

Earthquake and Radioactivity, its Application in Indonesia

Indonesia is an area that is very prone to earthquakes. research needs to be done in an effort to minimize the impact of earthquakes. one of them is monitoring physical parameters that occur before, during, and after an earthquake. The parameter is the concentration of radon gas which has certain radioactivity and is considered capable of representing one of the parameters of the lithosphere dynamics when an earthquake occurs. Some results of the study indicate an increase in gas concentration before the earthquake. in Indonesia, monitoring devices for radon gas concentrations are installed in several regions to monitor this, including in Sumatera (Medan dan Liwa), Jawa (Lembang dan Yogyakarta), and Central Sulawesi (Palu). some temporary results from the earthquake case study show that there was an increase in the concentration of radon gas before the earthquake occurred, even the validation was more than 50%. this increase was observed by the standard deviation method, median absolute deviation, and also daily inconsistencies. this indicates that radon can be used as a physical parameter that can be observed to analyze physical phenomena other than seismic parameters, before, when and after earthquakes occur.

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