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# How does the long range transport of aerosols from biomass burning affect air quality in Poland – a case study with the WRF-Chem model

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Episodes of wildfires and related emission of the pollutants are reported every year in Eastern Europe. They usually occur in late summer and may strongly influence the air quality in Central and Western Europe. In this work we use the WRF-Chem model to study the long range transport of wildfires pollution from the Ukraine and Russia to Poland. The model is run two times, first using anthropogenic emission alone, second with the FINN fire emission inventory included for the heavy wildfires episode observed in August 2015. The model was run for the entire Europe with 12km x 12km grid cell and 48 vertical levels. The difference between two model runs shows strong advection of PM10 and PM2.5 aerosols from Eastern Europe to Poland. This long range transport increases the concentrations of PM10 by up to 10 ug m-3. The model run that includes emission from wildfires is in better agreement with surface measurements, if compared to the base run with only anthropogenic emission considered. These results clearly show the importance of remote wildfire episodes on summertime air quality in Poland.