



AWSFL008-DS3

NSF Award Abstract
- #9905355

**Collaborative Research: Structure of the
Nicaragua/Costa Rica Subduction Zone: A
Framework for the Subduction Factory and
Seismogenic Zone Initiatives**

NSF Org OCE

Latest Amendment Date April 21, 2000

Award Number 9905355

Award Instrument Standard Grant

Program Manager James F. Allan

OCE DIVISION OF OCEAN
SCIENCES

GEO DIRECTORATE FOR
GEOSCIENCES

Start Date January 1, 2000

Expires December 31, 2003 (Estimated)

Expected Total Amount \$425668 (Estimated)

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NSF Program 5720 OCEAN DRILLING
PROGRAM

Field Application 0204000 Oceanography
Program Reference Code 0000,OTHR,

Abstract

99-05355 McIntosh

Recommended Project is for a multichannel seismic (MCS) survey of the subducting ocean crust off the coasts of Nicaragua and Costa Rica in support of both SEIZE and Subduction Factory objectives in this Margins program study area. The primary objective is to characterize the changing structural nature of the subducting Cocos plate, and to try to relate these changes to known chemical segmentation of the volcanic arc, best shown by ratios such as Ba/La that reflect relative changes in material input into the subduction zone. The MCS survey will be supplemented by three wide-angle, ocean bottom hydrophone (OBH) refraction lines, two perpendicular and one parallel to the trench, as well as by Hydrosweep swath bathymetry, gravity, and magnetics data. This proposed study is part of a larger, international effort, using the German research vessel R/V Sonne. The MCS and Hydrosweep surveys would be conducted aboard the R/V Maurice Ewing, using its 6 km-long streamer. The R/V Sonne will be used to supply, deploy and recover the OBH's, which will themselves be supplied by GEOMAR. ***

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