Spatially interpolated sounder derived products can be utilized as an indicator for regional and location specific forecast over the areas where radiosonde data is not available. It can be used as a sensitive measure for very early stages of instability developments such as thunderstorm and rainfall because no other single stability index can provide a distinct threshold value for these events.

Direct receiving and processing systems at IMD

- The purpose of this study is also to monitoring the atmospheric instability using INSAT-3D and MODIS profile data at regional and local levels so that it can be used as an indicator of instability and to improve the severe weather forecast.

Data Used

- We utilized entire temperature and moisture profile from MODIS instrument for computation of MPI over the Indian region from March to June 2011 & 12 for clear and convective weather conditions. The training dataset, with an assemblage of 12 vertical profile datasets from MODIS (Terra/Aqua), was constructed for both severe weather i.e. convective events and rain free/clear weather conditions for both drizzles nor light rain, where each single dataset consisted of 67 temperature/moisture soundings. Thus overall 804 (12x67) sounding associated with each weather conditions.

- The authors felt that this was a large enough data set to satisfy requirements for statistical significance of MPI. In the current study, MODIS Profile Index (MPI) has been computed by integrating the temperature/moisture soundings. Thus overall 804 (12x67) sounding associated with each weather conditions. The authors are very much grateful to Director General of Meteorology, IMD, New Delhi, for his keen interest and providing all facilities to attend the workshop.

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