Atmospheric Chemistry and Physics

Supporting Information for

On the Mechanisms that Control the Rainy Season Transition Periods in the Equatorial Congo Basin

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Supplementary Figures

Figures S1-S5

Figure S1
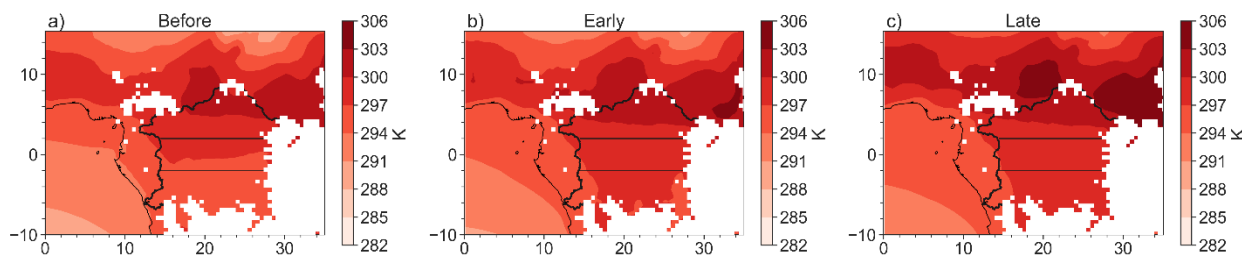
Figure S1: For the transition to the spring RSO: Near surface (925 hPa) temperature for the a) "before" period; b) early transition; and c) late transition. White shades mask out topography above 925 hPa.

Figure S2
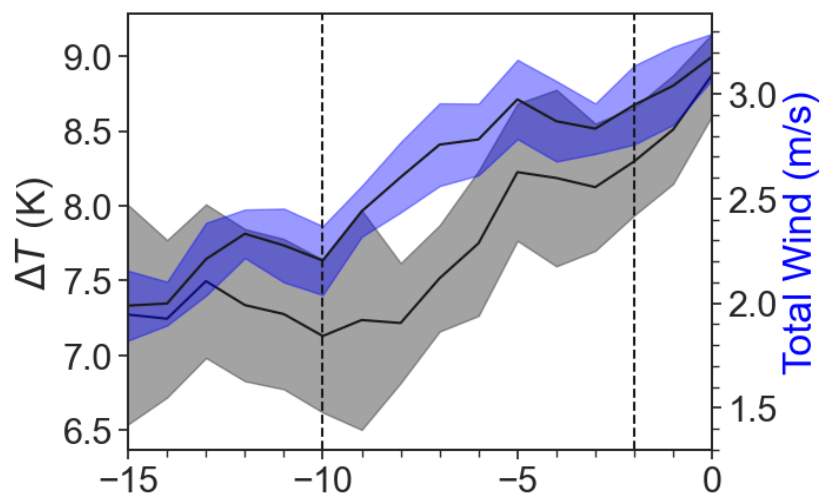
Figure S2: Black line: 925 hPa temperature gradient between the Atlantic Ocean ($5°S - 2°N, 5°W - 8°E$) and northern Congo ($5°N - 12°N, 15°E - 35°E$). Blue line: 925 hPa wind magnitude ($\sqrt{u^2 + v^2}$) in the equatorial and northern Congo coastlines ($2S° - 6°N, 5°E - 15°E$) prior to the spring RSO.

Figure S3
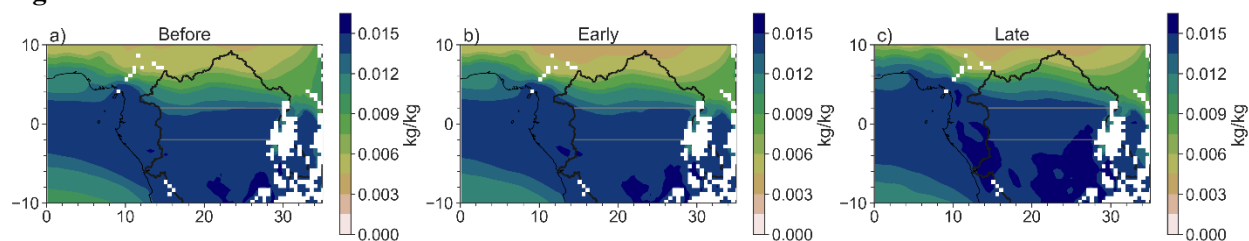
Figure S3: Specific humidity (q) averaged between 925-875 hPa for a) the "before" period; b) the early transition period; and c) the late transition period prior to the spring RSO. White shades mask out topography greater than 875 hPa.

Figure S4
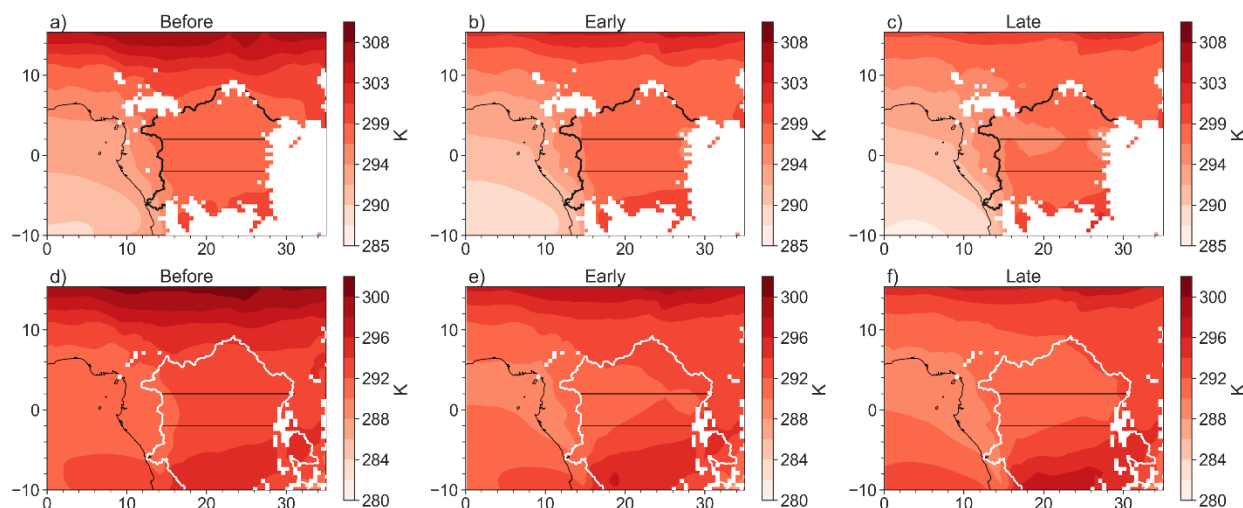
Figure S4: Surface temperatures (white areas mask regions with surface elevation higher than 925 hPa altitude) at 925 hPa for a) the "before" period; b) The early transition period; and c) the late transition period; and at 850 hPa (white areas mask regions with surface elevation higher than 850 hPa) for d) The "before" period; e) the early transition period; and f) the late transition period prior to the fall RSO. 850 hPa is representative of near-surface temperatures in the southern Congo (below 2°S). Prior to the fall RSO.

Figure S5
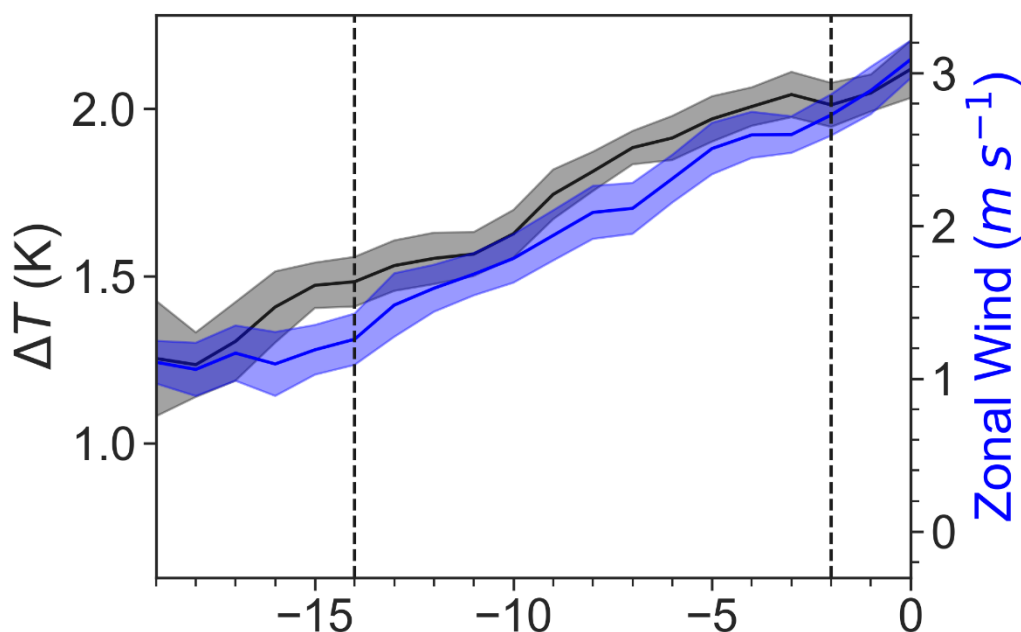
Figure S5: Zonal temperature gradient (black, ΔT) and the zonal wind component (blue, m/s). Both are between $5°S - 5°N$ and $5°E - 15°E$ prior to the fall RSO.