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**Supplemental Material for**  
**Distinguishing spread among ensemble members between**  
**drought and flood Indian summer monsoon years in the Past**  
**58 Years (1958–2015) reforecasts**

Ravi P. Shukla<sup>1,\*</sup> and Chul-Su Shin<sup>1,2</sup>

<sup>1</sup>Center for Ocean-Land-Atmosphere Studies  
George Mason University, Fairfax, Virginia, USA

<sup>2</sup>Department of Atmospheric, Oceanic, and Earth Sciences, George Mason University,  
Fairfax, Virginia, USA

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\*Corresponding author:  
Ravi P. Shukla, PhD  
Center for Ocean-Land-Atmosphere Studies (COLA)  
George Mason University  
270 Research Hall, Mail Stop 6C5,  
4400 University Drive, Fairfax, VA 22030 USA  
E-mail: rshukla2@gmu.edu

37 **Supplementary Figures:**

38 **Figure S1:** Scatter plot between JJAS mean NINO3.4 SST index and spread among 20 members for  
39 JJAS ISMR index over Indian landmass (10°N–35°N, 69°E–88°E) in April initialized CFSv2  
40 reforecasts for period 1958-2015. The flood monsoon years are 1962, 1964, 1968, 1973, 1978, 1984,  
41 1985, 1988, 1995, 1998, 1999, 2007 and 2008. The drought monsoon years are 1960, 1961, 1963,  
42 1965, 1972, 1980, 1986, 1993, 2001, 2014 and 2015. The normal monsoon years are 1959, 1966,  
43 1974, 1979, 1991, 1992, 1994 and 2013.

44 **Figure S2.** Area averaged of JJAS mean rainfall anomalies over Indian landmass in April initialized  
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47 **Figure S3.** Spatial anomaly correlation of JJAS mean rainfall anomalies over Indian landmass  
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50 **Figure S4:** Spatial distribution of mean of JJAS rainfall anomalies during La Niña years from (a)  
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53 India is -0.84 mm/day (0.86 mm/day) for El Niño (La Niña) years whereas mean observed  
54 anomalies value is -0.59 mm/day (0.26 mm/day) for El Niño (La Niña) years.

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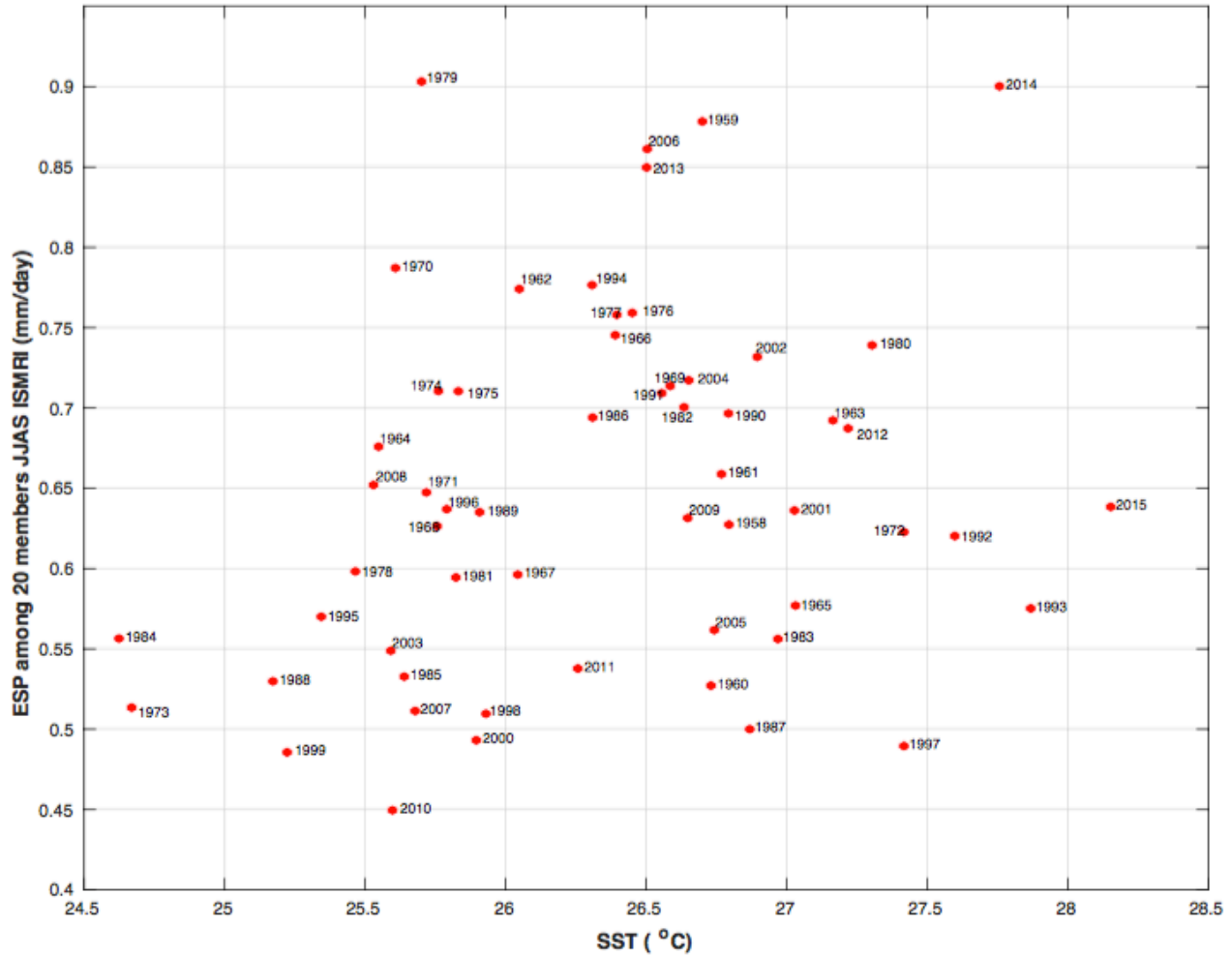
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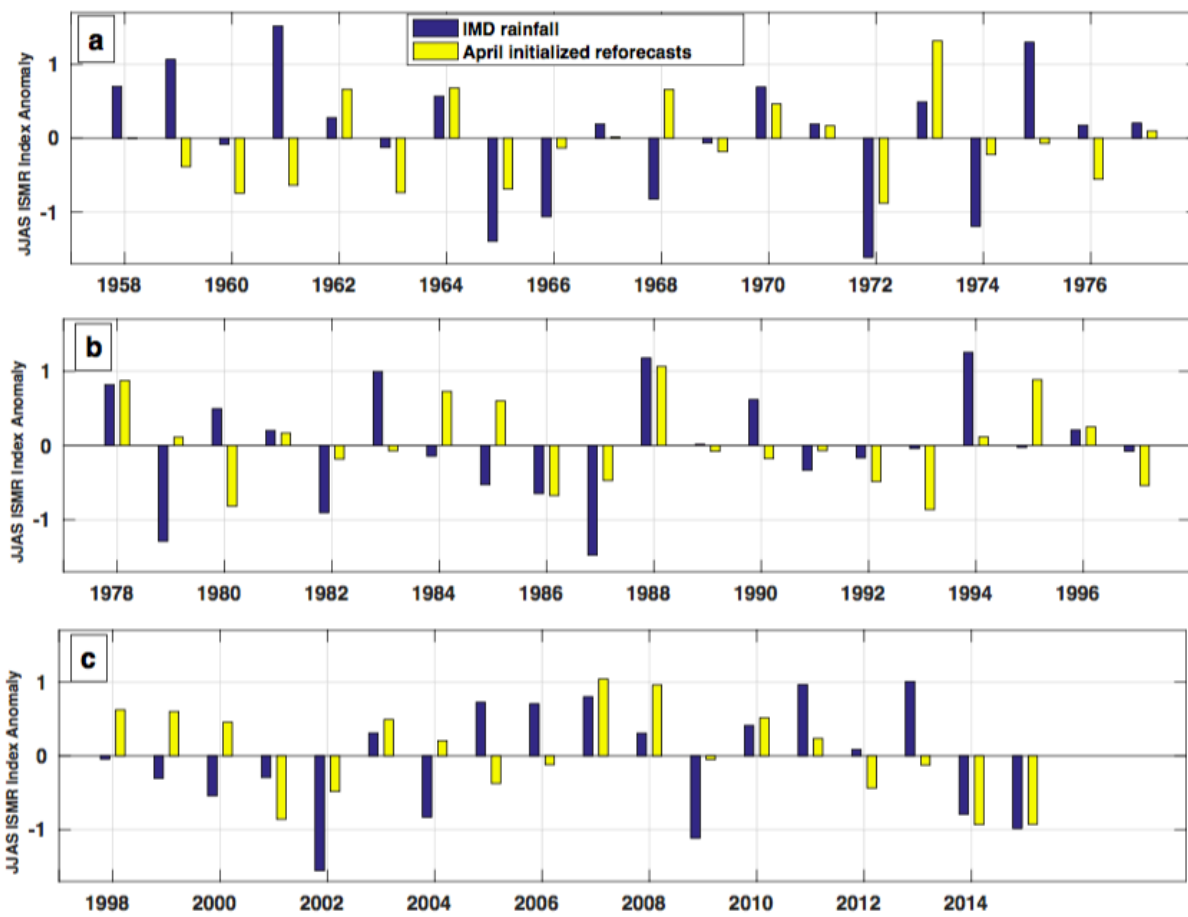
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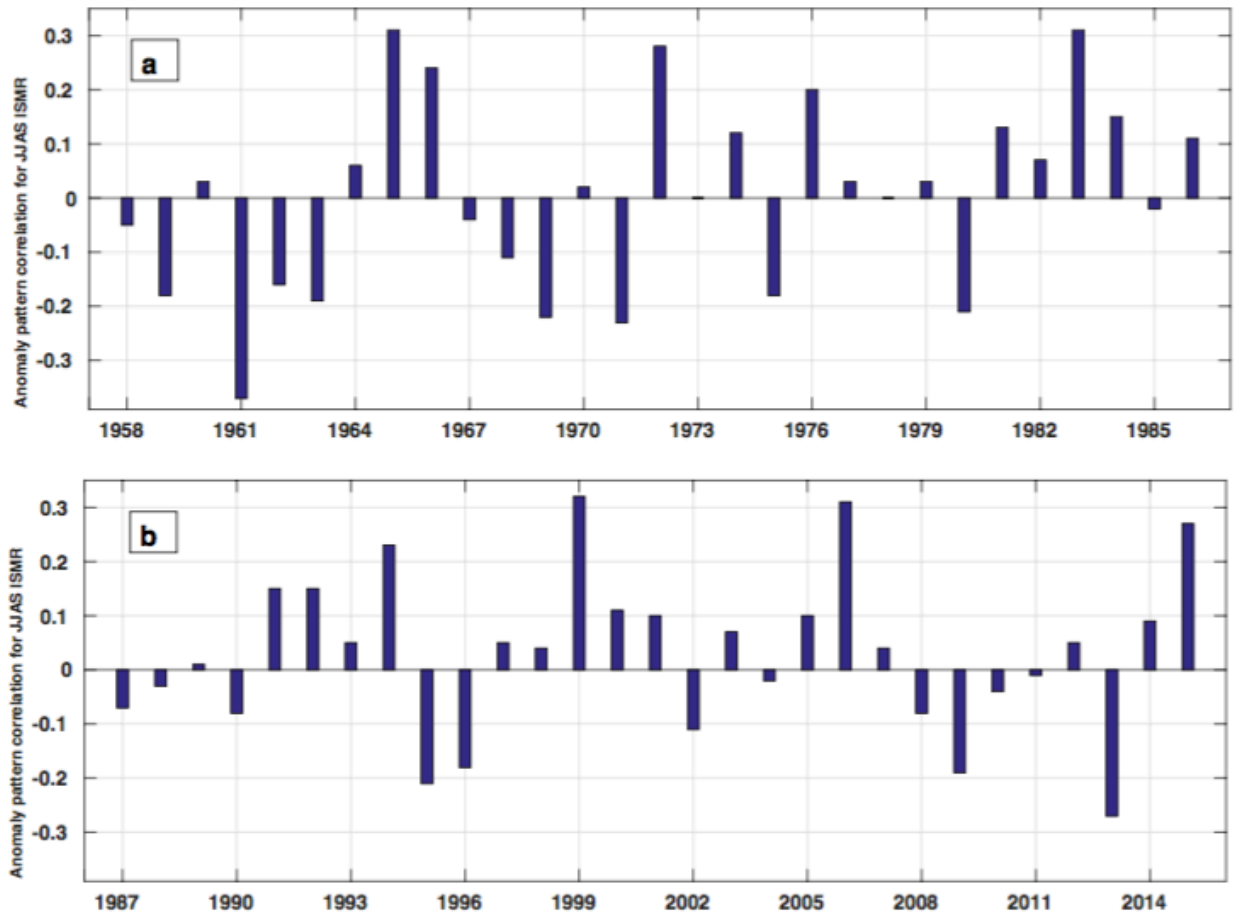
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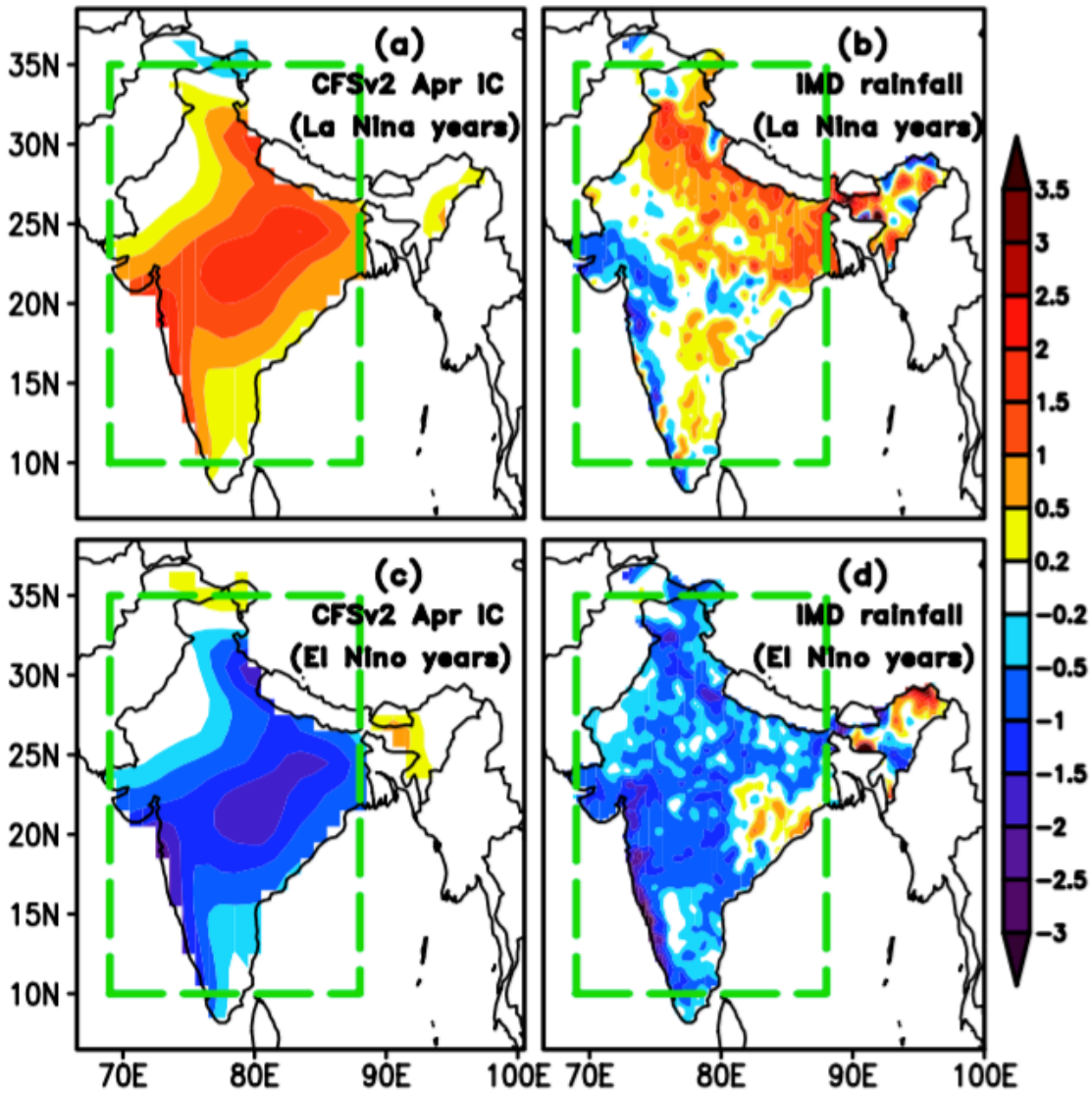
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