

## Correlation between Atmospheric Re-entrainment of Radioactive Cs and Meteorological Phenomena Conditions.

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### 1.Introduction

Massive earthquake attacked the eastern Japan on March 11 2011. It triggered the Fukushima Daiichi Nuclear Power Point accident, where large amount of radioactive substances were released. Released radioactive substances are diffused with atmospheric diffusion process, and eventually deposit on the ground surface and vegetation. Deposited radioactive Cs are released again from the ground surface and vegetation.

Today's main factor of atmospheric radiation concentration fluctuation is atmospheric Re-entrainment of radioactive Cs. Re-entrainment mechanism of radioactive Cs is a complex and unprecedented problem. We must consider an interdisciplinary study on deposited radioactive Cs for long-term estimation.

We infer that so Cs has a property that is taken in by clay minerals in soil that one of carriers of radioactive Cs is soil particles. The purpose of this study is to make clear how long does atmospheric radiation concentration increase by its re-entrainment, under what meteorological phenomena conditions.

### 2.About sampling

Since December 2012, we have been observing atmospheric radiation concentration of radioactive Cs by High-Volume Air Sampler on ground at Namie high school. It collects aerosols by passing through quartz filter. Wind velocity is measured at three altitudes by Three Cup Anemometer..Soil moisture is measured by Moisture Meter of Time Domain reflectometry system.

### 3.Correlation between seasonal re-entrainment of radioactive Cs and meteorological phenomena conditions

### 4.Investigation of direct transport by back-trajectory analysis

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