



Preliminary results of the CINDI-2 campaign for MARS-B instrument and its implementation for MAX-DOAS measurements over Minsk

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The work is dedicated to the instrument with multi-axis geometry of observations that has been developed at the NOMREC BSU. The instrument is based on the lab imaging spectrograph Oriel MS257 with Peltier-cooled Andor Technology DV420-OE 2D CCD (1024*256), having spectral range of 320 – 400 nm and FWHM = 0.5 nm. It has catadioptric radiation input system without optical fiber. The instrument successfully took part in MAD-CAT (2013) and CINDI-2 (2016) international inter-comparison campaigns.

The comparison results from the CINDI-2 campaign for UV-range (nitrogen dioxide, ozone, formaldehyde, oxygen dimer) will be presented and discussed.

The reasons for elevation angle misalignment will be presented and discussed as well as its possible solution.

First time true MAX-DOAS measurements in Minsk during the winter 2016-2017 will be presented in different modes (with electromechanical shutter and without shutter), results for retrieved aerosol, nitrogen dioxide and formaldehyde will be presented, analyzed and discussed. The profile inversion is using PriAM algorithm which is based on optimal estimation method, SCIATRAN radiative transfer model is used for additional calculations.