

Dissolved Fe, Mn, Cu, Zn and Cd, colloidal Fe and isotopic ratio of dissolved and colloidal Fe

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I plan to submit a proposal to measure the concentrations of dissolved Fe, Mn, Zn, Cu and Cd in all the samples collected at all the full-depth station planned for the cruise, and the concentrations of colloidal Fe and the isotopic ratio of dissolved and colloidal Fe in about half of the samples collected at all the full-depth station planned for the cruise. These measurements will be used to understand the processes responsible for the large scale distribution of dissolved Fe, Mn, Zn and Cu especially in the low oxygen environment and the influence by hydrothermal activity in the Pacific Ocean. The measurement of all the above parameters for each sample requires two liter of filtered seawater collected by the GEOTRACES trace metal clean sampler. I plan to participate in the cruise for sample collection and processing.