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

[A-OS13]Physical, biogeochemical, and ecological aspects and their mutual relations in the Indian Ocean

convener:Yukio Masumoto(Graduate School of Science, The University of Tokyo), Hiroaki Saito(Atmosphere and Ocean Research Institute, The University of Tokyo), Iwao Ueki(国立研究開発法人海洋研究開発機構)

Tue. May 22, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe)

Recent discovery of new climate modes and development of basin-scale and regional observing systems in the Indian Ocean advance researches on physical, biogeochemical, and ecological aspects of ocean variations. In addition, inauguration of international research programs in the Indian Ocean, such as IIOE-2 and EIOURI, leads high expectation of related studies in earnest both in each of the disciplines and in interdisciplinary ways. This session invites papers on physical, biogeochemical, and ecological aspects in the Indian Ocean and relations among these elements of the ocean variations, to facilitate integrated understanding of the Indian Ocean variability, as well as to stimulate collaborative researches among the relevant scientists.

[AOS13-P02]Dissolved organic carbon in the Indonesian Throughflow

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Keywords:Dissolved Organic Carbon, Indian Ocean, Indonesian Throughflow

Dissolved organic carbon (DOC) is considered to be an important reservoir of reduced carbon in the ocean. In this study, we aimed to gain insights into the amount of DOC transported via the Indonesian throughflow from the Pacific to the Indian Ocean. To this end, we measure DOC concentrations for the seawater samples obtained in a revisit cruise along World Ocean Circulation Experiment-Hydrographic Programme (WHP) line I10 between Indonesia and Australia, from December 2015 to January 2016. The repeatability of DOC is ~1.0 μmol kg^{-1}. Along the I10 line, DOC concentrations range from ~38μmol kg^{-1} in the deep waters to ~80μmol kg^{-1} in the shallow waters. The Indonesian Throughflow Waters are observed as the fresh surface and intermediate waters. In the intermediate waters, DOC concentrations are slightly higher compared to those in the other intermediate waters. The net transport along the line into the Indian Ocean is estimated to be ~9-~18 Sv, using several estimates of geostrophic velocity. In the presentation, we will discuss the transport of DOC from the Pacific to the Indian Ocean.