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# of ULF and VLF Pre-Seismic Signal as Candidate Precursor in CTBTO Lembang Seismological Station (West Java, Indonesia)

The main purpose of this research is to investigate characteristic of Ultra Low Frequency (ULF) and Very Low Frequency (VLF) pre-seismic signal based on Z/H and resultant spectra ratio. In this method, we analyzed seismic signal and noise before the 2 September 2009 Tasikmalaya earthquake and their aftershock. Then we compared all results to finds the similarities and differences. We have assumed before the large earthquake occured still there energy in cluster area that can be analyzed in ULF and VLF pre-seismic signal. The energy release happened when the large earthquake occured. We used seismic signal and noise from 20 earthquakes that recorded at LEM station. The results shows that in Z/H and resultant spectra ratio of seismic signal and noise before the large earthquake occured appear the dominant peaks frequency which coming from noise (< 0.1 Hz), ULF (0.1 – 0.2 Hz), and VLF (0.2 – 0.4 Hz) signal. Meanwhile, the results of Z/H and resultant spectra ratio after the large earthquake only dominated by noise frequency with peak signal < 0.1 Hz. Therefore, we supposed that the ULF and VLF pre-seismic signal might can be used for candidate precursor of the future large earthquake.

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