



Climate variability over Northeastern Argentina displayed from precipitation

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The paper explores the climatic variability displayed by precipitation over Northeastern Argentina in the La Plata Basin in South America. Using a 1.0° lat x 1.0° long grid 18 months of low-pass filtered anomalies of monthly precipitation, a Principal Component Analysis (PCA) was performed. The leading 10 S-PCs (Spatial Principal Components) were retained for a subsequent Multichannel Singular Spectrum Analysis (M-SSA), in order to determine the spatial and temporal structure of trends and interannual variability. We find evidence that precipitation has cycles in the Interannual Frequency Band (IFB), with periods of about 6, and 3.5 years and a quasi-biennial oscillation, together with a trend component. To determine if oscillatory components detected in rainfall are reflected in streamflow; a Singular Spectrum Analysis (SSA) was applied to a series of mean annual discharges, corresponding to gauging stations on the major rivers of the basin.