

## Very low frequency earthquake generated at Kii Peninsula, Central Japan

# Yasushi Ishihara[1], Yoshiko Yamanaka[2], Masayuki Kikuchi[3]

[1] Sci, Yokohama City Univ, [2] ERI, Univ. of Tokyo, [3] ERI, Univ. Tokyo

<http://www.seis.yokohama-cu.ac.jp>

Recently, many kinds of seismic events with the variety of event time constants are recognized by the modern seismic observation networks. Major examples are low frequency earthquakes and tremor sources occurred at subducting plate and long-period event associated with the volcanic activities.

We discovered the very low frequency seismic event on broad-band seismic network records around 19:36, 25 Dec., 2001 (local time). The seismograms are dominated between 0.02 and 0.05 Hz. The higher frequency component is less than the noise level.

We estimated the source location, origin time and moment tensor by the grid search and wave-form inversion techniques. The hypocenter is estimated South-western Kii Peninsula, Central Japan. The depth is 20 to 40 km. The hypocenter is located in low frequency seismic zone. However, the seismograms' spectra are quite different. The source time is 10 to 20 sec from the spectra.

We concluded the existence of very low frequency seismic event. In our preliminary research, other very low frequency seismic events are detected which were occurred at Kii Peninsula and South Kyushu region. We plan to survey the long continuous broad-band records, detect and compile the slow event in the whole of Japan.