Wind retrieval from synthetic aperture radar - an overview - DTU Orbit (13/12/2018)

**Wind retrieval from synthetic aperture radar - an overview**

This paper represents a consensus on the state-of-the-art in wind retrieval using synthetic aperture radar (SAR), after the SEASAR 2012 workshop “Advances in SAR Oceanography” hosted by the European Space Agency (ESA) and the Norwegian Space Centre in Tromsø, Norway 18–22 June 2012. We document the recent advances of the methodologies, which are capitalizing on the improved capabilities of the modern generation of SAR sensors providing Doppler grid and multi-polarizations. The many applications of SAR wind retrieval have also benefitted from the improved availability of wide swath modes (~500 km) with excellent coverage, giving much better overview of regional and mesoscale wind features. The accuracy of offshore wind retrieval is robust and generally in the order of 1.5 m/s in speed and 20° in direction, whereas the new methodologies steadily improve the performance for the more challenging conditions near cyclones and complex coastal topography.

**General information**

State: Published

Organizations: Department of Wind Energy, Meteorology, Nansen Environmental and Remote Sensing Center, Centre for Maritime Research and Experimentation, CLS, Bedford Institute of Oceanography, Chinese Academy of Sciences, Nanjing University of Information Science & Technology, National Oceanographic and Atmospheric Administration, Johns Hopkins University, German Aerospace Center, Norwegian Meteorological Institute, University of Washington, University of Miami, Defence Research and Development Canada


Number of pages: 22

Publication date: 2013

**Host publication information**

Title of host publication: Proceedings of SEASAR 2012

Publisher: European Space Agency

(E S A - S P; No. 709).

Electronic versions:

SeaSAR2012_whitepaper_wind.pdf

Research output: Research - peer-review › Article in proceedings – Annual report year: 2013