OBSIP Experiment Archive

Year:	2004
Experiment Name:	Development and Testing of a Deep-Water, Acoustically-Linked, Moored-Buoy Seafloor Observatory (Nootka)
Principal Investigator(s):	D. Frye J. Ware M. Grund J. Partan P. Koski S. Singh L. Freitag J. Collins R. Detrick

Experiment Summary: (Taken from IEEE Article): A buoy-based observatory that uses acoustic communication to retrieve data from water column and seafloor instruments has been developed and deployed in 2362 m of water offshore Vancouver Island. The system uses high-rate (5000 bps) acoustic modems that are power-efficient (on order 1000 bits per joule) to telemeter data from an ocean bottom seismometer and a sensor monitoring a cold seep site near the Nootka fault. The buoy includes a Linux-based embedded controller, the modem base station and meteorological sensors.

Continued Next Page
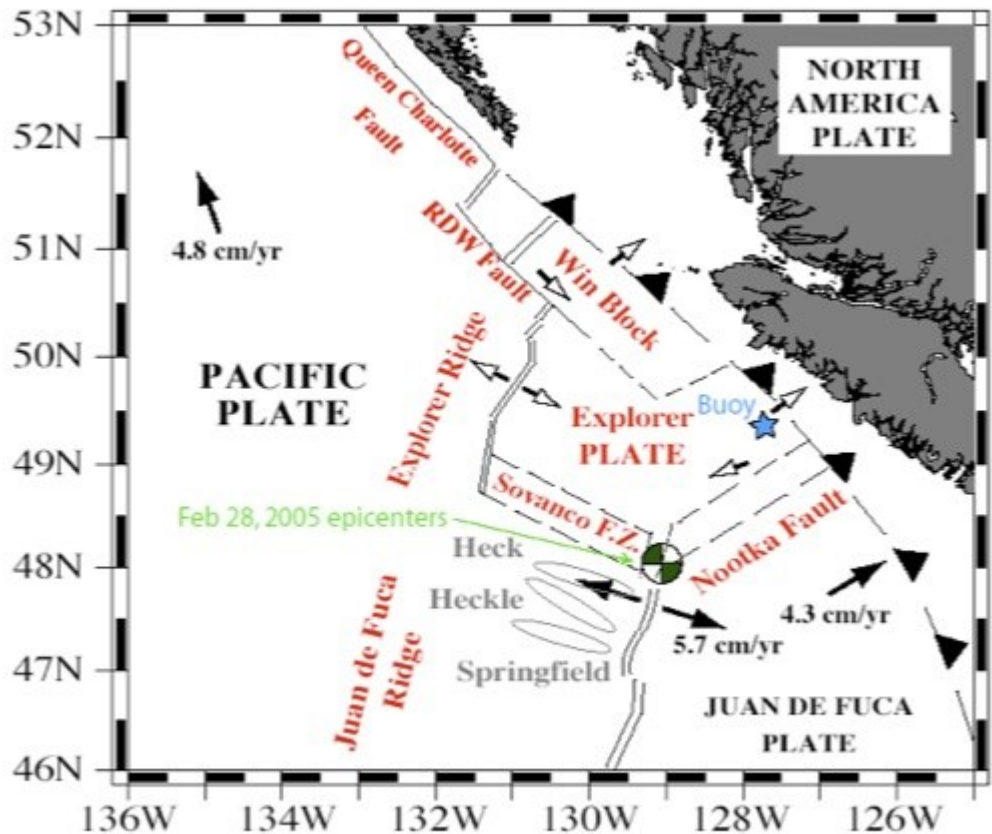
Location of the moored buoy (blue star) and the surrounding faults

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Experiment Summary: ... Data is off-loaded from the buoy using ftp, and remote login capability allows the acoustic communication schedule to be modified when instruments are added or removed from the network. The system has been operational for one year, typically transferring more than 500 Kbytes of data per day from two seafloor instruments.

Cruises:
5/16/2004 - 7/5/2005:
A single WHOI OBS with DPG was deployed and communicated 1 Hz data via an acoustically linked moored-buoy system while also recording 40 Hz data to be recovered at the end of the experiment.

Data:
Data from this instrument are archived under network code X1 at the IRIS DMC.

Downloads/Links:
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