

OCEAN OPTICS XXIV

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Wednesday, October 10

Poster Session 3

16:00–18:00

Poster 103

THE RECONSTRUCTION OF CHLOROPHYLL-A CONCENTRATION IN THE NORTHWEST PACIFIC CASE 2 WATER FROM MODIS DATA

In this study, remote sensing reflectance (R_{rs}) provided by MODIS-Aqua satellite data is used to classify satellite remote sensing data into different water types, and then establish the new algorithm of chlorophyll-a concentration. The results show that in case 2 water the correlation (R^2) between the new algorithm chlorophyll-a concentration (Chl-*anew*) and the in-situ data is 0.62 and RMSE = 1.63. Whether compared with the results ($R^2 = 0.58$, RMSE = 2.83) between the MODIS value (Chl-*ars*) and the in-situ value, or the ones ($R^2 = 0.19$, RMSE = 2.95) between the algorithm of Le et al.(2014) and the in-situ value, the optical property in case 2 water appears regional and the new algorithm in this study obviously would be more accurate. In this study, the chlorophyll-a concentration of the marginal sea of western North Pacific are less than those provided by MODIS, but in the open seas both values are corresponding. Actually the algorithm in this study can improve the overestimation of the original MODIS value.

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