



## Supplement of

## Modeling investigation of light-absorbing aerosols in the Amazon Basin during the wet season

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Figure S1: Column burden of total dust (top panel) and the contribution to total dust burden from four defined source regions (a: northwest Sahara; b: northeast Sahara; c: West Sahel; d: Bodélé) (middle panels) over the rectangle region between 80° W–40° E and 25° S–40° N in Jan 2014. The bottom panels are sensitivity of dust burden to the emission from four source regions with high value indicating high sensitivity (see text).



Fig S2. Precipitation (contours) in January-April (a) and January (b) for the year of 2014 over the rectangle region between 80° W–40° E and 25° S–40° N. Mean 0-1 km wind vectors are shown as arrows in both (a) and (b). The difference in precipitation between January and January-April is shown in (c).



Fig S3. Precipitation (contours) in the year of 2013-2015 (a) and 2014(b) during January-April over the rectangle region between 80° W–40° E and 25° S–40° N. Mean 0-1 km wind vectors are shown as arrows in both (a) and (b). The difference in precipitation between the year of 2014 and 2013-2015 is shown in (c).