



## **Atmospheric signature of the Agulhas current**

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Satellite observation and Climate Forecast System Reanalysis (CFSR) are used to map the influence of the Agulhas current on local annual precipitation in Southern Africa. The pressure adjustment mechanism is applied over the Agulhas current region. Results unfold that the narrow band of precipitation above the Agulhas Current is collocated with surface wind convergence, sea surface temperature (SST) Laplacian and sea level pressure (SLP) Laplacian. Relationship between SLP Laplacian and wind convergence is found, with 0.54 correlation coefficient statistically significant. In the free troposphere, the band of precipitation above the Agulhas current is collocated with the wind divergence and the upward motion of wind velocity. The warm waters from the Agulhas current can influence local precipitation.