
Oral | Symbol M (Multidisciplinary and Interdisciplinary) | M-IS Intersection

[M-IS30_28AM2]Paleoclimatology and paleoceanography

Convener:*Kazuyoshi Yamada(School of Human Sciences, Waseda University), Minoru Ikehara(Center for Advanced Marine Core Research, Kochi University), Tomohisa Irino(Faculty of Environmental Earth Science, Hokkaido University), Yusuke Okazaki(Department of Earth and Planetary Sciences, Graduate School of Science, Kyushu University), Ikuko Kitaba(Kobe University Research Center For Inland Seas), Akihisa Kitamura(Institute of Geosciences, Faculty of Science, Shizuoka University), Masaki Sano(Research Institute for Humanity and Nature), Ryuji Tada(Department of Earth and Planetary Science, Graduate School of Science, The University of Tokyo), Masakazu Yoshimori(Atmosphere and Ocean Research Institute, University of Tokyo), Chair:Masaki Sano(Research Institute for Humanity and Nature)

Mon. Apr 28, 2014 11:00 AM - 12:45 PM 501 (5F)

We discuss past environmental changes and events at multi-decadal to tectonic timescale toward an understanding of Earth climate system by an integration of terrestrial and marine proxy studies and numerical modeling. We welcome a variety of paleo-environmental studies from a wide range of background. This session includes a special series of presentations relating to recent progress on the age determination for geological archives which has a potential to promote broad interests in paleo-community in our country. The frontier researches for radiometric dating for instance, the IntCal13 calibration data set will be presented and discussed. We hope that this session will provide an opportunity to promote communication between participants from multidisciplinary field.

12:00 PM - 12:15 PM

[MIS30-P19_PG]Reconstruction of Paleo-environment at coastal lakes along the Soya Coast, Antarctica, using fossil diatom assemblages

3-min talk in an oral session

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Keywords:Antarctic coastal lakes, paleolimnology, diatom, the Holocene, Sediment core

Soya Coast, located at East Antarctica distribute wide ice-free areas such as Langhovde, Skarvsnes, Skallen and Rundvagshetta. The research areas of this study are five lakes in the ice-free coast as follows; Lake Nurume-ike and Lake Yukidori-ike at Langhovde, Lake Oyako-ike at Skarvsnes and Lake Maruwan-minami-ike and Lake Maruwan-oike at Rundvagshetta. Matsumoto et al.2014 described the Holocene paleo-limnological changes at Lake Oyako-ike. They described soft-x-ray analysis, carbon 14 dating, elemental analyses, Chlorophyll compounds and carotenoids, and algae and cyanobacteria analyses. The paleo-environment of the lake shifted from the open coastal environment, through stratified saline lake, and then to high productive fresh water lake during these two thousand years. They presume that these environmental changes have been affected by isostatic uplift by retreating continental glaciers. Diatom fossil assemblages at the lake deposit (Ok4C-1) divided into five assemblages zones, from Zone 1 to Zone 5 to upward. The dominated species of each zone is as follows. Zone 1:*Paralia sulcata*, marine species, Zone 2:*Staurosira construens*, Zone3:*Tryblionella littoralis*, marine species, Zone4:

Chamaepinnularia cymatopleura, brackish species and Zone 5: *Amphora oligotraphenta*, *Navicula gregaria*, *Diademsis* spp., freshwater species. The shifts of diatom assemblages presumed the lake water environment shifted from coastal marine environment through freshwater lake environment. This result was fitted to the results of the previous study. Now, we are analyzing other four lake sediment cores.