

## Setup for flux fusions for Hf-isotopic and $^{230}\text{Th}_{\text{xs}}$ measurements in marine sediments

Tina van de Flierdt ([tina@ldeo.columbia.edu](mailto:tina@ldeo.columbia.edu)) and Allison Franzese ([franzese@ldeo.columbia.edu](mailto:franzese@ldeo.columbia.edu))

**Abstract** - We request funds to set up a  $\text{LiOB}_2$  flux fusion procedure for dissolving marine sediment samples for Hf-isotopic and  $^{230}\text{Th}_{\text{xs}}$  measurements in geochemistry. Our request is based on the value of provenance and sediment flux measurements in marine sediments to paleoclimate studies. The sources and pathways of sediment distribution in the ocean are linked to atmospheric and ocean circulation. Accordingly changes in sediment provenance and flux in marine cores may be used to understand past changes in atmospheric and ocean circulation. Additionally, Hf-Nd isotope time-series in authigenic marine sediments emphasize the potential for better constraining the weathering contribution of these isotopes to the ocean budget as well as linking compositional changes to glacial inceptions. In order to fully capitalize on the vast potential of this approach, a significant ground-truthing effort is necessary.