3.055 Quantifying the impact of African pollution on the Tropical Troposphere of the Atlantic.

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Abstract:

The population of Africa is expected to double to 2.5 billion people by 2050 (UN Population Division), with the population of mega cities, such as Lagos, Nigeria, reaching over 20 million people (from the current 11 million). In August 2016 and February 2017, flights of the Atmospheric Tomography (ATom) mission over the Atlantic and Pacific oceans (from 65S to 85N) intersected a zone of strong pollution extending across many degrees of latitude, emanating from Southern and Western Africa, respectively. The emissions from southern Africa were dominated by biomass burning and dust. However, the West African emissions indicated a mix of oil and gas, biomass burning and Saharan dust sources. Using the trace gases measured during ATom, including profiles of carbon monoxide (CO), we quantify the impact of these emissions on the tropical troposphere in the Atlantic sector.