

Acoustic emission accompanying seismogenic process observed at Matsushiro, Central Japan - an unexpected fact -

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Acoustic Emission (AE) was recorded at JMA Matsushiro Station (Nagano Prefecture, Japan) in the special tunnel at depth about 100m. Sensitive 3-component AE receiver was used. It has frequency response growing proportionally to cube of frequency and contains four narrow-band filters tuned at frequencies 30, 160, 500, 1000 Hz. We have analyzed for 7 months period from February to August 1998. 11 nearby and shallow ($3.8 < M < 5.2$, $D < 35\text{km}$) earthquakes (EQs) happened during this period and we have found an association of AE with them. Our conclusions are as follows: 1. There is definite AE response to the EQs, appearing as increasing of AE. 2 The observational results are in agreement with simple theoretical model suggesting propagation of seismic perturbations from the epicenter region.