



Signal to noise characterisation in southern Chile from data of the TIPTEQ Seismological Experiment (2004/2005)

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The large-scale, multi-discipline, experiment TIPTEQ (from The Incoming Plate to mega-Thrust Earthquake processes) has been taking place on- and offshore southern Chile since October 2004, acquiring seismic (active and passive), magnetic, geothermal, and gravimetric data.

Major goals of the passive seismological experiment are to compile a complete high resolution image (less than 1 km) of the whole seismogenic coupling zone and to investigate the influence of the thermal structure of the incoming plate on seismicity in the region. In total more than 170 (land and ocean bottom) passive seismic stations are recording local and teleseismic earthquakes at present. The network is subdivided into 3 parts, with two of them consisting of an on- and offshore, the third only of an offshore part. The northern network (located 37-39S/ 72-75W) consists of 120 land and 10 ocean bottom stations (OBS), mostly short-period. The average station spacing is about 5 km in the center and the network has an aperture of about 200x250 km. Further south, in the region of Chiloe, a network of 20 land stations and 18 OBSs is installed (42-43S/73-75W, 200x250 km aperture). Both networks will run continuously for about 9 months in total. Additionally, a dense OBS network (2 patches with 15 stations, approx. aperture each 50x50 km, 43-44S/76W) was deployed in the outer rise for one month. Here we present a first characterisation of the signal to noise ratio, which we record at the different on- and offshore stations, and also compare it to a network operated in northern Chile in 1995.

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