

HyARC Seminar (HyARC Seminar#179)

Date: February 27 (Friday) 13:00-

Room: The meeting room (#617) of Research Institutes Building.

Speaker: Dr. Qiang Hao

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Title: Variability of the maximum carbon fixation rate within the water column in the Yellow Sea and East China Sea

Abstract:

The maximum carbon fixation rate within the water column (P<sub>Bopt</sub>) is an important parameter for estimation of oceanic primary production, and its variability is rarely reported before in the Yellow Sea and East China Sea (YECS). In this study, we described the temporal and spatial variation of in-situ P<sub>Bopt</sub> which derived from 15 cruises during 2006-2011 in the YECS. The results showed the P<sub>Bopt</sub> had significant seasonal variation, which is highest in summer and lowest in winter. Although the seasonal variations are similar, the P<sub>Bopt</sub> in continental shelf area (depth > 50m) was 2-3 times higher than that in coastal zone (depth < 50m). By compared with relationships between the in-situ P<sub>Bopt</sub> and environmental factors (such as SST, PAR, nutrients and size-fraction Chl-a), we found PAR and pico-plankton biomass were likely the main factors which influence the P<sub>Bopt</sub>. In addition, three empirical P<sub>Bopt</sub> models (Behrenfeld & Falkowski et al. 1997; Gong & Liu, 2002; Kameda & Ishizaka, 2005) were examined by the in-situ datasets.

(given in English)