

## **On the Influence of Tropical Storm Aila on the Indian Summer Monsoon 2009 - A Numerical Study**

S.S.V.S.Ramakrishna<sup>\*,1</sup>, N.Vijaya Saradhi<sup>1</sup>, G. Harikishan<sup>1</sup>, K. Asha Latha<sup>1</sup>

<sup>1</sup> *Department of Meteorology & Oceanography, Andhra University, Visakhapatnam, Andhra Pradesh*

Tropical cyclones in the North Indian Ocean form during the pre & post monsoonal season. The dynamics of the Tropical Storm AILA which formed during the month of May 2009 is investigated with high resolution mesoscale model. The evolution of the vortex has been studied with different parameterization schemes. Initial conditions are derived from NCEP FNL data with 1° X 1° resolution and the two-way nested domains of 90, 30 Km horizontal resolution are used for the simulation.

The influence of the storm AILA on the onset of the monsoon of 2009 has been further investigated by computing the energetics in the storm and storm free area. It has been found that the simulation with the combination of KF2 Convection scheme and Yonsei University PBL scheme yielded the lowest minimum central surface pressure and the maximum winds with the both 90 and 30 km resolutions. The radius height cross sections of the wind field and relative humidity, three components of velocity components and the structure of the precipitation are presented along the track.

**Keywords:** Tropical storm, monsoon, energetics

\* Email [ssvs\\_rk@yahoo.co.in](mailto:ssvs_rk@yahoo.co.in), Cell No: +91-9866339985