



## **Influence of Madden-Julian Oscillation and Somali Low Level Jet over Indian summer monsoon rainfall**

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The Somali Low Level Jet (SLLJ) is the most important moisture source for India during the monsoon season. A linkage between the moisture uptake over the equatorial area of the SLLJ and the rainfall variability over most of continental India has also been recently indicated. On the other hand, the Madden-Julian Oscillation (MJO) has been identified as a dominant mode of the intraseasonal variability of the Indian summer monsoon rainfall, since the northward propagation of the boreal summer MJO is closely associated with the active and break phases of monsoon rainfall. But a question remains open: is there a relationship between the moisture transport of the SLLJ and the MJO evolution?

In this work, a lagrangian approach is used to track the evaporation minus precipitation (E - P) evolution along trajectories of particles initially situated over the equatorial region of SLLJ. The impact of the MJO propagation on the water budget transport of the SLLJ is examined by making composites of the obtained (E - P) fields for the different phases of the MJO. Results show that anomalous moisture source and sink regions formed with particles in transit from SLLJ, provide a good representation of intraseasonal variability of India rainfall. Thus, the MJO is considered to modulate convection in India region through its influence on SLLJ.