
 [JJ] Evening Poster | M (Multidisciplinary and Interdisciplinary) | M-IS Intersection

[M-IS10]Paleoclimatology and paleoceanography

convener:Yusuke Okazaki(Department of Earth and Planetary Sciences, Graduate School of Science, Kyushu University), Atsuhiko Isobe(Research Institute for Applied Mechanics, Kyushu University), Akihisa Kitamura(静岡大学理学部地球科学教室, 共同), Masaki Sano(Faculty of Human Sciences, Waseda University)
Wed. May 23, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe)

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 will be discussed. We welcome a variety of paleo-environmental studies from a wide range of background. In particular, a series of presentations relating to the Anthropocene will be planned. This is a merged session of A-OS31 "Linkage between oceanography and paleoceanography in marginal, shelf and coastal oceans" and M-IS23 "Paleoclimatology and paleoceanography" sessions at JPGU 2017. We hope that this session will provide an opportunity to promote communication between participants from multidisciplinary field.

[MIS10-P19]Environmental and climatic change over the past bimillennium inferred from diatom assemblage in Hamana lagoon, Japan

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Hamana is a coastal lagoon in central Japan whose the past bimillennium sediments give a critical record of climatic change. The past bimillennium environmental and climatic changes were reconstructed by diatom analysis, geochemical analysis, and radiocarbon dating of a sediment core (Hm-1C and Hm-2C) with high temporal resolution. The most dramatic change in Hamana lagoon is changed brackish lagoon from the freshwater lake through the inlet which was constructed by the Meio earthquake around A.D. 1945. Hamana lagoon was brackish lagoon between B.C. 500 and A.D. 150. *Cyclotella atomus* is freshwater to brackish species. However, *Tabularia fasciculata* inhabits the hypersaline environment. From A.D. 150 to A.D. 340, it was heavy rainfall because *Achnanthes minutissimum* which is a terrestrial species and *Fallacia nyella* which is a marine species abruptly increased. The dominant species changed to *Aulacoseira ambigua* and *A. granulata*. Those species inhabit in freshwater. Therefore, Hamana lake was freshwater lake until A.D.1945. However, *A. ambigua* and *A. granulata* suddenly decreased and *Pseudoisotoma* ssp. which is benthic species and *T. fasciculata* increased from A.D. 900 to A.D. 1300. It means an environment of coring site changed to salt marsh from freshwater lake. After Meio earthquake, Hamana lake changed to brackish lagoon like a modern lagoon. The diatom assemblage shows the cycle of monsoon to weaken and strengthen. The total valves show is lowest and *Cyclotella* var. *gracilis* which indicates warmer climate suddenly decreased around A.D. 1495-1560, 1620-1720. This mean Asian monsoon event became weak. In other hands, Asia monsoon gets stronger around A.D. 1560-1620, A.D. 1720-1800.