Contribution ID: **109** Contribution code: **PSA-12** Type: **Poster**

Late Pleistocene reconstruction using sedimentary major elements and Be-10 from Lake Biwa, Japan

Monday, 21 October 2024 17:35 (20 minutes)

Advances in Accelerator Mass Spectrometry (AMS) have made palaeoclimate reconstructions using meteoric cosmogenic nuclides available for a wide range of environments, including ocean, lake and ice cores (Raisbeck et al., 2007; Yokoyama et al., 2016; Behrens et al., 2022). Here, we report a Be-10 record for the past 45,000 years using sediments from Lake Biwa, the largest lake in Japan. The core was obtained in 2007, and the Be-10 concentration was measured using the previously reported method (Yokoyama et al., 2019). The Be-10 measurement was performed at the Micro Analysis Laboratory, Tandem Accelerator, University of Tokyo (Matsuzaki et al., 2020). The reconstructed Be-10 fluxes show fluctuations and are correlated with the major element fluxes also measured for the sediments. They are controlled by regional climate changes during the Late Pleistocene, probably induced by changes in the East Asian monsoon.

Raisbeck, G. M. et al., Clim. Past, 3, 541–547, 2007.
Yokoyama, Y. et al., Proc Natl Acad Sci U S A. Mar 1;113(9):2354-9, 2016.
Behrens, B.C. et al., Quat. Sci. Adv., 7, Article 100054, 2022.
Matsuzaki, H. et al., Nucl. Instr. Meth. Phys. Res. B463, 55-63, 2020.

Student Submission

No

Primary authors: AZE, Takahiro (Atmosphere and Ocean Research Institute, the University of Tokyo); YOKOYAMA, Yusuke (Atmosphere and Ocean Research Institute, the University of Tokyo)

Co-authors: TAKAHASHI, Satomi (Atmosphere and Ocean Research Institute, the University of Tokyo); MIYAIRI, Yosuke (Atmosphere and Ocean Research Institute, the University of Tokyo); YAMANE, Masako (Atmosphere and Ocean Research Institute, the University of Tokyo); KITAGAWA, Hiroyuki (Institute for Space-Earth Environmental Research, Nagoya University); MATSUZAKI, Hiroyuki (The University Museum, The University of Tokyo); TAKEMURA, Keiji (Institute for Geothermal Sciences, Kyoto University)

Presenter: AZE, Takahiro (Atmosphere and Ocean Research Institute, the University of Tokyo)

Session Classification: Poster Session A

Track Classification: Applications in Climate Studies