

# Seismic Event Detection Using Real Time Data from the IMS

*Friday, 23 June 2023 09:31 (1 minute)*

This presentation gives examples on how a National Data Centre (NDC) can automatically detect seismic events data obtained in near real time from the IMS through the SeedLink service available on the Global Communications Infrastructure (GCI), using the seismic analysis software NETDET that is part of the SEISAN package. We also show how to integrate the GCI data with locally collected data and how to analyse the data to obtain event locations and magnitudes. SEISAN (see <http://seisan.info>) is used in more than 30 countries mainly at smaller seismic networks or by students or researchers, for processing data from permanent or temporary seismic networks and at a number of NDCs. NETDET is a newly developed tool for SEISAN that enables event detection and location in near real time or offline. At an NDC the data flow from the GCI is sent with SeedLink to a SDS or BUD miniseed archive structure from where NETDET loads the data and perform data processing and event analysis automatically. Dependent on the parameterization of NETDET location and magnitude estimations will be performed. The configuration of the data flow and the possible parameterization of NETDET will be presented.

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## Promotional text

We present a new method for NDCs to use CTBTO seismic realtime data in the local events detection, which will enable NDCs to improve nuclear test monitoring and / or scientific and civil applications, using the SeedLink service available on the GCI.

## Oral preference format

in-person

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**Track Classification:** Theme 5. CTBT in a Global Context: T5.3 Regional Empowerment