

Distribution of Seismic Wave Amplification Based on Comparison Between Surface and Bedrock Peak Ground Acceleration (PGA) (Case Study: Java Island)

The amplification of seismic wave is different from one location to another. This occurs because of differences in the thickness of sediment on top of bedrock. The aims of this researchs are to find an amplification value at each station and to determine areas which soft or hard soil. Area of this research is in Java with the coordinates of 5° S - 12° S and 105° E - 115° E. Using a simple method to obtain amplification value that is based on comparison of the PGA value at the surface with the Young empirical formula for bedrock. The results are amplification value of each point sensor stations ranged from 0.23 to 11.14. The largest value of amplification (thick sediment layer) is 11.14 located at JCJI station in the Jatiwangi, Cirebon, West Java and the smallest value of amplification (thin sediment layer) is 0.23 located at CTJI station in Tegal, Central Java.

Primary author: GINTING, Mira (NDC Meteorology Climatology and Geophysics Agency (BMKG))

Presenter: GINTING, Mira (NDC Meteorology Climatology and Geophysics Agency (BMKG))

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