

Underground measurements of artificial radioactivity in squids from the western Pacific Ocean

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Content

Fukushima Dai-ichi Nuclear Power Plant (FDNPP) accident discharged huge artificial radioactivity into the Pacific Ocean. To investigate its radiological effect on marine ecosystem, ash samples of squids from the western Pacific Ocean were prepared and measured by the underground gamma ray spectrometer — GeTHU. ^{108}mAg , ^{110}mAg , ^{134}Cs and ^{137}Cs were detected with maximum radioactivity values of 192.4 mBq/kg-wet, 19.3 mBq/kg-wet, 143.9 mBq/kg-wet and 33.9 mBq/kg-wet respectively, which indicates that the influence of FDNPP accident on marine organism is lasting but decreasing. The contrastive measurement with a ground spectrometer exhibited similar performance to GeTHU, as to the samples of this work whose own primordial radionuclides contributed dominantly to the background. However, GeTHU is still a better choice in measurements of primordial radionuclides in samples or samples with ultra-low radioactivity and it will be continuously dedicated to the investigation of marine radioactivity from FDNPP accident in the future.

About the Presenter

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