

Increased African fire carbon emissions inferred from TROPOMI carbon monoxide retrievals

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Poster

Fires across Africa account for the vast majority of global burned area, and account for roughly half of global fire carbon emissions. Still, total fire carbon emissions over Africa are uncertain, with refined burned area mapping driving up emission estimates. Here, we employ a top-down approach to quantify fire emissions based on satellite retrievals of carbon monoxide observed by the TROPospheric Monitoring Instrument (TROPOMI) instrument. Top-down annual African fire carbon emissions are found to be roughly doubled from the prior estimates (GFED4.1s, QFED, finn), consistent with upward revision resulting from better burned area mapping. This presentation will discuss the regional and temporal patterns of top-down fire emissions, uncertainties in top-down approach, and the implications for the African carbon budget.

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