

## Radon concentration change monitored at Nakaizu (SKE) well

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We review a long-term radon concentration change monitored at the Nakaizu observation well. Subsequently, we report radon concentration change before and after the Tohoku Earthquake in March 2011.

Radon concentration change in groundwater of the Nakaizu well has been being monitored from 1976. Radon concentration change that was observed before the 1978 Izu-Oshima-Kinkai Earthquake is believed as a preseismic change because anomalous changes of groundwater temperature, groundwater level and volumetric strain were coincidentally recorded at other observatories in Izu Peninsula (Wakita 1980, 1996).

Since a radon monitor exceeded the durable years, we introduced a new-designed radon concentration recorder in October 2010. Radon concentration begun to increase in December 2010. The increase of the concentration stopped around the Tohoku Earthquake in March 2011, and the concentration began to decrease from about 60 days after the earthquake. The concentration reached to an original level in December 2010.

It is difficult to estimate the radon concentration change in this report by the same method as Wakita (1890) and Igarashi (1995), since there are no other reports of preseismic phenomena relating to the earthquake. However, we are going to continue the observation because a same behavior of radon concentration will be expected before forth-coming big earthquakes in near future. In addition, we believe that the monitoring is important to verify the validity of a proposed mechanism for such phenomenon (Tsunomori 2010).

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