

**OVERVIEW OF NO<sub>2</sub> AND OTHER TRACE GASES POLLUTION LEVEL IN THE  
LOWER DANUBE BASIN DURING DANS MEASUREMENT CAMPAIGN**

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**Abstract:** The aim of this paper is to quantify the NO<sub>2</sub> and other trace gases pollution level from measurements made in the lower Danube basin area using a mobile DOAS system. In a few words, a DOAS system is composed of a car as the mobile platform and a UV-Vis spectrometer for recording the sunlight spectra. Mobile DOAS measurements were performed around and inside the cities of Galați, Braila, Tulcea, in rural areas and remote areas that are far from cities and other major sources in order to observe the differences from these zones. The measurement tracks shows the NO<sub>2</sub> and other trace gases (SO<sub>2</sub>, CH<sub>2</sub>O, O<sub>3</sub>) distribution in different zones of the lower Danube basin. The values of tropospheric densities of NO<sub>2</sub> are extracted from measurements of the mobile DOAS system using a simple approach: where all the measurement were performed at noon when sunlight path is almost perpendicular on the ground surface and so the measurements performed are more sensible in detecting the trace gases vertical column densities from the troposphere. An GIS (Geographic Information System) software was used to plot the results of the measurements as spatial distribution maps for each track.

**Keywords:** mobile DOAS measurements, NO<sub>2</sub> VCD, GIS, dispersion maps

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