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Research activities after a decade of the installation of a single stage accelerator mass spectrometry at the Atmosphere and Ocean Research Institute, the University of Tokyo

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A single-stage accelerator mass spectrometer at the Atmosphere and Ocean Research Institute, The University of Tokyo was installed in 2013 and has been running stably for the past 10 years. Various types of samples have been analyzed, including geology, biology, oceanography, archaeology, etc., in active collaboration with national and international institutions. Precision for $^{14}\text{C}/^{12}\text{C}$ measurements on standard samples has been achieved to better than 0.1% due to improvements in the operating software system and increased number of standard measurements per run, and small-scale radiocarbon measurements down to 10-30 micrograms C have been constantly carried out. Stable operating conditions have been maintained and the average annual operating hours have reached 8100 hours/year for the last three years, allowing us to measure as many as 2520 samples/year (excluding the number of standard samples). Some recently developed in-house apparatus including the automated graphitisation apparatus has enabled us to produce a high throughput system. The expansion of the building to twice the size of the current building will provide us with the space to install planned newly designed systems. We will introduce some of these recent systems during the presentation.

Student Submission

No

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