

Radon Concentration around Tachikawa Active Fault

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Characteristics of a radon concentration distribution around the Tachikawa active fault will be focused in this report.

According to the Headquarters for Earthquake Research Promotion, occurrence potentials of earthquake in active faults in Japan were updated after the Tohoku Earthquake (March 11, 2011). The report denotes the potential of the Tachikawa active fault while next 30 years was increased from 0.5-2% to 0.9-2%. In order to monitor a state change of the fault system by groundwater analysis, we have been surveying water qualities of spring water and hot-spring water.

Our survey of shallow spring waters around the fault in 2012 revealed that the radon concentration of shallow groundwater was affected by a cultivation process of groundwater on the ground surface around the northwest area of the Tama district. Therefore the shallow groundwater around the fault is not appropriate to get information on the state change of the fault. Our survey of deep hot-spring water around the fault in 2013 indicated the good relation between the radon concentration distribution and the location of the fault. The nearer the location of the hot-springs to the fault is, the higher the radon concentration becomes. Therefore the deep groundwater around the fault is useful to monitor the state change of the fault.

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