

Somali Jet in the Arabian Sea, El Niño, and India Rainfall

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The summer monsoon is inarguably an important facet of life in India, and the relationship between southwest monsoon winds in the Arabian Sea and India rainfall remained elusive until recent satellite observations. In June 1997, NSCAT surface wind vector data provided the first opportunity to diagnosis the onset of the Somali Jet in the Arabian Sea. During 1988-1999, interannual variations of the onset and strength of the Somali Jet are described with 2-day $1^{\circ} \times 1^{\circ}$ SSMI wind speed data. Each year the Somali Jet formed in a similar area in the western Arabian Sea, and always before the onset of monsoon rainfall in Goa. When monthly mean intensity of the Somali Jet was above (below) normal, there was excess (deficit) rainfall along the India west coast. The average date of Somali Jet onset was later in El Niño events compared to La Niña conditions. The very late onset of the Somali Jet in 1997 was coincident with the strongest El Niño of the century. The Somali Jet was weaker during El Niño episodes than during La Niña intervals. Results demonstrate interannual variations of the Somali Jet were associated with El Niño/La Niña and India west coast rainfall.