NSF Award Abstract - #0505924

Volcanic Growth Rates and Elemental Fluxes From Central America

NSF Org OCE
Intial Amendment Date August 9, 2005
Latest Amendment Date August 9, 2005
Award Number 0505924
Award Instrument Continuing grant
Program Manager Rodey Batiza
OCE Division of Ocean Sciences
GEO Directorate for Geosciences
Start Date August 1, 2005
Expires July 31, 2006 (Estimated)
Awarded Amount to Date $40000

Investigator(s) Michael Carr carr@rci.rutgers.edu(Principal Investigator)
Mark Feigenson (Co-Principal Investigator)
Carl Swisher (Co-Principal Investigator)
Brent Turrin (Co-Principal Investigator)
Sponsor Rutgers University New Brunswick
ASB III, 3 Rutgers Plaza
New Brunswick, NJ 08901 732/932-0150

NSF Program(s) MARINE GEOLOGY AND GEOPHYSICS
Field Application(s) 0000099 Other Applications NEC,
0204000 Oceanography
Program Reference Code(s) OTHR,0000
Program Element Code(s) 1620

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.
