Geophysical Research Abstracts
Vol. 13, EGU2011-5910, 2011
EGU General Assembly 2011

Real-time computational seismology earthquake report: An example from Taiwan

Shiann-Jong Lee (1), Hui-Wen Cheng (2), and Wen-Tzong Liang (3)

(1) Institute of Earth Sciences, Academia Sinica, Taipei, Taiwan (sjlee@earth.sinica.edu.tw), (2) Institute of Geophysics, National Central University, Jhongli, Taiwan (huiwen@eqkc.earth.ncu.edu.tw), (3) Institute of Earth Sciences, Academia Sinica, Taipei, Taiwan (wtl@earth.sinica.edu.tw)

Real-time computational seismology is currently possible to be achieved in Taiwan which needs highly connection between seismic database and high preference computing. We are developing and testing a real-time moment tensor monitoring system (RMT) by using continuous broadband records. Our recent results show that the source parameters, including event time, event location, magnitude, moment tensor and focal mechanism can be obtain simultaneously within 2 minutes once the earthquake occurred at offshore northeast Taiwan. Our long-term goal is to apply this technique to real-time monitoring the seismic activities for the whole Taiwan. Once this goal is achieve, the follow-up near real-time earthquake simulation (ShakeMovie & ShakeMap) can be done straightforwardly (for M>=5 earthquakes). These results, including the real-time source parameters, synthetic seismic wave propagation and shake map, will apply to reduce the time needed in the seismic hazard assessment.