



## **OMI/Aura Aerosol Index and ground-based Brewer observations of Aerosol Optical Depth as scientific tools for the analysis of aerosol concentrations over Eastern Europe**

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The Aerosol Index retrieved from satellite observations of the Ozone Monitoring Instrument (OMI) on board the Aura satellite is quantitatively evaluated and its applications in the study of mid- and large scale aerosol transport for the region of Northern Greece are examined. The Aerosol Optical Depth deduced by the Brewer spectroradiometer of the Laboratory of Atmospheric Physics located in the centre of Thessaloniki [40.6°N, 22.9°E], was adopted as a measure of the amount of atmospheric aerosols over the city during the Aura/OMI overpass.

Heavy loading aerosol events, such as biomass burning cases, Saharan dust transport, and so on, have been studied in detail so as to evaluate the effectiveness of the aerosol index in a particularly complex atmospheric environment as is that of Thessaloniki. Results from joint satellite and ground-based observations from a dedicated observational campaign during the summer of 2005 will be shown and analysed in order to study various aerosols sinks and sources in the region.