



Volcanic ash observed over Poland, April 2010

Aleksander Pietruczuk, Janusz Krzyścin, Janusz Jarosławski, and Jerzy Podgórski
Institute of Geophysics, Polish Academy of Sciences, Belsk, Poland

We present analyses of the results of the ground-based measurements of the aerosols at Belsk - Central Geophysical Observatory Institute of Geophysics Polish Academy of Sciences (IGF PAS) after eruption of Eyjafjallajökull volcano. The lidar and Sun-photometric result are compared to model simulations by the Norwegian Institute of Meteorology (NIM), Oslo, Norway. Our measurements show presence of aerosol layers in free troposphere mainly 16 -17 April and 23 April when presence of ash cloud is predicted by the model. However, contribution of that layers to aerosol optical depth (AOD) is rather weak. Variability of AOD during measurements period is small and does not exceed overall mean for April. Aerosol microphysical properties, like size distribution, measured after eruption is typical for advection of clear air from northern Europe. Small fine mode is observed during whole period and only 16 and 17 April small increase of coarse mode was found.