Volcanic Growth Rates and Elemental Fluxes From Central America

Abstract

Abstract Under this award the PIs will attempt to determine the flux of highly incompatible elements out of the volcanic front in Nicaragua and Costa Rica, in order to make realistic mass balance estimates for highly incompatible elements in the Subduction Factory. The idea is to determine volcanic production rates through strategic sampling of the older parts of the 20 Quaternary volcanic
centers in the arc and to obtain reliable and meaningful age dates that will allow them to calculate growth rates for the predominantly mafic volcanic centers. This study should also allow the PIs to determine whether the volcanic production rate (and thereby the fluxes of incompatible elements) is constant or a series of pulses and gaps. Broader impacts include international collaboration and broad student involvement.

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