
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-P18_PG]Reconstruction paleoenvironment by using diatom fossil assemblage analysis in Imuta-ike wetland, Satsumesendai, Kagoshim

3-min talk in an oral session

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Keywords:diatom, Holocene, climatic change, pH change, volcanic stratigraphy, annually laminated lake deposit

Paleoenvironmental reconstruction, using diatom assemblage analysis have been carried out in Imuta-ike, Satsumasendai, Kagoshima, Japan. In this site, there are deposit peat layer which is rare in west Japan, 6 visible tephra layer and 2.5m depth laminated layer. Boring survey conducted center of Imuta-ike at Feb. 2011, we was able to got 25m depth core. It can be traced back to 30,000 years past, can be reconstructed until modern environment from ice age. Following environment changes are reconstructed. Since about 30,000 years ago, peat and silt continuously has deposited, but accumulate speed has changed. About 30,000 yr BP to 23,400 yr BP, we can't reconstruct detail environment change, because of the small number of diatom. About 23,400 yr BP to 13,600 yr BP, inflow river has been existed. And edge of the lake, moor has been formed. About 13,600 yr BP to 10,800 yr BP, moor became land, then pH rose. About 10,800 yr BP to 4,600 yr BP, it starts the postglacial age, increase precipitation and water level was rose. After K-Ah, tephra deposited the lake and water depth was shallow. About 4,600 yr BP to

1,500 yr BP, those days was dystrophic lake and it started to form wet land in west side of the lake. About 1,500 yr BP to present, it continues aggradation, water depth has been shallow. It progresses wet land formation so that water pH was dropped.