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A long-term climate data record of scatterometer winds

Maria Belmonte Rivas, Ad Stoffelen, Anton Verhoef, Jos de Kloe, Jeroen Verspeek, and Jur Vogelzang
Royal Netherlands Meteorological Institute, The Netherlands

The ocean surface wind stress is a key element of the air-sea interaction, which refers to the transfer of energy, momentum and trace gases between the ocean and the atmosphere, both essential components of the Earth's climate system. We propose to create a global and continuous climate data record (CDR) of ocean stress-equivalent winds from satellite scatterometers from 1991 to present date. This will be done by reprocessing the entire backscatter archives from the ERS1 and ERS2, Quikscat SeaWinds, Metop-A ASCAT and Oceansat-2 OSCAT instruments using publicly available wind retrieval packages and special emphasis on sensor inter-calibration. Along with a consistent long-term record of scatterometer wind stress, this CDR will deliver wind curl/divergence and sea ice extents. This contribution reports on progress made, applications envisioned and current status of this activity.