

## Dr. Indira Rani S.



Dr. S. Indira Rani, currently working as Scientist-E at NCMRWF, obtained her Ph.D from Kerala University in 2009 while working as a VSSC Research Fellow. She joined NCMRWF in the year 2009 and has been working on Data processing, Satellite data validation and assimilation. She has 30 research publications to her credit. Her recent significant contributions include:

- 1) Development of techniques to assimilate Indian Satellite radiance observations from INSAT-3D and Megha-Tropiques satellites in the Unified Model (UM) data assimilation system.
- 2) She contributed significantly in the improvements of the UM pre-processor system operationally used at NCMRWF. The improvements in the pre-processor software helped to increase the observation volume used in the data assimilation system.
- 3) Implementation of Hybrid 4D-Var system at NCMRWF which blends the climatological forecast error estimates with the “flow dependent” forecast error estimates from the ensemble prediction system. This helped to improve the global analysis and forecasts from UM at NCMRWF.
- 4) The retrieval of past observations from Indian sources helped to improve the observation volume in the IMDAA regional reanalysis. Her study of retrieved observations with ECMWF data archives clearly indicates the significance of the archived Indian observations.

Dr. Indira Rani S. is awarded the Certificate of Merit for her outstanding contributions in the field of Atmospheric Science and Technology.