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Impact of QuikSCAT wind on operational global 3DVAR system

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QuikSCAT sea wind data has been used for the data assimilation over the data-sparse area. It has been shown to have positive impact on the numerical weather analysis and forecasting (Atlas et al., 2001). As it is expected to bring a positive impact of that data on the both analysis and forecast, QuikSCAT sea wind data is implemented in the current global data assimilation system of Korea Meteorological Administration. In previous surface data assimilation observation data are vertically interpolated according to pressure, but QuikSCAT wind is analyzed at 10m-level by using similarity theory in this implementation. Forward and adjoint operator are adopted from MRF PBL parameterization process. And quality control routine of JMA is also introduced.
Experiments with single observation of QuikSCAT wind were tested to check if the operators were properly installed. The results of data assimilation with QuikSCAT wind on the global 3dvar system will be presented.

Keywords: QuikSCAT; data assimilation

References

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