

## Marine ecological study using long-lived radionuclides

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Recent advance in technology enables us to monitor fish migrations and marine mammals behaviors to understand their ecological information. These fundamental data is critical to establish management programs of marine resources. However the logger size limits their applicability to smaller size tests and no information is available for the period before the capture and release of loggers.

We therefore have been trying to develop methods to monitor ecology and environmental data using geochemical fingerprints remaining in the body of marine organisms. That includes radiocarbon, iodine and other trace amount of nuclides. In the presentation, we will introduce our recent studies on this topic in particular using radiocarbon that is measured by Single Stage Accelerator Mass Spectrometry installed at the Atmosphere and Ocean Research Institute, the only and the first machine in Japan. The success of the study is depending on the reduction of sample sizes for each measurements but this new AMS provides stable and reliable measurements with trace amount of samples.

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AMS building (left) and Single Stage Accelerator Mass Spectrometer (right)