Geophysical Research Abstracts,
Vol. 10, EGU2008-A-11973, 2008
SRef-ID: 1607-7962/gra/EGU2008-A-11973
EGU General Assembly 2008

Analysis of OMI Tropospheric NO2 data for Northwestern Europe

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In Northwestern Europe the predominant source for NO_2 in the boundary is the combustion of fossil fuels. NO_2 is a pollutant by itself, but also plays an important role in the formation of tropopsheric ozone and as a precursor for nitrate aerosol particles. By combining a full year of OMI data, a high resolution (0.03x 0.03 degrees) dataset of tropospheric NO2 has been produced. Analyses of this dataset will be presented, including the following aspects:

- the unprecedented spatial resolution of the yearly averaged data;

- the expected detection limit for OMI and related instruments;

- the weekly cycle and its relation to traffic intensity;

- the relation between the satellite data and ground based measurements.