



AWSFL008-DS3

NSF Award Abstract
- #9910609

**Collaborative Research: Imaging the Seismogenic
Zone with Geodesy and
Seismology: Two Land Ocean Transects Across
Costa Rica and the Middle America
Trench**

NSF Org OCE

Latest Amendment Date May 7, 2001

Award Number 9910609

Award Instrument Standard Grant

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OCE DIVISION OF OCEAN
SCIENCES
GEO DIRECTORATE FOR
GEOSCIENCES

Start Date August 1, 1999

Expires November 30, 2003 (Estimated)

Expected Total Amount \$362697 (Estimated)

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NSF Program 1620 MARINE GEOLOGY AND

GEOPHYSICS

Field Application 0204000 Oceanography
Program Reference Code 0000,OTHR,

Abstract

Funds are being provided for a three year, multi-institutional, two-transect, geodetic and seismic experiment across the Middle America Trench and Costa Rica, immediately above the seismogenic interface between subducting Cocos and overriding Caribbean plates. The PIs will operate GPS, leveling, and digitally recording seismometers on land and deploy ocean bottom seismometers (OBSs) offshore. The goal is to map the three-dimensional distribution and nature of the seismogenic zone, the locked or the partly locked plate interface that generates large earthquakes, for comparison to processes that control the distribution of seismicity and plate coupling. The imaging of the seismogenic zone will be enhanced in the Nicoya and Osa peninsular region because of the close approach of local coastline to the trench axis where the large earthquakes are generated.

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