

## First NO<sub>2</sub> measurements by car-DOAS instrument in Minsk

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The work is dedicated to the car-DOAS instrument that has been developed in Research Institute of Applied Physical Problems, BSU and its application for NO<sub>2</sub> vertical column retrieval. The instrument is based on own production spectrometer with concave holographic diffraction grating and non-cooled CCD-array detector. The instrument is employing in spectral range of 340 – 600 nm and FWHM = 4.5 nm. The optical fiber radiation input system with zenith geometry has been implemented.

The comparison results with reference instrument will be presented and discussed. Reference instrument successfully took part in MAD-CAT (2013) and CINDI-2 (2016) international inter-comparison campaigns. It has spectral range of 320 – 400 nm and FWHM = 0.32 nm.

First mobile measurements around the Minsk aiming to retrieve NO<sub>2</sub> emission power of the city have been carried out. Obtained results have been compared with Belarusian Hydro-meteorological Centre data and satellite data; corresponding results will be presented and discussed.