

## **OBSERVING SYSTEM EXPERIMENTS FOR MODIS WINDS IN THE JOINT CENTER FOR SATELLITE DATA ASSIMILATION**

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Polar winds from MODIS are now considered among the mainstays of wind observations used for operational numerical weather prediction around the world. Part of the reason is the relatively limited coverage of the polar regions provided by the other parts of the Global Observing System. In other words, the MODIS winds are substantial contributors to NWP skill because the observations are taken in what would otherwise have been a near data void. However, this also poses difficulties for activities such as data screening, quality control and verification. In areas of good data coverage, the different types of observations will tend to keep each other in check. This is generally not the case in the regions covered by the MODIS winds, and the data assimilation systems can therefore be highly vulnerable to bad QC decisions for these data. We present a series of MODIS wind impact experiments for the winter of 2007-08. The experiments were carried out with two different data assimilation systems, namely the NCEP/EMC Global Forecast Systems and the GMAO GEOS-5, and the experimental period was coordinated with the plans of the Met Office, ECMWF and other centers. The experiments were designed to not only show the overall impact of the MODIS winds in the latest generation of 3D-VAR systems but also to highlight the particular role of data screening and QC for these observations. Time permitting, more general AMV impact experiments may also be shown.