Exploration of Tachikawa Fault by Groundwater Radon Concentration

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We explored Tachikawa fault by use of groundwater radon concentration. Radon concentrations in shallow groundwater samples around the fault were comparable to that expected from the geology on the Kanto plane, and they were consistent with previous studies. Almost of all radon concentrations in deep groundwater from the bedrock-deep aquifer were also comparable to that in shallow groundwater. However radon concentrations in groundwater samples that were obtained at wells close to the fault were markedly higher than the expected radon concentration. This disparity can be explained by the existence of fracture zones spreading on both sides of the fault. The radon concentration distribution of deep groundwater samples suggests that a fault exists even at the southern part of the traditional line of Tachikawa fault.

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