

The initial report of the electromagnetic observation on the seafloor in the Ontong Java Plateau

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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.

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