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## ORAL PRESENTATION - Isotopic composition of uranium in aerosol samples collected at 120 km south-southwestern of Fukushima before and after the nuclear power plant accident

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The isotopic composition of uranium (U) in aerosol samples collected before and after the accident of the Fukushima Daiichi nuclear power plant (FDI-NPP), occurred on March 11, 2011, was studied. The aerosol samples were collected on filters by an air sampling system in Tokai, Japan (at 120 km south-southwestern of the FDI-NPP). The filter samples were divided into several parts and U isotopic composition in each filter was analyzed. After ashing the filter samples at a high temperature, the filters were dissolved into acid solutions. Uranium was then chemically separated from the matrix using ion exchange and chromatographic resins. After repeated purification of U, the isotopic ratios were measured by sector field inductively coupled plasma mass spectrometry (SF-ICPMS). The compositions of U in the samples collected after the accident show that non-natural U existed in the aerosol. The results of series measurements of radioactive materials before and after the accident indicate that the radioactive materials released from the FDI-NPP into the atmosphere were transported to the sampling station in Tokai, a place at 120 km distance from the FDI-NPP, within a day.

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