[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-P05]Sulfur isotope analysis of sulfate over the last deglaciation in Antarctica: source estimation for sulfate aerosols

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The sulfate aerosols record preserved in polar ice cores provide important clue on for understanding the relationship between past variations of aerosols and climate. However, changes in sulfur contributions from various sources, such as marine biogenic sulfur, volcanoes, and sea salt, remain unclear. Sulfur stable isotopic values (δ^{34}S) of sulfate aerosols can be used to assess oxidation pathways and contributions from various source. Here, to investigate the change in changes in sulfate sources over glacial cycle, we measured the sulfur isotopic composition of sulfate in Antarctic Dome Fuji ice core. A relatively high time-resolution allows us to examine timing between the changes in δ^{34}S and other climate proxies (temperature and fluxes of aerosols). The δ^{34}S data during Holocene is consistent well with modern surface snow observation in this region. The δ^{34}S values show distinct increase from the Last Glacial Maximum to Holocene, suggesting that changes in sulfur source under the different climatic conditions.