

**A way too quick overview of long-term, surface,
in-situ aerosol optical property network measurements**

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Long-term, surface, in-situ measurements of aerosol optical properties have been made under the auspices of several international networks since the 1970s. These observations provide climatological information on aerosol particle properties for a variety of time scales (diurnal, seasonal, inter-annual). For sites with a long enough record, the measurements can be used to assess aerosol trends. These in-situ data can also be used for Earth system model validation and to explore patterns of co-variability among aerosol properties which can be useful for aerosol typing.

In this talk, I'll briefly (way too briefly!) talk about how the in-situ measurements are made, the networks making them and where the data from these networks are archived. I'll discuss some of the common issues that need to be considered when relating in-situ aerosol optical property measurements to remote sensing retrievals of aerosol properties and model simulations. If time allows, I'll also highlight some examples (e.g., comparisons of in-situ and remote sensing observations) and discuss a recent EU proposal to better harmonize aerosol in-situ measurements across networks.