

## Shear wave splitting observed in the Ontong Java Plateau and adjacent regions

\*Satoru Tanaka<sup>1</sup>, Daisuke Suetsugu<sup>1</sup>, Hajime Shiobara<sup>2</sup>, Hiroko Sugioka<sup>3</sup>, Aki Ito<sup>1</sup>, Takehi Isse<sup>2</sup>, Yasushi Ishihara<sup>4</sup>, Masayuki Obayashi<sup>1</sup>, Takashi Tonegawa<sup>4</sup>, Junko Yoshimitsu<sup>1</sup>, Takumi Kobayashi<sup>3</sup>

1. Department of Deep Earth Structure and Dynamics Research, Japan Agency for Marine-Earth Science and Technology, 2. Earthquake Research Institute, University of Tokyo, 3. Department of Planetology, Kobe University, 4. R&D Center for Earthquake and Tsunami, Japan Agency for Marine-Earth Science and Technology

We measured shear wave splitting of SKS, SKKS, and PKS phases observed at broadband seismic stations on the sea floor and islands in the Ontong Java Plateau (OJP) and adjacent regions. Due to high noise level, we could use only 3 deep earthquakes with magnitudes greater than 7 occurred in the south America. A bandpass filter with cut-off frequencies between 0.02 and 0.2 Hz was applied to the observed seismograms, of which frequency range is a bit lower than the usual for continental areas. By using the eigenvalue method (Silver and Chan, 1991; Helffrich et al., 2000), we tried to estimate the splitting directions and delay times. However, except for three stations, null or node with N-S and E-W directions were obtained or many cases. The directions of the nodes did not coincide with the absolute plate motion of the Pacific plate (WNN-ESE, Argus et al., 2011). The exceptions were observed at the stations located in the southeast margin of the OJP near Stewart Basin and Ellice Basin, which showed that the fast direction was NNW-SSE or N-S and the delay time was 1–2 s. These observations suggest that the directions of mantle flows below the OJP are different from those in the southeastern outside.

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