

Enhancing Signal Detection at International Monitoring System Seismometer Arrays

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Seismometer arrays form the core of the International Monitoring System (IMS) waveform network, and enhancing signal detector performance should lead to improvements in the performance of all subsequent parts of the International Data Centre (IDC) waveform processing pipeline. Recently a test data set was released by the IDC composed of signal detections made by an implementation of the generalized F detector (Selby 2008, 2011, 2013) at multiple IMS seismometer arrays. In this presentation we will cover the following related topics: i) the performance of the generalized F detector in this test data set in comparison with the existing signal detection algorithm used at the IDC; ii) if and how to apply f-k analysis to detections made by the generalized F detector, and iii) outline approaches to the physical characterization of signals observed at IMS arrays to enhance the performance of the generalized F or other detectors.

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Promotional text

Enhancing signal detection methods will lead to an improvement of the CTBT verification regime.

Oral preference format

in-person

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