

OBSIP Experiment Archive

Year:	2001
Experiment Name:	Gravity Lineations, Intraplate Melting, Petrologic and Seismic Expedition (GLIMPSE)
Principal Investigator(s):	Don Forsyth

Experiment Summary: (Taken from the NSF Abstract Award #[9911729](#)): This project addresses the origin of intraplate volcanic ridges - often called cross-grain anomalies - located on the Pacific plate. Suggestions for the origin of these ridges include small-scale convection rolls, lithospheric boudinage, and small plumes resembling mini-hotspots that originate in the upper mantle. Two neighboring intraplate ridges will be studied. Measurements will include ocean-bottom seismometer observations of mantle structure, a seismic refraction/reflection profile of crustal structure, micro- earthquake recordings, extensive geochemical probing of the melting conditions and composition of the mantle, radiometric dating of the timing of volcanic activity, and mapping of bathymetry, seafloor sidescan reflectivity, sediment thickness, and gravity and magnetic anomalies.

Cruises:

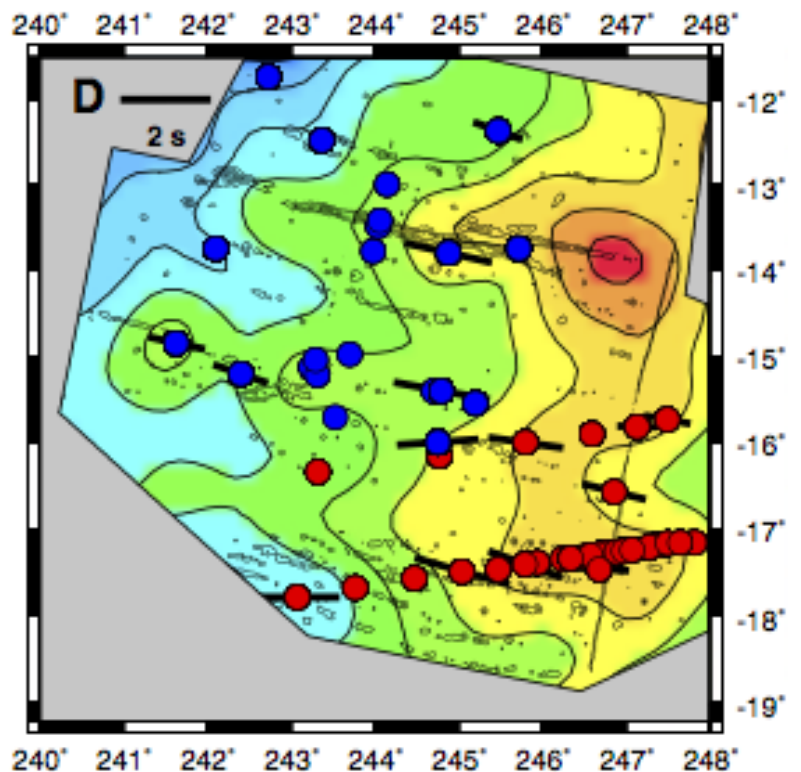
12/01/2001 - 11/25/2002: Cruise from Arica to Valparaiso, Chile aboard the R/V Melville.

Data:

Data from all instruments deployed are archived under temporary network code [2A](#) at the IRIS DMC .

Downloads/Links:

[JGR Publication](#)



Stations that are deployed as part of GLIMPSE (blue circles)