



Seismic oceanography using small-size seismic equipment.

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We report an attempt of exploring horizontal thermal fine structures in the water-column using the existing seismic equipment of the Royal Netherlands Institute of Sea Research (NIOZ). Until now, our work was focused on the dynamics of internal waves, including their interaction with small-scale stratification details such as temperature or salinity steps. Classical mooring instrumentation, including the new "NIOZ-3" high sampling rate thermistor string showed with very high details and dynamics of these layers in the vertical. The recent discovery of the possibility to use seismics to measure horizontal details of these structures is of primary interest for us, and we took advantage of the multidisciplinary of our institute to try to reproduce these measurements with our own seismic equipment.

This equipment consists of a small airgun array of 50ci in total and of a 24 channels streamer. We performed seismic lines conjointly with XBT casts in the Brazilian basin in the vicinity of an isolated seamount susceptible of generating internal wave activity. We report our last results from this campaign, and conclude on the eventual necessity of using larger equipment in the future.