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

[A-CC29]Ice cores and paleoenvironmental modeling

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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-P04]Near infra-red reflectance of southeast dome ice core, Greenland

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Southeast dome in Greenland (SE-Dome, 67.18°N, 36.17°W, 3170m a.s.l.) is one of the highest accumulation area. Due to the high accumulation, the snow and ice of the SE-Dome site well preserves paleo environment proxies (Furukawa et al., 2017). In order to reconstruct paleo environment by using the proxies, post depositional effect for water molecule and impurities should be evaluated. Near infra-red reflectance of snow/ice is highly related with specific surface area (SSA), which is a proxy of snow metamorphism before/after snow precipitation. We measured near infra-red reflectance of a firn core obtained from the SE-Dome site. As a result, SSA profile of the SE-Dome firn is highly related with δ^{18}O maximum, indicating summer temperature. This relationship suggests that SSA profile is not likely affected by post depositional effect such as depth hoar formation, rather SE-Dome firn well preserves its characteristic features when the firn was precipitated.