

## **Assimilation of MeghaTropique Saphir Radiance data at NCMRWF**

V.S. Prasad, C. Johny and Sanjeev Kumar Singh  
National center for Medium Range Weather Forecasting, Ministry of Earth Sciences, India.

India and French launched a joint Satellite mission, called MeghaTropiques (MT) for studying water cycle and energy exchanges in the tropics. MT is a unique satellite revolving around the earth in circular orbit with 20 degree inclination and carrying a six channel radiometer, sounder for Probing vertical profiles of Humidity (SAPHIR) in 183 Ghz frequency along with three other sensors. The data from this sensor is recently made available to users.

A Global Data Assimilation and Forecasting (GDAF) system in T574L64 resolution is regularly run in near real time mode at NCMRWF. The analysis of this system is based on Global Statistical Interpolation (GSI) scheme. Necessary changes are made in the GSI to assimilate SAPHIR radiances.

An Observational System Experiment (OSE) to study the impact of SAPHIR radiances is carried out involving this modified GSI. The study period covers a severe cyclone system, Neelam that formed in the Bay of Bengal and crossed south Indian coast on 31 October 2012. The results of this experiment will be discussed in this paper.