

## Atmospheric radioactive cesium in the broad-leaf and Japanese cedar forest and canopy

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Radionuclides emitted in the Fukushima dai-ichi nuclear power plant (FNDPP) accident have been deposited on the soil, ocean and vegetation. Especially, a significant amount of them has been attached on Japanese cedar trees because they are dominant evergreen trees which extend leaves in Fukushima mountainous region when the accident occurred. Re-suspension of radioactive cesium from these trees to the atmosphere may be one of significant path in the diffusion of radionuclides after the accident.

We have measured atmospheric concentration of radiation by Cs-134/137 in two forest sites: broad-leaf tree (BT) site and young Japanese cedar (JC) site at Kawamata-town near Fukushima to study re-suspension of radioactive Cs in the forest. Atmospheric suspended particle are collected with high/low-volume air samplers mounted at the forest floor and canopy, respectively, and gamma-ray emission from them were measured with Ge detector.

The measured concentration of atmospheric Cs-134/137 was about 2-times larger at the forest floor than that at the canopy both in BT and JC sites, indicating that particles including Cs-134/137 are produced or emitted in the forest. The ratio of atmospheric Cs-134/137 radiation concentrations to surface density of Cs-134/137 is significantly higher in JC site than that in BT site. Processes of re-suspension of radioactive cesium in these forests will be discussed.

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