

Analyzing seismic explosion records using SEISAN

This presentation gives an overview of the seismic analysis software package SEISAN. Initially SEISAN was developed to analyse seismic records of earthquakes in local networks, but the package has undergone a steady development so that it today can be applied to seismic sources at all distances including possible nuclear explosions. SEISAN is used in more than 30 countries, mainly in small seismology groups and primarily on Windows or Linux platforms. SEISAN is also used at NDCs in many parts of the world. The architecture of SEISAN is based on a database structure where the three main parts are the parametric data, the waveform data and the metadata. The parametric data are based on the well-established Nordic format, the International Seismological Centre reports that app. 25% of the bulletins they received are in the Nordic format. SEISAN reads a number of waveform formats, but miniseed is preferred. Waveform-data can be in stored in SDS, BUD or a SEISAN structured file systems. SEISAN reads instrument metadata in an internal format, but also in SEED and GSE format. Data examples showing how SEISAN can aid smaller NDCs are given based on data from the IMS and on data from local a seismic network.

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