the GEOTRACES community is aware of our interest in collaborating.

We would like to sample at the 6 superstations at ~4 depths in the upper 1000m and 2 depths below 1000m. We would like to collect the particles from 0.2 $\mu$ m (Duro pore filters) filtered water for lipid biomarker and molecular biological investigations of gene abundance and expression. Ideally we would collect particles from ~50L of water. In addition to these 50L samples at the 6 superstations, we would like to collect particles from ~200L of water (0.2 $\mu$ m filter) for more complete molecular analysis on a subset of 2-3 samples. Our samples need to be stored at -80°C.

Water can be filtered in situ with MULVFS or McLane pumps or on deck. However, due to the high demand, we are not requesting any berths. So, ideally we will be able to obtain samples from others planning to carry out in situ pumping. We could also collect some of the 200L samples from the towed fish (50m) if someone was willing to filter water for us on deck.