
CFOSAT and Sentinel-1 comparisons for Significant Wave Height measurements

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Résumé

This study provides a comparison between CFOSAT and Sentinel-1 wave measurements. Recently, new methods have been developed to analyze Sentinel-1 C-band SAR data acquired over open ocean in the so-called Wave Mode for estimating the significant wave height [Quach et al., 2020] and for classifying the images with respect to the dominant geophysical parameter [Wang et al., 2019]. These two informations are systematically derived from Sentinel-1 A and Sentinel-1 B measurements collocated with CFOSAT. The significant wave height as measured by CFOSAT and Sentinel-1 are then compared. Performances (RMSE, correlation and bias) are presented and analyzed with respect to geographical location, wind regimes and dominant geophysical signatures captured by the SAR. Emphasis on complex situations and/or inconsistent cases are discussed.

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