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Atmospheric Radionuclides from the Fukushima Nuclear Accident-Two years observations in Tsukuba, Japan

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The accident of Fukushima Dai-Ichi Nuclear Power Plant of the Tokyo Electric Power Corporation arisen by the hit of great earthquake and tsunami in March 11, 2011, emitted abundant fresh radioactive material to the atmospheric environment. The amount has been estimated to be at least a few-tenth of those from the Chernobyl accident (by NISA, etc.). By this large-scale contamination, atmospheric environments over Japan, especially the eastern part, were seriously impacted with such a massive amount of the anthropogenic radionuclides (e.g. typical hotspots). So the persisting aftermath is one of the concerns. Although the heavy primary emission seems to be terminated until April of 2011, 2ndary emissions from contaminated ground surface, coppices, fields, roads, any burnings of the contaminated materials generated the resuspension of radionuclides into the atmosphere. With 2-years observation for the Fukushima radioactivity at the Meteorological Research Institute, Japan (MRI) such persisting resuspension is considered in this presentation. The resuspension seems still in difficulty to give forecast by computer modeling; the observations are indispensable bodies of the research even in the future.
The MRI has carried out observations of the atmospheric radionuclides, which are long-lived with potentials of environmental and health impacts, for more than 50 years. Aiming at to clarify temporal change in concentration of anthropogenic radionuclides in the atmosphere and its control factors, the observations have continued over the long period. The long-lasting impacts of the Fukushima accident are addressed with our long-term time series of the atmospheric radioactivity as a reference.