

Recognition Methods for Identifying Aftershock Sequences

The detection and identification of aftershocks is an important and challenging task for the efficient seismic processing in the CTBT context. In this work we apply a template-based sonogram pattern recognition and a waveform correlation detector in order to identify events which are part of the aftershock sequence. The concept is demonstrated using the February 2004 Dead Sea earthquake with magnitude $ML=5.2$ and its aftershock sequence. The events were recorded by stations of the Israeli seismic network and IMS stations EIL and MMAI. The master patterns include the main earthquake and several strong aftershocks with $ML \geq 2.5$. The obtained results are validated by the analyst and they are compared with the data set recorded by a portable sparse array deployed at an epicentral distance of 15 km from the earthquake.

Primary author: BREGMAN, Yuri (Soreq Nuclear Research Center)

Presenter: BREGMAN, Yuri (Soreq Nuclear Research Center)

Track Classification: Theme 3: Advances in Sensors, Networks and Processing