



## **Retrieval of AOD from ground based Brewer spectrophotometer measurements in Rome.**

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Several studies have pointed out the important role of aerosols in the Earth's atmosphere and their impact on global climate. Reliable long time series of aerosol optical properties are still not available and there is no satisfactory worldwide spatial coverage. Here a methodology to retrieve aerosol optical depth (AOD) from Brewer direct sun measurements in the visible region using a zero air mass Langley Plot extrapolation calibration methodology, is presented. Direct irradiance measurements from the Brewer spectrophotometer station of Rome (#67) were reanalyzed for the period 1997-2005. The retrieved AOD shows a pronounced annual variability with minimum in winter and maximum in summer. Comparisons with other instruments confirm the validity of the method.