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# of Web-based Atmospheric Dispersion Model for a Nuclear Accident

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A radiological emergency preparedness system in Korea has been developed to predict the behavior of radioactive material released into the environment and estimate the dose assessment for humans in case of a nuclear accident. The system is composed of atmospheric dispersion, marine dispersion, and dose assessment models, along with a graphic user interface module. It can evaluate the dispersion patterns of radionuclides in the air and ocean, and the short-term and long-term radiological effects of a nuclear accident on humans. It has been constructed on the web to allow users to access it easily and simply through an intrinsic IP address, username and password. The atmospheric dispersion, marine dispersion and dose assessment models have already been validated by model-to-model comparisons and measurements from the Chernobyl and Fukushima accidents. Especially, the atmospheric dispersion model is connected with numerical weather forecast data produced by Korea Meteorological Administration in real-time and the air concentrations are rapidly calculated in the system.

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