

[JJ] Evening Poster | A (Atmospheric and Hydrospheric Sciences) | A-CC Cryospheric Sciences & Cold District Environment

[A-CC29]Ice cores and paleoenvironmental modeling

convener:Ryu Uemura(University of the Ryukyus), Kenji Kawamura(National Institute of Polar Research, Research Organization of Information and Systems), Ayako Abe-Ouchi(東京大学大気海洋研究所, 共同), Nozomu Takeuchi(Chiba University)

Tue. May 22, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe)

Analyses of ice cores from polar and mountain regions have contributed to the reconstruction and understanding of the past environmental changes on timescales from years to several hundred thousand years. In this session, we welcome paleoenvironmental studies using ice cores and paleoclimatic modeling. Studies on reconstruction methods, recording processes and new paleoenvironmental proxies, technical aspects of paleo-modeling are also welcomed. Studies with marine sediment cores, terrestrial sediment cores and tree-rings on similar timescales are also important and welcomed, in order to discuss past environmental changes from multidisciplinary viewpoints.

[ACC29-P01]Ice core dating using tree ring oxygen isotope

*Akane Tsushima¹, Mask Sano², Sojiro Sunako³, Podolskiy Evgeny⁴, Yoga Sato³, Koji Fujita³ (1.Research Institute for Humanity and Nature, 2.Waseda University, 3.Graduate School of Environmental Studies, Nagoya University, 4.Hokkaido Univ. Arctic Research Center)

Keywords:Mountain glacier, Ice core, Dating

Alpine ice cores obtained from mountain glacier are considered to be an important proxy of paleoclimate changes. However, the dating of an ice core collected at lower latitudes is challenging due largely to complicate topographical and climatological conditions. Therefore, analyzing alpine ice cores is usually faced with dating error. On the other hand, tree-ring $\delta^{18}\text{O}$ can be used to reconstruct annual precipitation change without dating error. In this study, we tried to develop a new dating method for alpine ice cores by collaborating with tree-ring $\delta^{18}\text{O}$ data. In order to develop the new methodology, we collected tree-ring samples and an ice core in the Nepal Himalaya in 2017. Unfortunately, we could not obtain good ice core samples. Therefore we examined new dating methods using an existing ice core, which was obtained from the western Nepal Himalaya in 1998.