Geophysical Research Abstracts
Vol. 19, EGU2017-13106, 2017
EGU General Assembly 2017

Observed trends in aerosol optical properties, visualization and comparison to models

Michael Schulz (1), Augustin Mortier (1), Betsy Andrews (2), Cathrine Lund Myhre (3), Martine Collaud-Coen (4), and Jan Griesfeller (1)

(1) Meteorologisk Institutt, Oslo, Norway (michael.schulz@met.no), (2) NOAA ESRL Global Monitoring Division, Boulder, USA, (3) Norwegian Institute for Air Research (NILU), Kjeller, Norway, (4) Federal Office of Meteorology and Climatology, MeteoSwiss, Payerne, Switzerland

Several long term data sets are developed and documented recently in ACTRIS, cci-aerosol, GAW and AeroCom, which can serve to update our knowledge on trends in optical aerosol parameters. Regional trends in aerosol optical parameters, which signal significant changes in emissions, are most relevant to understand aerosol radiative forcing. Here we aim to explore measurements of in-situ scattering and absorption (ACTRIS/GAW) together with aerosol optical thickness from satellites (cci-Aerosol) and sun photometer networks (Aeronet). Modelled trends are available from the AeroCom model data comparison initiative. Multi-annual data of all these data sources are visualized via the trend web interface, developed at MetNo. Trends and their significance level are computed and shown for all seasons and yearly averages. We present preliminary findings and discuss how the results can be transformed into products of use to the scientific user community. We acknowledge most valuable cooperation within ACTRIS, Aeronet, GAW and AeroCom.