



## **Ozone measurements with spectrophotometers Brewer at Lindenberg, Germany. Sensitivity study of the Brewer inversion method with a radiative transfer model**

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Since decades the DWD (Deutscher Wetterdienst – German Weather Service) measures the atmospheric ozone with spectrophotometers Brewer at the MOL-RAO (Meteorologisches Observatorium Lindenberg – Richard Assmann Observatorium) observatory at Lindenberg, Germany. We present here the results of long term observations of the total atmospheric ozone column and discuss the sensitivity of the Brewer direct sun measurements to different atmospheric parameters. The Brewer’s method of inversion assumes some fixed parameters (e.g. ozone layer height, vertical distribution of the ozone layer, ozone layer temperature, Rayleigh optical thickness). These parameters differ from a measurement site to another, and from a measurement date and time to another. We present here the results of a sensitivity study done with a radiative transfer model. This study quantifies the impact of the variability of the here-above cited parameters on the value of the total ozone column obtained with the Brewer direct sun inversion method.