Efficient radiocarbon measurements on marine and terrestrial samples for Antropocene and Holocene with Accelerator Mass Spectrometry at the Atmosphere and Ocean Research Institute, University of Tokyo

*横山 祐典[1]、宮入 陽介[1]、阿瀬 貴博[1]
*Yusuke Yokoyama[1], Yosuke Miyairi[1], Takahiro AZE[1]

1. 東京大学　大気海洋研究所
1. Atmosphere and Ocean Research Institute, University of Tokyo

A single stage Accelerator Mass Spectrometer (National Electrostatic Corporation, YS-AMS) at the Atmosphere and Ocean Research Institute (AORI), University of Tokyo has operated smoothly since 2013 and has been utilized to conduct various studies including geosciences and life sciences. The average annual operation hours exceeded 8000 h/year for the last two years, allowing for measurement of up to 2912 samples/ year (including standards). A newly developed in-house automated system increased the throughput dramatically, with a total of 16,000 samples measured to date. A 14C/12C measurement precision on standard material is better than 0.1 % due to and improved operation software system and an increased number of standards measured per run. Results have improved geochronological information for paleoenvironmental, biological, and geohazard studies.[Reference] Yokoyama, Y. et al. (2022) *Nuclear Instruments and Methods in Physics Research B* 532, 62–67

キーワード：放射性炭素、加速器質量分析、人新世
Keywords: Radiocarbon, Accelerator Mass Spectrometer , Anthropocene

