



AWSFL008-DS3

NSF Award Abstract
- #0305755

**Melt Inclusions in Izu Arc Lavas: Examining
Slab-Derived Contributions to
Intra-Oceanic Arc Magmas and the Role of
Volatiles in the Subduction Factory**

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NSF Program 1620 MARINE GEOLOGY AND
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Abstract

Via a Japanese, American, and European collaboration, this study will analyze major, trace and volatile elements (H₂O, CO₂, S, Cl, F) and B and H isotopic composition in melt inclusions and lavas from the Izu arc using petrographic, electron microprobe, ion microprobe and laser-ablation ICP-MS techniques. Melt inclusions will provide primary constraints on the major, trace and volatile element contents and boron and hydrogen isotope compositions of primitive Izu arc melts, and this data will test and constrain geochemical, petrological, geophysical and thermal models for subduction in this region, one of the MARGINS program selected study areas, and elsewhere.

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