Development of Gamma Camera to Visualize Distribution of Radioactivity

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Summary

A gamma camera has been developed to support recovering from the contamination caused by the accident of Fukushima Dai-ichi Nuclear Power Plant. The gamma camera consists of a radiation detector, an optical camera, and a laser range finder, which enables recognition of the contamination situation by visualizing radioactivity. Laboratory tests confirmed the capability of discriminating nuclides (e.g. ^{137}Cs and ^{134}Cs) and the spatial resolution of 0.8 m (FWHM) at a distance of 10 m. Field tests under the actually assumed environment revealed that hot-spots can be visualized and the effect of decontamination works can be measured by using the gamma camera.