

## **6.201 A sun photometer to connect local and remote sensing of aerosols.**

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Abstract:

Aerosol extinction is a fundamental parameter for visibility and for the direct forcing of climate visibility. Vertical profiles are an essential complement to satellite measurements of column optical depth. A miniature, four-wavelength sun photometer has been developed for vertical profiles of aerosol extinction. It weighs about 360 g, is low power, and uses inexpensive components. It is suitable for routine profiles on small balloons and UAVs. Flight data show that it can distinguish aerosol optical depths of about 0.01 and measure the scattering phase function even with very low aerosol optical depths.