

T3.3-P18. Is more less in signal detection?

Seismological signal detection is the process of identifying those parts of a recorded waveform that may contain information about seismic events of interest. Detected signals can be associated to define, locate, and characterise these events. Recent work has demonstrated that advanced signal detection algorithms such as the generalised F detector (Selby; 2008,2011,2013), when compared with the existing detector used at the International Data Centre, detect as many signals associated with events (e.g., those listed in the Reviewed Event Bulletin) while greatly reducing the number of unassociated signals. Here I investigate factors that may explain this difference, including the detection statistics, the algorithm logic, and detection thresholds. Further enhancement of signal detection algorithms requires that the behaviour of current systems is thoroughly understood.

Primary author: SELBY, Neil (AWE Blacknest)

Presenter: SELBY, Neil (AWE Blacknest)

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