

ASAIN - Antarctic Seismological Network

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An optimal global coverage of the Earth with broadband seismographic stations is still an objective far from being reached. It has been remarked by many authors that this is especially true in the southern hemisphere, where relevant information on medium and low level seismicity is lost due to the lack of an appropriate density of stations in the oceanic regions and in the inhospitable Antarctic areas.

No permanent broadband land stations was operating there before 1992 and until today only a few temporary deployments of sea bottom seismographs on the oceanic floor of the Scotia Sea have been performed. Since then, a relevant effort has been conducted by some national Antarctic programs to install a broadband regional network capable of providing the seismological data base necessary to afford the study of those areas. Seven land stations have been put into operation up to now. All of them constitute the Antarctic Seismographic Argentinean Italian Network (ASAIN), AI is the Network code assigned by International Federation of Digital Seismic networks (FDSN).

In the last 24 years OGS (Istituto Nazionale di Oceanografia e Geofisica Sperimentale), PNRA (Programma Nazionale di Ricerca in Antartide) and DNA-IAA (Dirección Nacional del Antártico - Instituto Antártico Argentino) deployed and managed the ASAIN, a broadband seismic network, that operated in the Scotia Sea region, Antarctic Peninsula and polar area. Data from this network are sent in real time by satellite transmission to OGS and DNA-IAA and then also to IRIS (Incorporated Research Institutions for Seismology) and ORFEUS (Observatories and Research Facilities for European Seismology) and are freely accessible in MiniSEED format.