# OBSIP Experiment Archive

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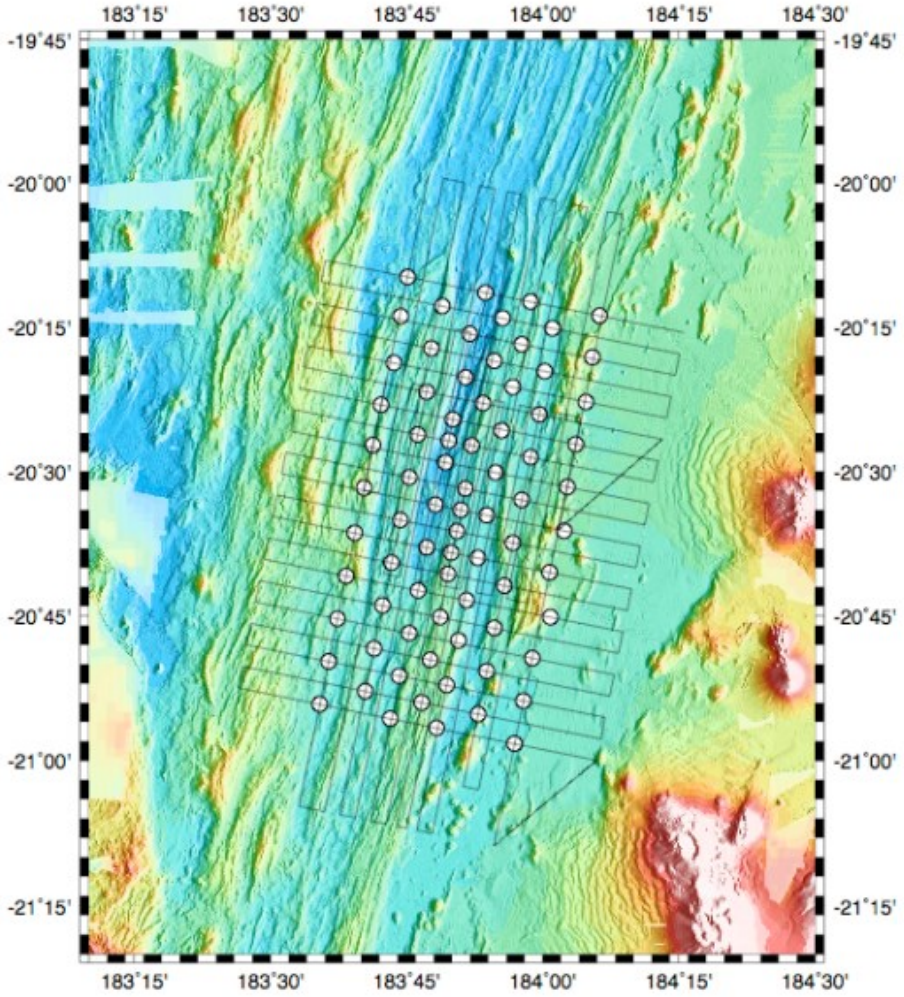
| **Year:** | 2009 |
| **Experiment Name:** | Lau Basin<br>Lau Spreading Center Active-source Investigation (L-SCAN) |
| **Principal Investigator(s):** | Doug Wiens (WUSTL) |

**Experiment Summary:** (Taken from the NSF Abstract Award #0426408): This is a combined active and passive seismic experiment along the Eastern Lau Spreading Center to test the following hypotheses. 1. Circulation in the mantle wedge is dominated by slab driven flow. 2. Interaction of the arc and backarc magma production controls the character of the ridge by influencing melt flux, petrology, and geochemistry. 3. Variations in the mantle melt supply control ridge crest features such as morphology, thermal structure, and hydrothermal venting. The passive experiment consists of 55 broadband ocean bottom seismographs and five land seismographs deployed for 10 months to image the larger-scale structure of the melt production region and the mantle flow pattern. The active source experiment consists of 100 ocean bottom seismographs deployed along a 250 km section of the spreading center extending from the inflated Vala Fa region to the magma-starved northern Eastern Lau Spreading Center where the axial melt lens is absent.

*Continued Next Page*




*OBS deployments for the L-SCAN experiment.*

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**Cruises:**
*1/24/2009 - 3/8/2009:*
59 short period OBSIP ocean-bottom seismometers were deployed, 25 were recovered and redeployed, and then all 59 were recovered on board the R/V Langseth for 84 SP deployments or sites total. 38 of these deployments were WHOI OBS and 46 were SIO OBS.

**Data:**
Data from all OBSIP instruments deployed is archived under temporary network code YL and assembled data set ID #09-012 at the IRIS DMC.

Data is not archived for 46 SIO SP OBS in mSEED and 34 SIO SP OBS in SEG-Y.

**Downloads/Links:**

Cruise Report

Additional Lau Basin Studies