



Tropical storm forecast verification using a mesoscale NWP model HIRLAM

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It has been a challenge to make accurate tropical storm forecast by using meso-scale Numerical Weather Prediction (NWP) models. In this study, DMI NWP model HIRLAM has been implemented for the Far Eastern and NW Pacific Marginal Sea region, and running operationally since 2007. The model was calibrated with a horizontal resolution of 0.072degree, the best available lateral boundary forcing from ECMWF global forecast and daily SST forcing in a horizontal resolution of 0.05degree which was derived from 7 satellites. The capacity of HIRLAM on predicting the tropical storms in NW Pacific region are verified for year 2009 and 2010, both on typhoon tracks and intensity. The results suggest that HIRLAM model has a similar performance in typhoon track prediction as the advanced global forecast model, but a unique strength on predicting the typhoon intensity. No bogussing scheme was used.