[JJ] Evening Poster | S (Solid Earth Sciences) | S-CG Complex & General

[S-CG61]Ocean Floor Geoscience

convener:Kyoko Okino(Atmosphere and Ocean Research Institute, The University of Tokyo)
Wed. May 23, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe)
Most of Earth's volcanism and much of its tectonic activity occur on and beneath the seafloor. Various phenomena on the seafloor are closely linked to plate tectonics, Earth structure and dynamics, and also related to Earth's environments through the hydrosphere and atmosphere. Seafloor rocks and sediments record Earth's evolution and heat and material fluxes on the Earth. Ocean Floor Geoscience session covers a broad range of research on seafloor such as mid-ocean ridge process, subduction dynamics, arc magmatism, hot spot and LIPs, crustal movement and structure etc. Every field of researches and every approaches are welcomed. The session aims to encourage discussion among scientists from different study fields and to integrate our understanding of ocean floor. The session is co-dhaired by K. Tadokoro (Nagoya Univ.), O. Ishizuka (AIST), T. Toki (Univ. Ryukyu), and N. Takahashi (JAMSTEC).

[SCG61-P18]Development of deep tow multi-channel streamer system with networking hydrophone units

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AIST and Sonic Corporation are developing a new deep towing streamer system. This system is designed to be able to use in various situations and consists of hydrophone units, network cables between these hydrophone units, storage unit and battery units. All units in the system have pressure resistance more than 2000 meters in depth. The analog sound wave data received by hydrophone units are converted to digital data individually in these units. So, we can change the channel number, channel space and towing depth according to survey target. We finally aim to build the selectable system in the “off-line type” that is able to collect all data in the deep sea or the “on-line type” that is able to regulate equipment from ship when we investigate.
We had the trial cruise for this new system at Sagami Bay in December 2017. In the cruise, we used the mini G.I. gun as seismic source, and seismic profiling survey was carried out using the deep towing twelve channels streamer cable and the surface towing multi-channel streamer cable at the same time. In this presentation, I introduce about the detail of this new system and the results of seismic profiling survey carried out using the new system.