

Temporal and spatial variations of Radon-222 in the western North Pacific

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A new compact radon measuring system has been developed for high-resolution observation of low-level radon-222 (Rn) for the remote sites, in collaboration with the MRI and AIST. The Rn measuring system was installed at 4 stations of Minamitorishima (MNM), Yonagunijima (YON), Chichijima (CCJ) and Ryori (RYO) operated by Japan Meteorological Agency (JMA) since 2007. The Rn measurements clearly show that distinct seasonal variations as well as frequent episodic events with Rn enhancement peaks on a synoptic scale are successfully captured at all 4 stations. Although the seasonal cycles depended on the stations, significant correlations between the Rn and other trace gases were found for the most of the synoptic-scale events, indicating a large impact of widespread pollutions from the East-Asian countries on the regional air quality over the western North Pacific.

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