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MAX-DOAS observations of trace gases over Mainz: preliminary results

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In this work we report on levels of trace gases in ambient atmosphere in Mainz, Germany. We measured the differential Slant Column Density (dSCD) of NO_2, HCHO and O_4 in the ultraviolet region of the electromagnetic spectrum using a Mini-MAX-DOAS instrument. The MAX-DOAS observations were taken at Max Planck Institute for Chemistry in Mainz, from January to March 2014, at different elevation angles. The main aim of the study is to compare the results of the Mini-MAX-DOAS instrument with those from a 'scientific' MAX-DOAS instrument operated simultaneously at the same location. We quantify systematic differences and random and errors of both data sets for different measurement conditions. The preliminary results of this MAX DOAS observations and the diurnal variation of the retrieved trace gas DSCDs will be discussed in this work.