



Are certain storms overestimated in the NORA10 wave hindcast?

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The Norwegian Reanalysis of wind and waves (NORA10) is a downscaling to 10 km of the ERA-40 dataset and ECMWF forecasts for 1958-2014. The significant wave height (H_s) in some storms in 2006 and 2011 are modelled 13-23% higher than observed even if modelled winds seem to be in accordance with observations. The propagation track and speed of these storms and possible swell into the area is investigated compared to similar situations. The wave observations from the storms are analyzed as well as data from experiments using SWAN with different dissipation formulations and two different versions of WAM. One is WAM cycle 4 from 1998 (modified for parallel processing and rotated grid) running operationally at MET and the other is a new version made available through the MyWave project. Preliminary studies show that MyWave WAM gives higher waves than the old version of WAM in the storms mentioned while SWAN with Westhuysen dissipation gives values of H_s closest to the observed. A new operational wave model setup using MyWave WAM on 4km spatial resolution over a domain covering the Nordic Seas is implemented and considered for operational use. The performance of the new wave model setup for the Nordic Seas is validated against the offshore observations and compared to the existing forecasting system.