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Although I am interested in many aspects of the GEOTRACES Key Parameter list (Fe, Cu, Cd, Zn, Pb, and Pb isotopes), given the advice we have received to focus on a narrower research problem, I am choosing to submit a "science" proposal to measure Pb and Pb isotopes on the Atlantic Zonal Section. Because of the large preparation time (bottle cleaning and improved method efficiency work), time at sea, and analysis workload, I will propose a three-year proposal with one month of my summer salary, partial technician support, and partial graduate student support.

Because of the high sample load (~500 samples), I will propose to analyze all of the main station samples (i.e., from the approximately 22 stations) for Pb but only about half of the samples for Pb isotopes, which is a much more labor intensive measurement. Sufficient samples will be collected at all main stations to fill in Pb isotope data in regions where more detailed data is necessary to resolve the distribution.

My expectation is that if I am funded I will be on the cruise and bring 1-3 others depending on cruise needs and berth space.

In the proposal I will add in a short statement about my capabilities and interests in the other elements and say that I will work together with the other program participants to help maintain quality control for those elements. If in the end there are other people also interested in Pb and Pb isotopes on this section who will submit proposals and are funded (so far my inquiries have not found such a person), I can arrange to put some of my effort into those other properties if the funded PIs agree that this would be beneficial to the program.