

Estimation Sources, Path and Site Effects from 2018 Lombok Earthquakes Sequences

Earthquakes sequences struck north part of Lombok Island are thrusting earthquake's type as interaction of back-arc Flores Thrust tectonic system. This earthquakes sequences is initiated by significant earthquake with magnitude M 6.4 (29 July 2018), M 6.9 (05 August 2018) and M 7.0 (19 August 2018). Using hybrid simultaneous displacement spectrum inversion for determining physic of source characteristic, path effect and amplification effect at recording seismic sites (PLAI, JAGI, SRBI and TWSI) reveals that the median static stress drop($\Delta\sigma$) is account 28,4 MPa and Q factor parameterise ($Q_0 f_0$) is about 64 f0.8. Processing of 8 significant earthquakes ranges from M. 4.9 to M 6.4 also indicates amplification factor of SRBI and TWSI are about 4 -6 Hz and 15 – 18 Hz respectively (ranges of dominant frequency) by assumption PLAI as reference station due to its MASW measurement is about 1385 m/s (rock site category).

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Track Classification: Theme 1. The Earth as a Complex System