

Explanation of the experimental results of LF-band signal transmission from the Nojima borehole electrodes

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We have conducted active experiments using the Nojima borehole electrodes to investigate whether active fault can be a propagation path for LF-band seismogenic electric signals. The active experiments showed that (1)longitudinal electric field-strength exceeded transverse one, (2)high electric field-strength zone expanded along the fault line, and (3)attenuation rate in the transverse direction were higher than that of the longitudinal direction. We explain those results, except field strength value, by using the FDTD analysis with a simple high conductive layer. It is therefore concluded that LF electric signal can really propagate along conductive fault zone.