

## Modulation of Monsoon Intraseasonal Oscillations by El-Nino

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The predictability of interannual variability (IAV) of Indian summer monsoon (ISM) is controlled by external components, i.e., the slowly varying components like SST, sea ice, snow cover etc. and the internal components like the nonlinear interactions between monsoon intraseasonal oscillations (MISOs) and seasonal cycle, topography etc.<sup>1,2</sup>. The monsoon internal variability is inherently chaotic and is highly unpredictable. In this study, using a non-linear technique called Self Organising Maps<sup>3</sup> (SOM), we identify interesting evidence that certain phases of ISO are being modulated by El-Nino. This identification provides some hope in improvement of the predictability of the part of internal monsoon IAV that is modulated by external components.

**Keywords:** Indian summer monsoon; Intraseasonal Oscillations; El-Niño

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