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An experiment of comparison of SAR wind analysis with Eta model output in the North Tyrrhenian Sea.

An experiment of comparison between SAR wind analysis and Eta model output for the North Tyrrhenian Sea is presented. Two consecutive SAR frames, covering large part of the North Tyrrhenian Sea, from the ERS-2 pass of March 30, 2000, were acquired from ESA.

The empirical backscatter model CMOD4 [1] was used to obtain wind stress while wind direction could be resolved without ambiguity either from PODAAC/JPL archive of QuikSCAT satellite data or from ECMWF [2]. In situ reference data were supplied by the open-sea ODAS Italia-1 buoy located at 43.8N 9.1E [3].

The meteorological Eta model is used to study the features in the area. Eta is a three-dimensional, primitive equation, grid-point model which is operational at the National Centers for Environmental Prediction of the U.S. National Weather Service.

The SAR wind analysis was applied to a region north of Corsica and to a region between Corsica and the continent which is in the "shadow" of the wind coming from NW. We will show how the Eta model outputs perfectly match the SAR analysis in the same regions.

To complete the study, we also applied the SAR wave analysis to the two regions cited above [4].

References

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