

## Virtual ACOM Seminar

**Africa qualité de l'Air (AfricAir): A transcontinental air quality monitoring hybrid network using lower-cost sensors and reference monitors**

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Links: <https://operations.ucar.edu/live-acom>

### ABSTRACT

Ambient air pollution is estimated to cause several hundred thousand deaths annually across Africa. Many African cities have very limited or no air quality monitoring infrastructure, hampering urban air quality management. The Make Our Planet Great Again (MOPGA) project 'Make Air Quality Great Again', in collaboration with African, American, and Australian partners, has established AfricAir, a transcontinental network of low-cost sensor nodes and reference monitors. Over 50 nodes have been deployed in Nairobi, Kigali, Accra, Abidjan, and other African cities. Localized corrections for these sensors are developed by collocation with reference monitors for fine particulate matter mass (PM<sub>2.5</sub>), nitrogen dioxide, and ozone. Not all these cities had continuous reference monitoring, so AfricAir partners have deployed reference monitors in Accra, Nairobi, and Abidjan. Efforts are also underway to deploy an additional 25 reference PM monitors (TEOMs). Local partnerships ensure that the sensors are maintained and deployed in locally-relevant sites. We are training local students and technicians to develop local capacity and ensure network sustainability. Knowledge is actively exchanged through webinars, summer schools, and a planned CAMS-Net symposium at ASIC 2022. Results for spatio-temporal variability of urban air pollution, comparison of ground monitoring data with satellite estimates, and source apportionment will be presented. Challenges faced and questions for future investigation will also be shared in this seminar.