Geophysical Research Abstracts
Vol. 17, EGU2015-9761, 2015
EGU General Assembly 2015

In situ measurements and analysis of apparent optical properties in the Red Sea

Surya Prakash Tiwari and Burton Jones

Red Sea Research Center, King Abdullah University of Science & Technology, Jeddah, Kingdom of Saudi Arabia (burton.jones@kaust.edu.sa)

Much of the Red Sea is considered as a typical oligotrophic sea. Its optical properties are investigated utilizing the data collected several cruises during 2014. Apparent Optical Property (AOP) profiles were obtained with a Satlantic HyperPro instrument is deployed in free-fall profiler mode to measure upwelling radiance and downwelling irradiance in the spectral range of 350 to 800 nm with simultaneous measurements of conductivity, temperature, depth, salinity, chlorophyll fluorescence, and optical backscattering coefficient in red band. These measurements will be used to describe apparent optical properties in the Red Sea, which is not yet studied. Spectral remote sensing reflectance (Rrs) and diffuse attenuation coefficient (Kd) is derived from our measurements. The Rrs determines how the light is backscattered of the water that can be detected by satellite ocean color sensor and Kd determines an intensity of light penetration into the water column. Thus, the results obtained from these analyses will be exploited to develop specific light models for the Red Sea.