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Title: Prediction of South Asian monsoon by a high-resolution coupled model on intraseasonal to seasonal time scales
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Abstract:
 The prediction of the South Asian monsoon by a high-resolution version of the ECMWF coupled model is assessed. The retrospective forecasts by the high-resolution model (T1279 atmospheric model) for the period 2000-2011 are compared with those by lower resolution versions (T319 and T639) to investigate the impact of increasing the resolution. Specifically, the mean conditions of the monsoon, the intraseasonal and interannual variability are examined in detail. The influence of El Niño-Southern Oscillation (ENSO) and Indian Ocean Dipole (IOD) on the monsoon rainfall and circulation are analyzed in order to assess the prediction of seasonal mean monsoon. The model's ability to simulate the period, spatial structure and propagation of the leading intraseasonal oscillation (ISO) in the monsoon rainfall is studied. The leading ISO generated by the models with different resolutions are compared. The predictability of the ISO is also assessed by estimating the growth rate of small errors and compared with a similar analysis of the total anomalies.
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