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Supplement of

Atmospheric black carbon and warming effects influenced by the source and absorption enhancement in central Europe

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Table S1. Country specific emission rates of EC for the EUCAARI and BC for the Lamarque et al. (2010) emission inventory.

country	EUCAARI EC t/year	Lamarque BC t/year
Belarus	9817.23	8589.38
Poland	74140.01	47232.21
Czech Republic	23423.85	16220.78
Ukraine	101925.1	49637.79

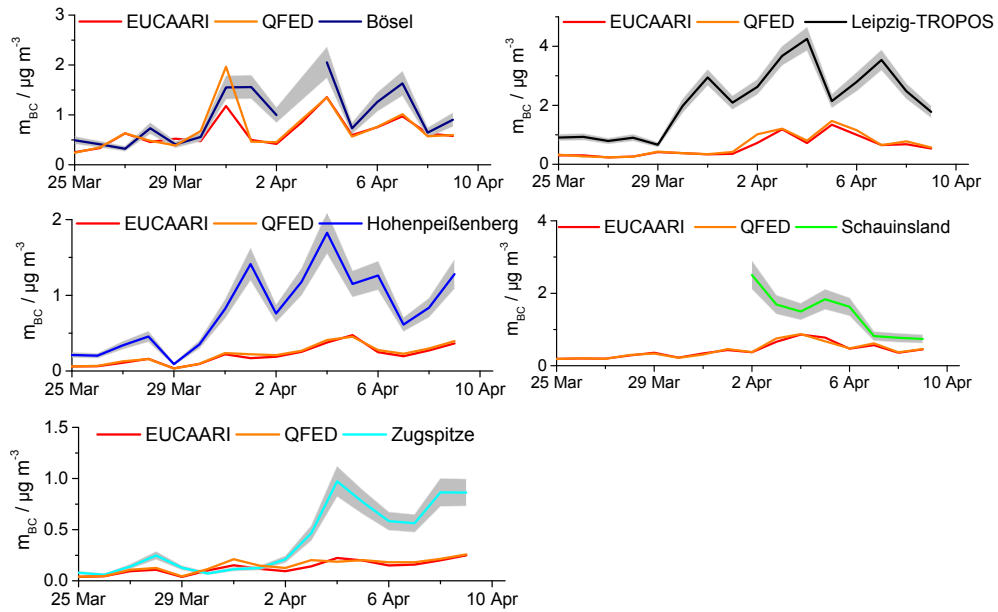


Fig. S1. Time series of modeled BC and observed C_{soot} mass concentrations for different observation sites. Model results for 2 different model runs are shown, base run with EUCAARI emissions and the QFED run with base EUCAARI emissions and QFED biomass burning.

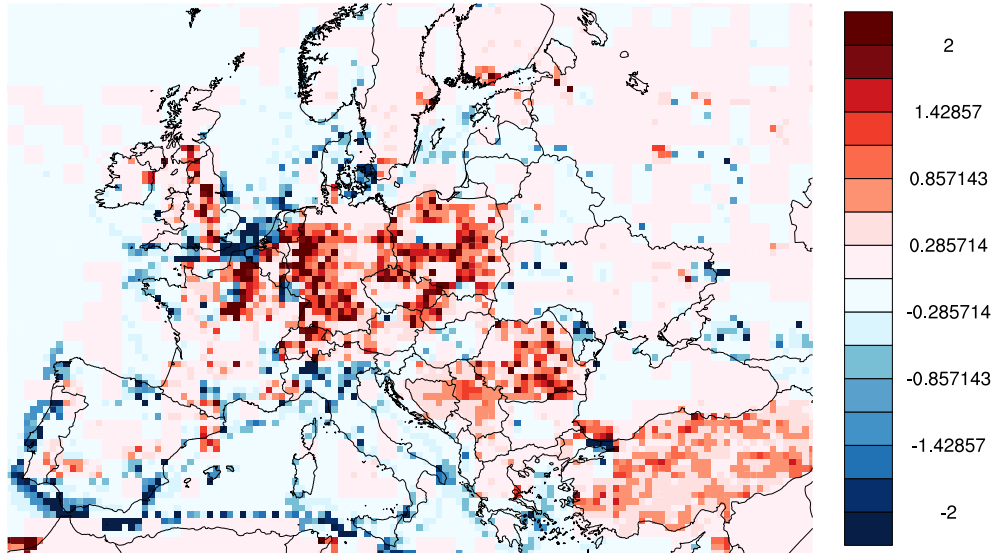


Fig. S2. Difference between EUCAARI BC emissions scaled to Arctas BC emissions and the original EUCAARI BC emissions in $\text{ngm}^2\text{s}^{-1}$.

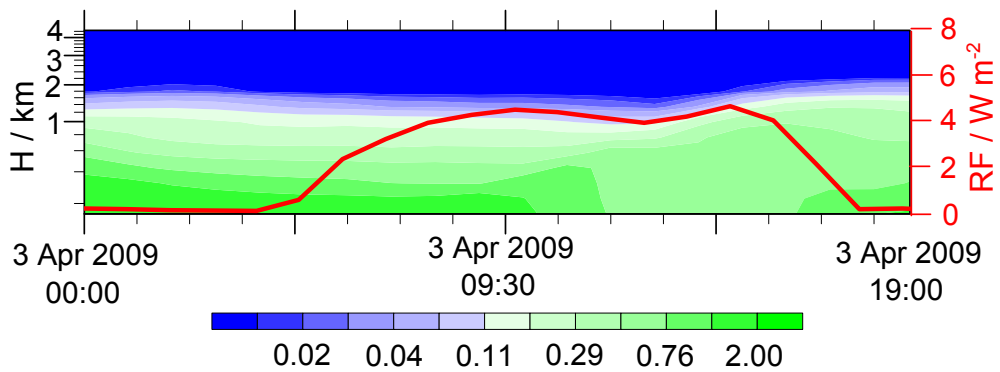


Fig. S3. Temporal evolution of the BC vertical profile for Leipzig-TROPOS and corresponding radiative forcing (RF) from model simulation.