Supplementary Online Materials

Observation and modeling of a gigantic African dust intrusion into the Caribbean Basin and the southern U.S. in June 2020

Figure S1: Curtain plots of CALIOP aerosol extinction coefficient in the Caribbean Basin on June 22, 23, and 24, 2020.

Figure S2: MODIS/Terra daily AOD for 2020 (red dot and thick line) in comparison to 2000-2019 climatology (the median and range of daily AOD are represented by thick black line and gray vertical bar, respectively) in West Africa (10N-30N, 17W-10E), a sub-set of the SAHD defined in Figure 9. The insets zoom in to the day-to-day variations of regional AOD from June 10 to June 30, 2020.

Figure S3: GEOS daily AOD for 2020 (red dot and thick line) in comparison to 2000-2019 climatology (the median and range of daily AOD are represented by thick black line and gray vertical bar, respectively) in seven regions defined in (a). The insets in (b-h) zoom in to the day-to-day variations of regional AOD from June 10 to June 30, 2020.

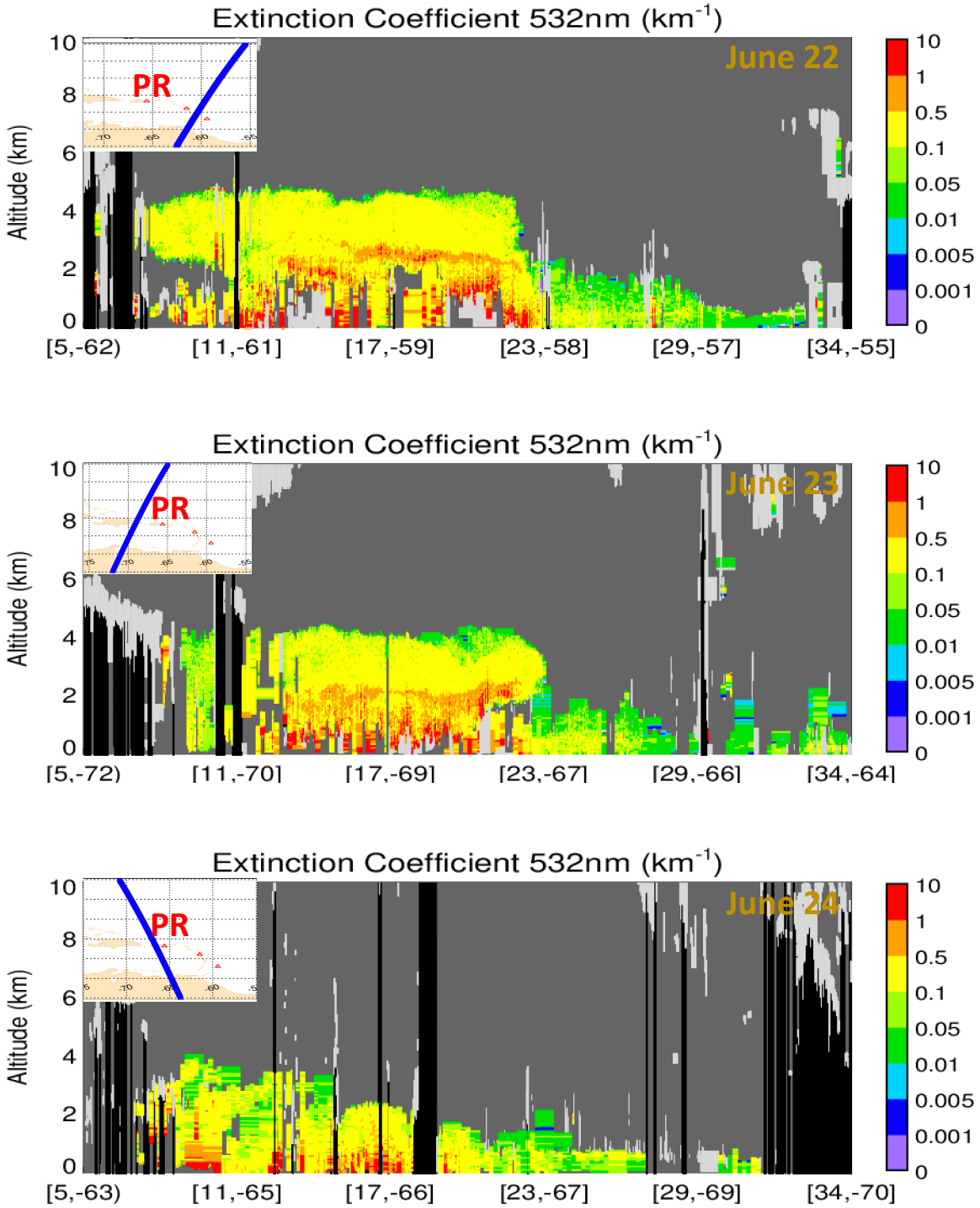

Figure S1: Curtain plots of CALIOP aerosol extinction coefficient in the Caribbean Basin on June 22, 23, and 24, 2020.

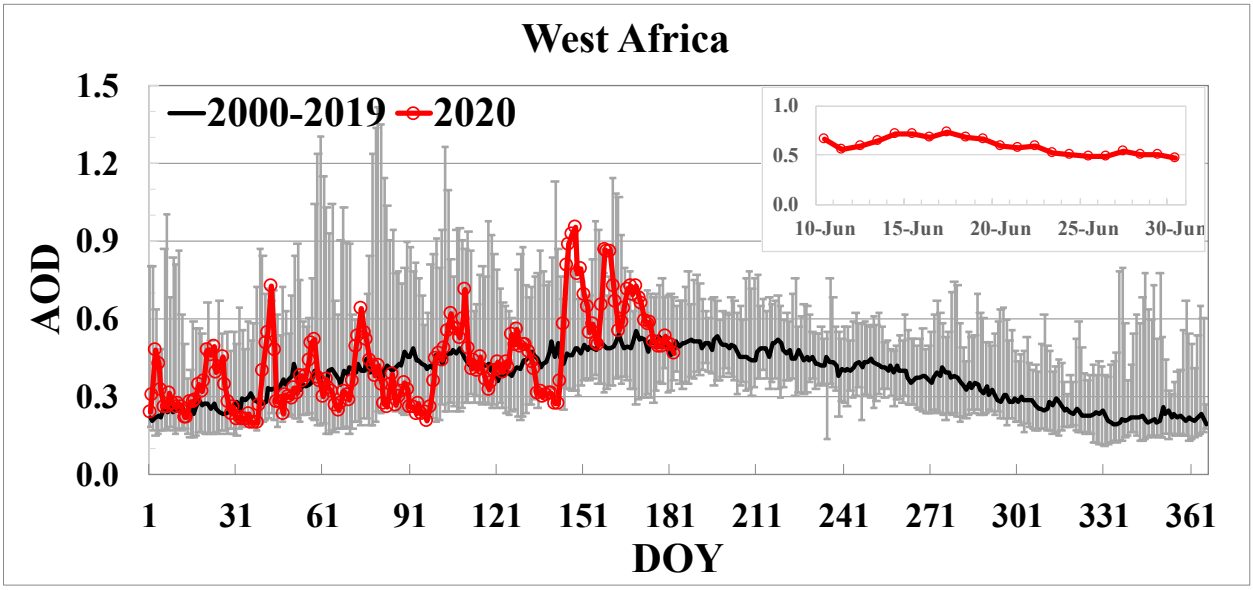

Figure S2: MODIS/Terra daily AOD for 2020 (red dot and thick line) in comparison to 2000-2019 climatology (the median and range of daily AOD are represented by thick black line and gray vertical bar, respectively) in West Africa (10ºN-30ºN, 17ºW-10ºE), a sub-set of the SAHD defined in Figure 9. The insets zoom in to the day-to-day variations of regional AOD from June 10 to June 30, 2020.

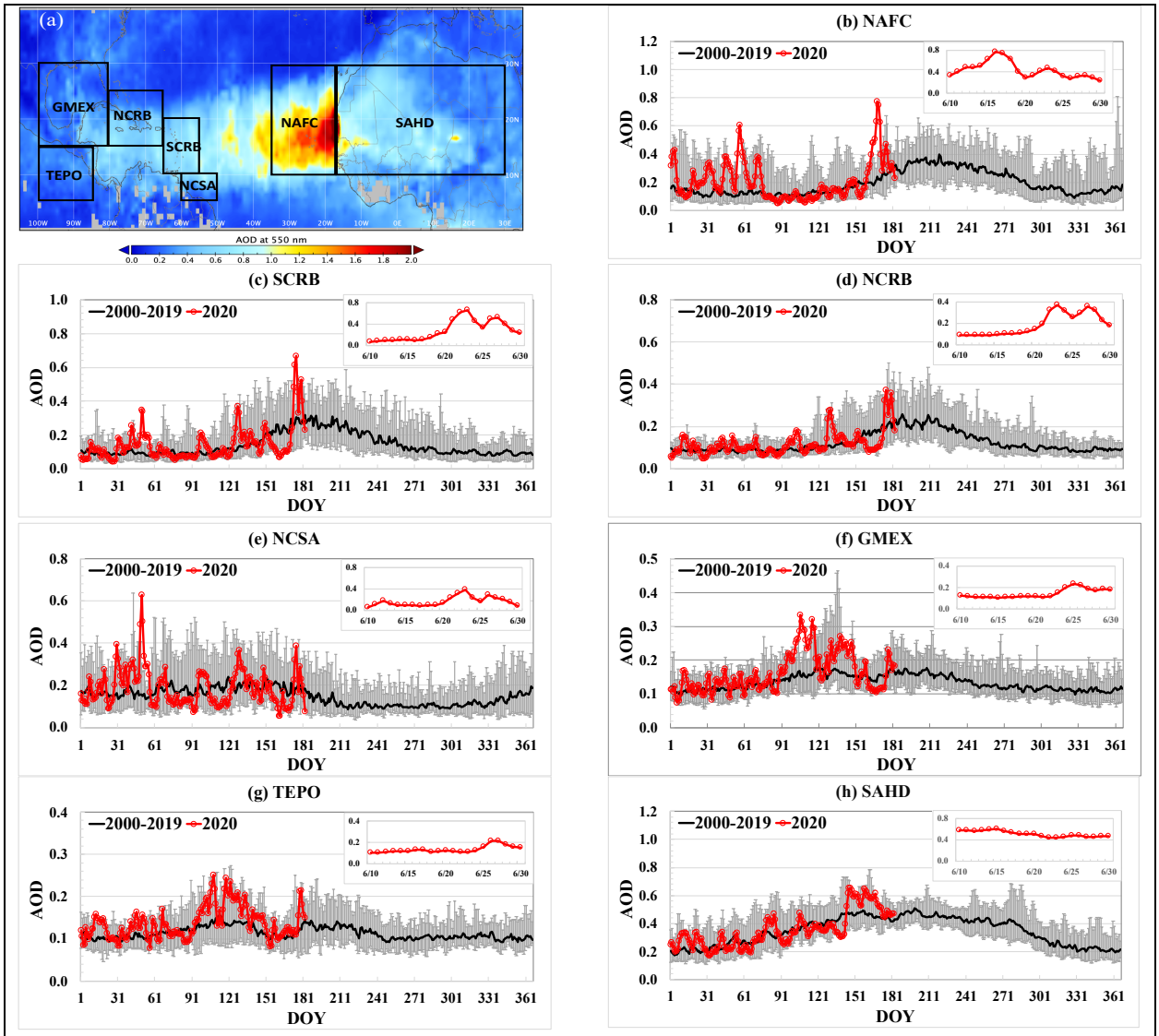

Figure S3: GEOS daily AOD for 2020 (red dot and thick line) in comparison to 2000-2019 climatology (the median and range of daily AOD are represented by thick black line and gray vertical bar, respectively) in seven regions defined in (a). The insets in (b-h) zoom in to the day-to-day variations of regional AOD from June 10 to June 30, 2020.