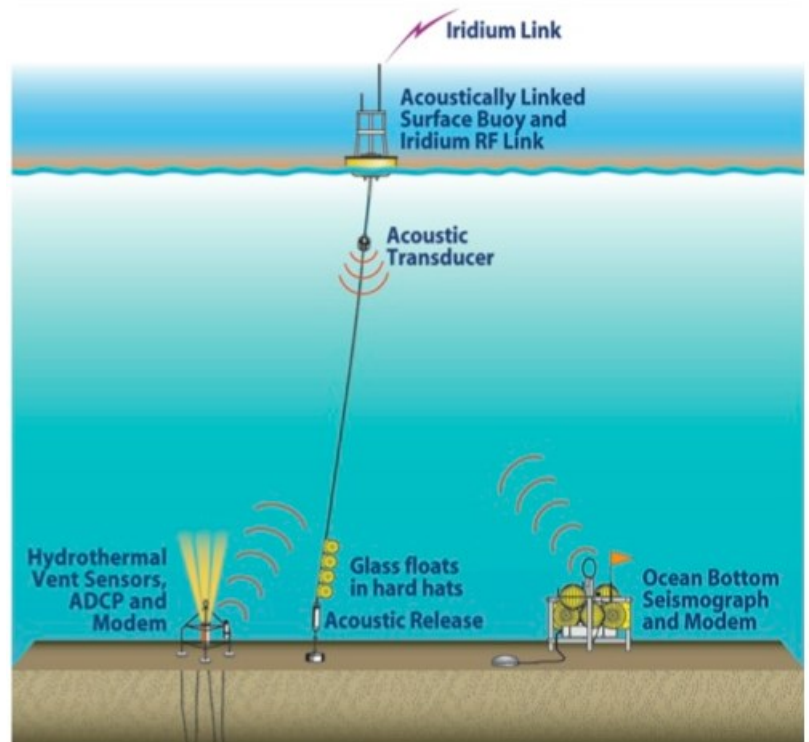


OBSIP Experiment Archive

Year:	2003
Experiment Name:	Development and Testing of a Deep-Water, Acoustically-Linked, Moored- Buoy Seafloor Observatory (ALST)
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 NSF Abstract [#0215670](#)): This Major Research Instrumentation award to Woods Hole Oceanographic Institution in Massachusetts provides funds to develop and test a prototype deep-water, acoustically-linked, moored-buoy seafloor observatory. The system will consist of a discus buoy on a single-point, deep-water mooring, equipped with a satellite link for 2-way communication to shore and a high-speed acoustic modem for 2-way communication with sensors on the seafloor and on the mooring itself. The suite of sensors, at two seafloor nodes, will include an ocean bottom seismograph (OBS), an acoustic current profiler (ADCP), hydrothermal flow meters with associated temperature, chemical and pressure sensors and a conductivity-temperature-depth (CTD) instrument. All will be interfaced to two acoustic modems, and they will transmit data to the surface buoy of the mooring, from which they will be transmitted daily to shore together with meteorological data from sensors on the surface buoy and current meter data from instruments installed on the mooring.



Conceptual drawing of an acoustically-linked observatory.

Continued Next Page

OBSIP Experiment Archive

...Continued

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Experiment Summary: ...The mooring was deployed for a 15-month demonstration project in the vicinity of the Nootka Fault, where complementary observatory experiments have been carried out under separate support from the Keck Foundation. This experiment is documented under the separate [Nootka experiment page](#).

Cruises:

11/19/2003 - 1/18/2004:

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 [ZT](#) at the IRIS DMC.

Downloads/Links:

None.