
[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-P10]Comparison between the paleo data and climate prediction in the last interglacial by AOGCM with vegetation change

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The Last Interglacial (LIG; ca. 127,000 years ago) is known as the warm period induced by the different orbit of the Earth than the present day. Geological evidences indicate Greenland ice sheet reduction and sea level rise occurred in the LIG due to the warming, however, prediction by the atmosphere-ocean coupled general circulation models (AOGCMs) still underestimate this warming (Otto-Bliesner et al. 2013). In the present study, we introduce the LIG vegetation distribution predicted by a vegetation coupled GCM (MIROC-LPJ; O'ishi and Abe-Ouchi 2011) as boundary conditions of an AOGCM (MIROC4m; Hasumi and Emori 2004) and examined LIG climate prediction. The result indicates the introduction of LIG vegetation improves warming in the LIG compared with geological evidences. In the presentation we will discuss the contribution of the Atlantic meridional ocean circulation (AMOC).