

## **Aerosol optical depth in the ultraviolet range: a new product in EUBREWNET**

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It is well known that aerosols play a key role in the weather and climate of the Earth system, affecting directly or indirectly many biological processes. In the ultraviolet (UV) range, it has been reported that the absorption of radiation by aerosols may compensate for the increase of incoming radiation produced by the reduction of ozone levels. The harmful effects of UV radiation on Human health make thus desirable to have data on the extinction of radiation due to aerosols in this spectral range. Brewer spectrophotometers can provide such information through the determination of the aerosol optical depth (AOD) in their standard ozone operational range, from 306 to 320 nm.

Within the framework of the IDEAS+ project, funded by the European Space Agency in collaboration with LuftBlick Earth Observation Technologies, at the Regional Brewer Calibration Center Europe (RBCCE) we are working on the development and implementation of an online AOD product which will be soon available at the website of the European Brewer network (EUBREWNET), <http://rbcce.aemet.es/eubrewnet/>. This will provide near real time UV data across a large part of Europe, EUBREWNET currently collecting data from more than 30 Brewer spectrophotometers operating at observation sites spanning from the Canary Islands to Finland.

In this work we present the first results of this new AOD product for selected Brewer spectrophotometers integrated in EUBREWNET. Using the Langley method, we have calibrated one of the spectrophotometers of the RBCCE Brewer triad normally operating at the Izaña Global Atmospheric Watch Observatory (Tenerife, Spain), and then have transferred this calibration to instruments which took part in the intercomparison campaigns held at El Arenosillo (Huelva, Spain) in the years 2013 and 2015. Our AOD results are compared to the OMAERUV aerosol product of the Ozone Monitoring Instrument (OMI) available at the Aura Validation Data Center (<http://avdc.gsfc.nasa.gov/>). We further compare our data with the AOD provided by an UV Precision Filter Radiometer operated by the World Radiation Center during the last intercomparison campaign.