NSF Award Abstract

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MARGINS: NARS-Baja: A Five-Year Deployment of Broadband Seismic Instruments around the Gulf of California

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Abstract

Project Abstract

NARS-Baja: A 5-year Deployment of Broadband Seismic Instruments Around the Gulf of California

NARS-Baja is a 5-year deployment of seismic instruments along the Baja-California peninsula and Sonora province in Mexico. This network fills a gap of seismic instrumentation between present-day networks in California and southern Mexico Seismic data from NARS-Baja is key to constrain the structure of the crust and mantle and to study earthquake faulting in the Gulf of California region, where active rifting is taking place. NARS-Baja involves collaboration between the California Institute of Technology (Pasadena, USA), CICESE (Ensenada. Mexico), and the University of Utrecht (Utrecht, The Netherlands). The first seismic instruments of NARS-Baja will be installed in October of 2001.

The NARS-Baja network shares many similarities with other passive-source deployments, commonly funded by the PASSCAL program of the National Science Foundation. However, in some aspects NARS-Baja stands out. (1) NARS-Baja will be in operation for at least 5 years to ensure that a large seismic database is constructed. (2) NARS-Baja bridges the gap in seismic stations between present-day broadband networks in California and the UNAM network in southern Mexico. In combination with these networks, NARS-Baja yields an unprecedented 3000-km long array along the tectonically active Pacific margin of Mexico and California. (3) The NARS-Baja data will be made available via the Internet from the IRIS data center as soon as it is received and checked. This

promotes involvement by the entire research community.

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