Satellite Data Assimilation in Tropical Cyclone Forecasts

Wei Han and Jishan Xue

Chinese Academy of Meteorological Sciences
China Meteorological Administration
Beijing, China

All tropical cyclones landing Chinese coast originate in the Western Pacific or the South China Sea where few conventional soundings or surface data are available. With sparse observations over the oceans, it is impossible to define the large scale flow patterns and the inner structure of tropical cyclones, and such inaccurate analyses cause big errors in both numerical prediction and statistical forecasts of tropical cyclones. So the data voids problem is the most serious challenge faced by Chinese Scientists and forecasters in operational centers. The assimilation of satellite observations is likely the best way for solving this data voids problem. Trials of assimilation of AMSU and Geo-AMVs in Tropical cyclone forecasts will be presented in this poster.