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Transport simulations of Cs137 from the shelf to open ocean around Fukushima

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We have conducted simulations of the Cs137 oceanic dispersion process from March to May 2011, focusing on transport processes from the shelf to open ocean and source information. Dispersion due to direct emission was limited near the coast for the period from March to the beginning of April, and extended to open ocean in the middle of April. Atmospheric deposition was dominant for oceanic dispersion for the period from March to the beginning of April. Estimation of the source information using the observation data could be considerably influenced by simulated ocean currents and error specification of urgent monitoring data. Comparatively large direct emission amount estimated as compared to other models suggests more transport of Cs137 from the shelf to open ocean simulated by JCOPE-T than by the other models

Keywords: Cs137, Fukushima, oceanic dispersion, simulation, observation