RADON MESUREMENT ALONG THE ATOTSUGAWA FAULT

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The Atotsugawa fault whoes length is about 60km is a right-lateral strike-slip fault and displaced at the Ansei Hida earthquake occurred in 1858. Radon concentration discharged from the Atotsugawa fault were measured to study how high is radon concentration and what relations exist between the Atotsugawa fault and the concentration. The concentrations were measured by means of two kinds of methods to obtain information of radon discharge from ground surface of a sheared zone of the Atotsugawa fault.The one is a direct measurement which is performed by closed circumstances. The air inlet was set 70cm over the ground surface. The other is an indirect measurement which was done after sampling the air in the field of open circumstances. The air inlet was set also 70cm above the ground surface. Sampled air in special bag to get in the field of a indirect measurement has about 200 little in volume. Radon concentrations by the direct measurement showed higher value than the non-direct measurement by a factor of ten or so. Concentrations of radon by the direct measurement were 4 to 30Bq/m3. On the otherhand, concentraions by the indirect mesurement were 0.15 to 0.43Bq/m^3. Small earthquakes has occurred along the Atotsugawa fault. And they occur particularly in the middle part of the fault. But long time epicentral space distribution of small earthquakes arranges fairly straight line, say the Atotsugawa fault. The result of radon measurent shows that radon concentrations correspond strongly with geology. The concentrations are high in granit region and low in sedimentary rock regions. It is interested that radon concentrations in the strongly damaged area of the Ansei Hida earthquake region are relatively high. And also the strongly damaged area corresponds with the area of granite.