
[EE] Evening Poster | A (Atmospheric and Hydrospheric Sciences) | A-OS Ocean Sciences & Ocean Environment

[A-OS12]Continental-Oceanic Mutual Interaction: Planetary scale Material Circulation

convener:Yosuke Alexandre Yamashiki(Earth &Planetary Water Resources Assessment Laboratory Graduate School of Advanced Integrated Studies in Human Survivability Kyoto University), Yukio Masumoto(Graduate School of Science, The University of Tokyo), Swadhin Behera(Climate Variation Predictability and Applicability Research Group, Application Laboratory, JAMSTEC, 3173-25 Showa-machi, Yokohama 236-0001, 共同), Takanori Sasaki(Department of Astronomy, Kyoto University)
Tue. May 22, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe)

The main purpose of this session is to promote discussion on mutual interaction between Continental zone and Oceanic zone. The global-scale material circulation induced by River runoff through oceanic general circulation as major topic on Continental-Oceanic Interaction, where the ENSO / IOD influence into continental climate as major topics on Oceanic-Continental Interaction. Numerical simulation and field observation of radionuclide transport from continental zone into ocean and its potential impact is also important topics of this session. The session also extend discussion on planetary hydrology and oceanography focusing on subsurface ocean in Jupiter's moon &Ancient Martian Hydrology.

[AOS12-P01]Development of Global Lakes &Reservoir Repository and its application for water resource observation

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Keywords:Lakes, Reservoirs, Hydrological system

We developed Global Lakes &Reservoirs Repository in order to evaluate terrestrial water resources of the Earth. The system includes mostly important large waterbody and included also hydrological and water quality components. The system may potentially be applicable for other planetary system which possesses only lakes, not ocean. Distinction between Lakes system and seamless ocean differs very much when discuss on the climate impact after receiving radiation. Ocean and lake planets are thus provide distinct output for each environment. In the case of planet Earth, the total volume of water stored in lakes &reservoirs are estimated only around 90,000 Km³, which is far smaller compared with the ocean. At the same time, each lake creates internal microclimate and catchment for surrounding area. Heat budget for those area are essentially important to comprehend climate in terrestrial system. It should also be considered that "terra forming" can only provide small amount of water in surface of different planetary system - thus for those planetary system "lakes" are essentially important factor to comprehend new system.