

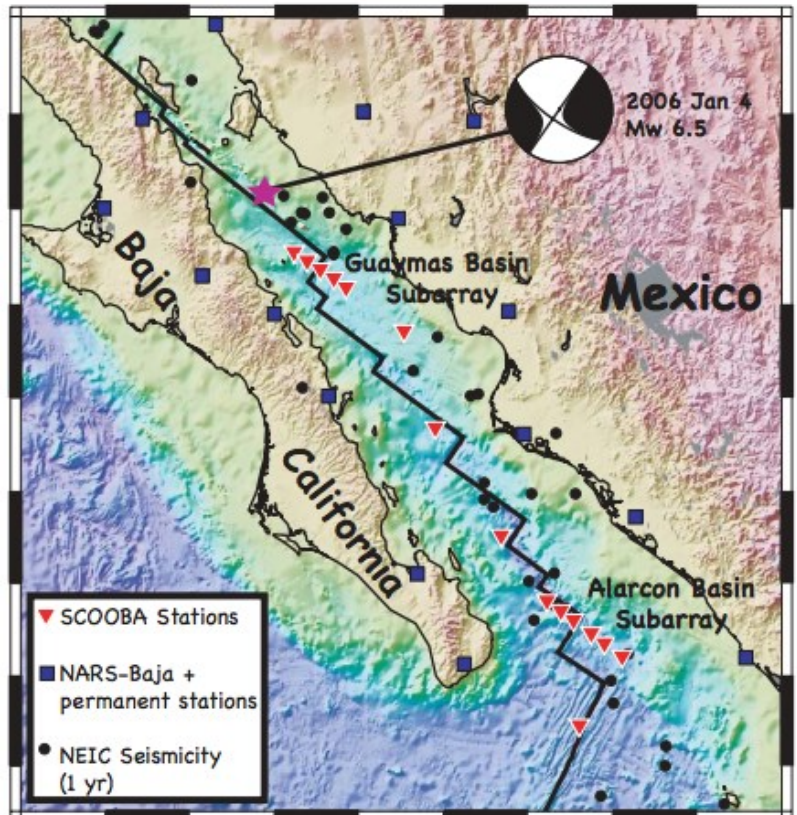
OBSIP Experiment Archive

Year:	2005
Experiment Name:	Sea of Cortez Ocean Bottom Array (SCOOPA) A seismic investigation of the influence of upper-mantle structure and dynamics on faulting, extension, and rifting in the Sea of Cortez (Gulf of California), Mexico.
Principal Investigator(s):	Jim Gaherty (LDEO) John Collins (WHOI) Raul Castro (CICESE)

Experiment Summary: (Taken from NSF Abstract Award #[0436411](#)): In this experiment, which is part of the NSF Margins initiative on Rifting Continental Lithosphere, the investigators are deploying 18 wide-band ocean bottom seismographs (OBS) in the Gulf of California for a period of 15 months. These seismographs are recording naturally occurring seismicity (over 200 moderate and large earthquakes) from around the globe. Using these seismic recordings, the investigators are constructing images of the mantle beneath the Gulf and the surrounding region, providing a means to evaluate the degree to which mantle processes control lithospheric rupture and the initiation of seafloor spreading in the Gulf of California. The experiment is focused on

two questions that are particularly important for achieving the goals of the Rifting Continental Lithosphere initiative: (1) Is the upper-mantle directly underlying Gulf of California extension anomalously hot? (2) To what extent do North-South variations in extensional style correlate with upper-mantle velocity variations? The OBS deployment also provides the means to better characterize seismically active faults within the Gulf of California, improving the assessment of the natural hazards environment of the region.

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Cruises:

10/12/2005 - 10/21/2005:

15 SIO broadband ocean bottom seismographs were deployed on board the R/V New Horizon. [

10/1/2006 - 10/17/2006:

14 SIO broadband ocean bottom seismographs were recovered on the R/V New Horizon, 1 OBS was unresponsive.

Data:

Data from all instruments deployed are archived under temporary network code [ZL](#) at the IRIS DMC.

Downloads/Links:

[BSSA Publication](#)

[Poster Presentation](#)

[Southern Gulf Earthquake Catalog](#)

[SCOoba Website](#)

[Cruise Report 2005](#)

[Cruise Report 2006](#)