



Sea Surface Salinity Algorithm from MODIS Data

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This paper introduces a new approach for measuring sea surface salinity (SSS) from Aqua/terra MODIS level 1B reflectance data with 250m and 500m spatial resolutions. In-situ measurements of SSS were compared with coincident MODIS spectral reflectance measurements over the ocean surface. Non linear model based on linear regression and polynomial formula has been developed on the MODIS data and the 'in-situ' measurement datasets to retrieve SSS from remote sensing data. A segmentation algorithm was developed to track the velocity changes of salinity frontal zone. These developed models were validated by using real time SSS measurements along Johor coastal waters. The results show high correlation of R2 of 0.91 between modeled sea surface salinity from MODIS and in situ measurements with RMSE of 20 psu.