Supplementary Information for:

Understanding the Variability of West African Summer Monsoon Rainfall: Contrasting Tropospheric Features and Monsoon Index

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Figure S1. (a) Study domain showing West African topography and the regions designated as Guinea coast (A), Savannah (B), and Sahel (C).
**Figure S2:** Standardized JJAS rainfall anomaly over West Africa from 1950 - 2014

**Figure S3.** Regression between JJAS zonal wind and area-averaged summer monsoon rainfall over West Africa (4° - 16°N, 20°W - 20°E). Stippling indicates regions where changes are significant at the 95% level.
Figure S4. Spatial correlation between previous indices and JJAS rainfall of (a) CRU, (b) GPCC, and (c) UDEL. Stippling indicates regions where changes are significant at the 95% level.

Figure S5. Time series of the standardized anomaly of the WASMI and other indices.