Geophysical Research Abstracts
Vol. 12, EGU2010-12612, 2010
EGU General Assembly 2010

Aerosols characteristics, transport and optical properties in Cabauw area, May 2008

Denis Zyryanov (1), Jacques Pelon (1), Laurent Gomes (2), Dave Donovan (3), and Bas Henzing (4)

(1) University Paris 6, Pierre and Marie Curie, Paris, France (denis.zyryanov@latmos.ipsl.fr), (2) Centre National de Recherches Meteorologique (CNRM), 42 av. Gaspard Coriolis, 31000, Toulouse, France, laurent.gomes@meteo.fr , (3) KNMI, donovan@knmi.nl, (4) TNO, bas.henzing@tno.nl

In May 2008, an intensive aerosols field measurements campaign took place in the frame of the European integrated project on Aerosol Cloud Climate and Air Quality Interactions (EUCAARI) in Cabauw area, Netherlands. Airborne observation of aerosols performed using in situ and remote sensing from the French ATR-42 have been combined with ground-based and mast measurements in Cabauw as well as satellite data to characterize aerosol properties over northern Europe. CALIPSO satellite and ATR-42 collected data i.e. backscatter coefficient, depolarisation and colour ratio helped characterizing the evolution on the vertical, whereas MODIS optical depths have been used to infer spatial variability. Combination of measurements using the HYSPLIT calculations of the air masses dynamics have been used to better characterize links between observed aerosol physical parameters at the regional scale. We present the aerosol characteristics and transport patterns observed in May 2008, and the atmosphere optical properties changes related to various aerosol sources.