ID: Type: **Poster**

T3.3-P08. DataScale project: Seismic event location using waveform correlation techniques at global scale

DataScale is a French Software Project born at the call number 3 «Cloud Computing» and «Big Data» of French "Investissements d'avenir". The goal of the project is to develop a data analysis tool leading to revise the seismicity at global scale between 2002 to 2012. Seismic waveform data are obtained from the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) using primary seismic network of the International Monitoring System (i.e. 23 seismic arrays, distributed globally). We present a waveform cross-correlation algorithm and the associated process workflow. This process leads to build a new seismic bulletin taking as input events subsets coming from the Reviewed Event Bulletin (REB). A detailed study of the template selection is presented and the results suggest that broad monitoring using historical templates of interest is feasible and increases detection capabilities and location precision. The computing platforms and preliminary performance tests are also presented.

Primary author: DUPONT, Aurélien (CEA)

Presenter: DUPONT, Aurélien (CEA)

Track Classification: 3. Advances in sensors, networks and processing