The assimilation of CFOSAT synthetic wave data in the wave model MFWAM

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The CFOSAT satellite mission will provide the directional wave spectra from the real aperture radar SWIM and the wind vectors from the scatterometer SCAT at the same location. It is challenging for wave modelers to use such data in order to understand and better describe the physical processes at the ocean-atmosphere interface. To prepare our wave forecasting system of using such data, assimilation tests in the wave model MFWAM have been performed by using synthetic wave spectra provided by the simulator of SWIM developed by CNES. The sensitivity to the wavelength cut-off on the wave spectra is examined. The complementary use of SWIM, SAR (synthetic aperture radar) and altimeters is also investigated. Assimilation parameters in terms of correlation model are adjusted in order to improve the impact.