

Real-Time Satellite-Derived Ocean Surface Parameters for Ocean Model Forcing

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The Naval Research Laboratory at Stennis Space Center, MS, has implemented a real-time automated processing and quality control system for selected ocean surface parameters derived from remote sensing. The initial atmospheric parameters selected for development are specific humidity, air temperature, and scalar wind speed derived from the DMSP SSMIS and POES AMSU sensors, using a combination of published and newly-derived single-instrument retrieval algorithms based on multiple-linear regression and neural networks. Remote and in situ observations are processed through a dual-pass automated data quality control routine that assigns a probability of error to each observation based on a climatological or model-based background field and variability. A dataset of match-ups with in situ measurements from buoys and ships is maintained in real-time for algorithm development and to monitor the bias and error characteristics of the satellite retrievals in comparison with global atmospheric model fields.

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