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

Wednesday, 23 October 2024 10:00 (20 minutes)

The Annual discharges and the ratio of  $^{129}\text{I}/^{236}\text{U}$  from the nuclear reprocessing plants are different, the concentration of  $^{129}\text{I}$ ,  $^{236}\text{U}$ , 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  $^{236}\text{U}$ -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  $^{236}\text{U}$ -AMS at MALT.

### Student Submission

No

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