## [EE] Evening Poster | S (Solid Earth Sciences) | S-IT Science of the Earth's Interior & Tectonophysics

## [S-IT24]Probing the Earth's interior with geophysical observation on seafloor

convener:Daisuke Suetsugu(Department of Deep Earth Structure and Dynamics Research, Japan Agency for Marine-Earth Science and Technology), Guilhem BARRUOL(CNRS, Institut de Physique du Globe de Paris, France), Hitoshi Kawakatsu(東京大学地震研究所, 共同), Douglas Wiens(Washington University in St Louis)

Tue. May 22, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe) Most important sites for plate tectonics and mantle dynamics studies (e.g., subduction zones, spreading ridges, and hot spots) are located in oceanic regions. The coverage of seismic stations is concentrated in land areas, which cover only one-third of Earth's surface. Since 1990s, technology for seafloor geophysical instruments to explore deep earth structure have been advanced, such as broadband ocean bottom seismographs (BBOBSs), ocean bottom electro-magnetometers (OBEMs), and pressure gauge, because observation network in oceanic regions is essential for major breakthroughs in Earth sciences. Technical advance in the instruments including cabled realtime seafloor networks have made the seafloor observation more common and reliable, which promotes a number of seafloor observations, both temporary and permanent networks, in the last decade. We call for papers on recent scientific results from such observation projects, including those on crust and mantle structure beneath subduction zones, hot spots, Large Igneous Provinces, and spreading ridges. Technical advances for observation in oceanic regions, including seafloor instruments and drifting float, proposals and plans for innovative observations are also welcome.

## [SIT24-P02]The initial report of the electromagnetic observation on the seafloor in the Ontong Java Plateau

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Keywords:Ontong Java Plateau, Electromagnetic observation on the seafloor, OBEM (Ocean bottom electromagnetometer), Electrical resistivity structure

We conducted electromagnetic (EM) observation on the seafloor around the Ontong Java Plateau (OJP) to determine the underlying crust and upper mantle structure beneath the OJP. We deployed 20 ocean bottom electromagnetometers (OBEMs) in late 2014 to early 2015 and recovered all of them in early 2017. While five of all OBEMs recorded two components of electric fields and three components of magnetic field every 60 seconds, the rest of them acquired them every 10 seconds for the first two months and then every 60 seconds for the remainder of the observation period. The shorter sampling rate data were recorded to obtain shallower structure beneath the seafloor. High quality time series of EM fields were obtained for more than one year at all sites. Preliminary results of analyses for electrical resistivity distribution will be shown in the presentation.