

Fukushima: lessons learned on wet deposition from a combined analysis of radiation dose rate and volume activity measurements of ^{137}Cs

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In 2015, ^{137}Cs hourly air concentrations retrieved from filter tapes of air quality monitoring sites in Japan became public [1]. At certain location, these measurements can be compared to other ones already available: hourly gamma dose rate [2] and meteorological data from the AMEDAS monitoring network which provides rain-gauges, rain radars and visibility detection (fog). This combined analysis brings new perspectives on the understanding of wet deposition and allows discussing the influence of several factors: scavenging of plumes in altitude, impact of light rains in particular before some rainfalls, ^{137}Cs contribution to gamma dose rate in airborne plumes.

[1] Tsuruta, H., Oura, Y., Ebihara, M., Ohara, T. et Nakajima, T. (2014). Sci. Rep. 4. [2] IAEA (2012): Fukushima monitoring data base https://iec.iaea.org/fmd/search_by_dataset.aspx