

# Observation results of the Fukushima Daiichi accident at CTBT radionuclide monitoring stations

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After the Great East Japan Earthquake in 2011, the Fukushima Daiichi Nuclear Power Plant accident happened and large amounts of radioactive materials were released into the environment and spread globally. The National Data Center-2 (NDC-2) in the Japan Atomic Energy Agency received observation data every day sent from the radionuclide monitoring network of the CTBT International Monitoring System and analyzed the data. The radionuclides released by the accident generally circulated around the northern hemisphere in about 12 days. The activity concentration of Xenon-133 around each radionuclide station in the northern hemisphere almost became uniformed by diffusion in early April, 2011, and after that, the activity concentration at each station decreased with the half-life of Xe-133 and returned to the normal level before the accident in early June. NDC-2 also estimated the timing of first arrival of the radioactive plume at the CTBT Takasaki radionuclide station using the observation data of the station. Consistent results were found between the estimated timing and the time when the spatial gamma-ray dose rate at the monitoring post neat the station rose suddenly.

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