

# Strain seismogram observed at crustal deformation station of ERI, University of Tokyo

# Shigeru Nakao[1]; Yasuhiro Hirata[2]; Shigeru Watanabe[2]; Makoto Omura[3]

[1] Kagoshima Univ.; [2] ERI, Univ. of Tokyo; [3] Dept. of Environmental Science, Kochi Women's Univ.

A quartz-tube extensometer and a borehole type strainmeter have a wide frequency response from DC to several Hz. We have there stations with high sampling rate, 1 Hz since 1997. Data are sent from each station to ERI, Univ of Tokyo by satellite communication with Hakusan LT-8500 and Meisei sampling machines. High sampling data of Nokogiriyama observatory are high-cut-filtered with 20 seconds before digitizing. So, Nokogiriyama observatory is excluded in this analysis because we can not get strain seismogram with period shorter than 20 seconds.

Strain power spectra on at all sites are estimated from 0.0002 to 0.5 Hz by using strain data on December 25, 2004. Those of Fujigawa(FUJ) is the lowest one and strain power spectra from 0.01 to 0.5 Hz is almost constant value. Those of Muroto(MURT) and Ito(ITO) are about two and four order lager than those of FUJ, respectively.

We can see clear strain seismogram of Sumatra Earthquake (M9.1). The first arrival at FUJ is about 9 minutes after the onset of Sumatra Earthquake. The another strain wave arrives about 16 minutes after the onset. Strain seismogram of Sumatra Earthquake is also observed at other two sites (ITO, MURT). Strain signal of a large aftershock(M=7.1) is also observed. However, the amplitude is very small ( 20 times smaller than main shock). We will also present the seismogram of 2003 Tokachi-oki Earthquake (M=8.3).