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First measurement of ^{236}U concentration in the Arctic seawater in 2022 at the MALT, The University of Tokyo

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The Annual discharges and the ratio of $^{129}\text{I}/^{236}\text{U}$ from the nuclear reprocessing plants are different, the concentration of ^{129}I , ^{236}U , and the ratio of $^{129}\text{I}/^{236}\text{U}$ are novel tracers for the transit time of the Arctic Ocean circulation.

We developed a new ^{236}U -AMS with the time-of-flight detector system at the MALT, The University of Tokyo. To improve sensitivity and decrease background by increasing the extract beam intensity, the sample preparation procedures for the Iron-Uranium co-precipitation ratio and the mixed Nb powder ratio were optimized. The depth profile of the Chukchi Sea and the Beaufort Sea in the Arctic Ocean during the MR22-06C cruise of R/V Mirai were measured by ^{236}U -AMS at MALT.

Student Submission

No

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