



AOD and trace gases retrieved with satellite over Europe during the Pegasos campaigns 2012-2013

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Satellite retrievals have been used in the Pan-European Gas-AeroSOls-climate interaction Study (PEGASOS) EU project to provide a general context of the three field campaigns involve in the project: the Benelux area and the Po Valley in the spring and summer 2012 respectively and in central Finland during the spring 2013. In this work we present the regional gradients of the AOD base on MODIS retrievals, NO₂ and O₃ retrieved with OMI and CO retrieved with AIRS to understand and analyze the regional effects of the different gases and aerosol concentrations as well as the transportation of the different pollutants. During the field campaign in Hyytiälä a forest fires plume was transported from Southeast Europe, to detect this, besides the already mention parameters the Aerosol Absorbing Index (AAI) from OMI was also used. The results show the largest concentration of NO₂ over the Benelux area during the three campaigns. The lowest concentrations for all parameters were registered during the spring campaign in 2013. The CO concentration does not show a large variability over Europe, but an increase of the concentration was clear during the days where the plume of the forest was detected over central Finland. The AOD shows the Po Valley and the Benelux area like hot spots over Europe.