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Supplement of

Evaluation of the absorption Ångström exponents for traffic and wood burning in the Aethalometer-based source apportionment using radiocarbon measurements of ambient aerosol

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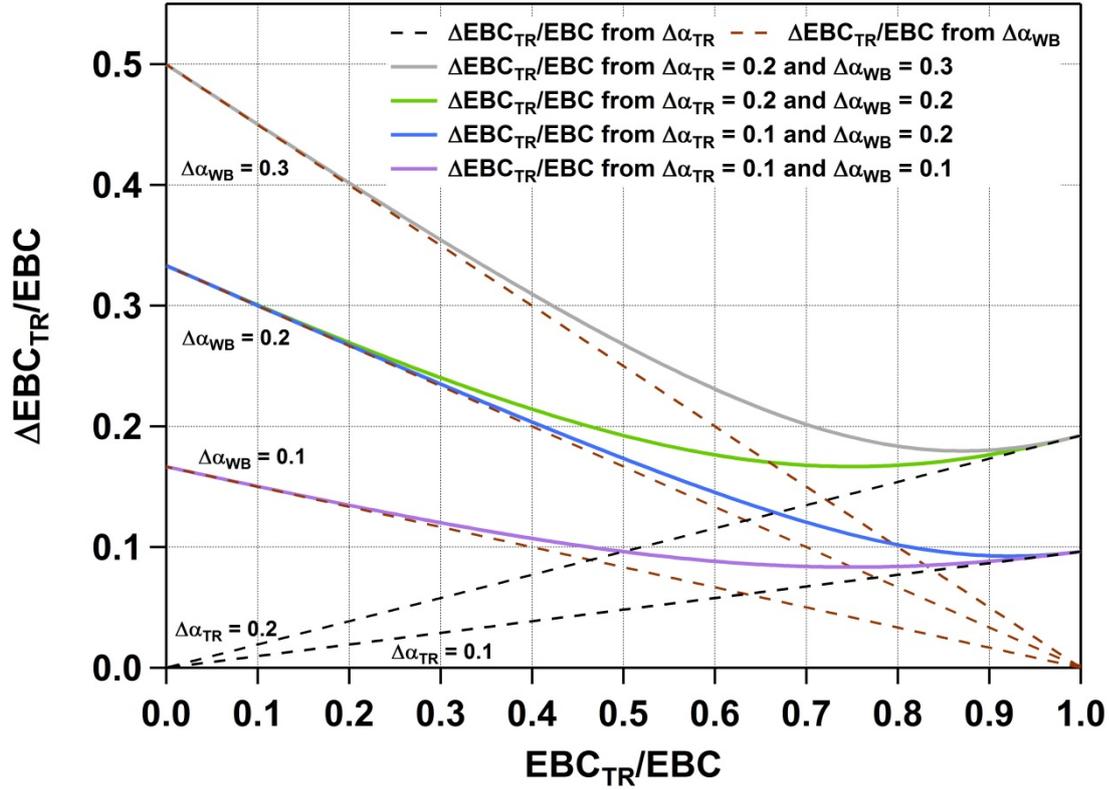


Figure S1: Residuals of EBC_{TR}/EBC compared to EC_F/EC ($\Delta EBC_{TR}/EBC$) as a function of EBC_{TR}/EBC calculated with $\alpha_{TR} = 0.90$ and $\alpha_{WB} = 1.68$ and using the wavelength pair 470 nm and 950 nm. The brown and black dashes lines denote the residuals of EBC_{TR}/EBC with respect to an error of α_{WB} and α_{TR} ($\Delta\alpha_{WB}$ and $\Delta\alpha_{TR}$), respectively, and the solid coloured lines represent the errors in EBC_{TR}/EBC with respect to errors in both, α_{WB} and α_{TR} .

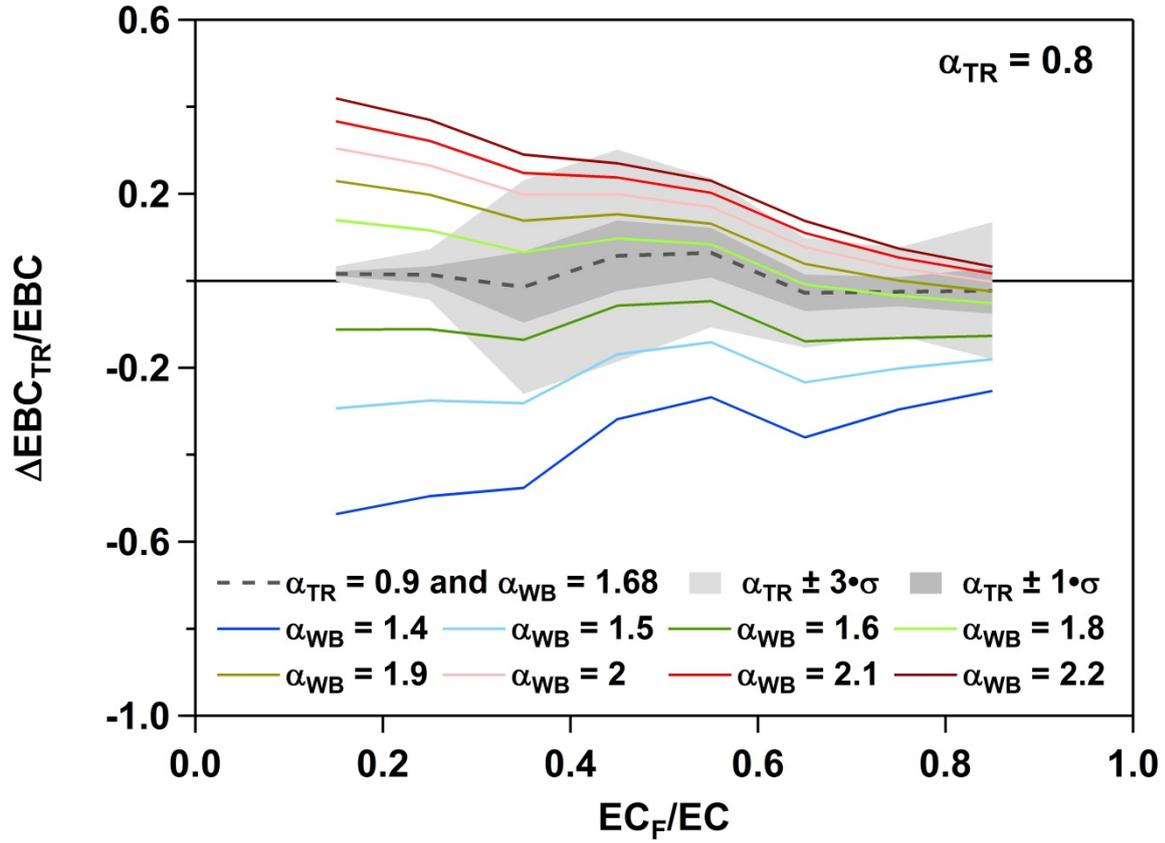


Figure S2: Residuals of EBC_{TR}/EBC compared to EC_F/EC ($\Delta EBC_{TR}/EBC$) as a function of EC_F/EC for $\alpha_{TR} = 0.8$ and $\alpha_{WB} = 1.4-2.2$ and using the wavelength pair 470 nm and 950 nm. Average $\Delta EBC_{TR}/EBC$ values for EC_F/EC bins of 0.1 are displayed. The dashed grey line denotes the best α pair ($\alpha_{TR} = 0.9$ and $\alpha_{WB} = 1.68$) as obtained in Sect. 3.2.1 and the dark and light grey shaded areas mark the 1σ (standard deviation) and 3σ of $\Delta EBC_{TR}/EBC$ per EC_F/EC bin for this best α pair.

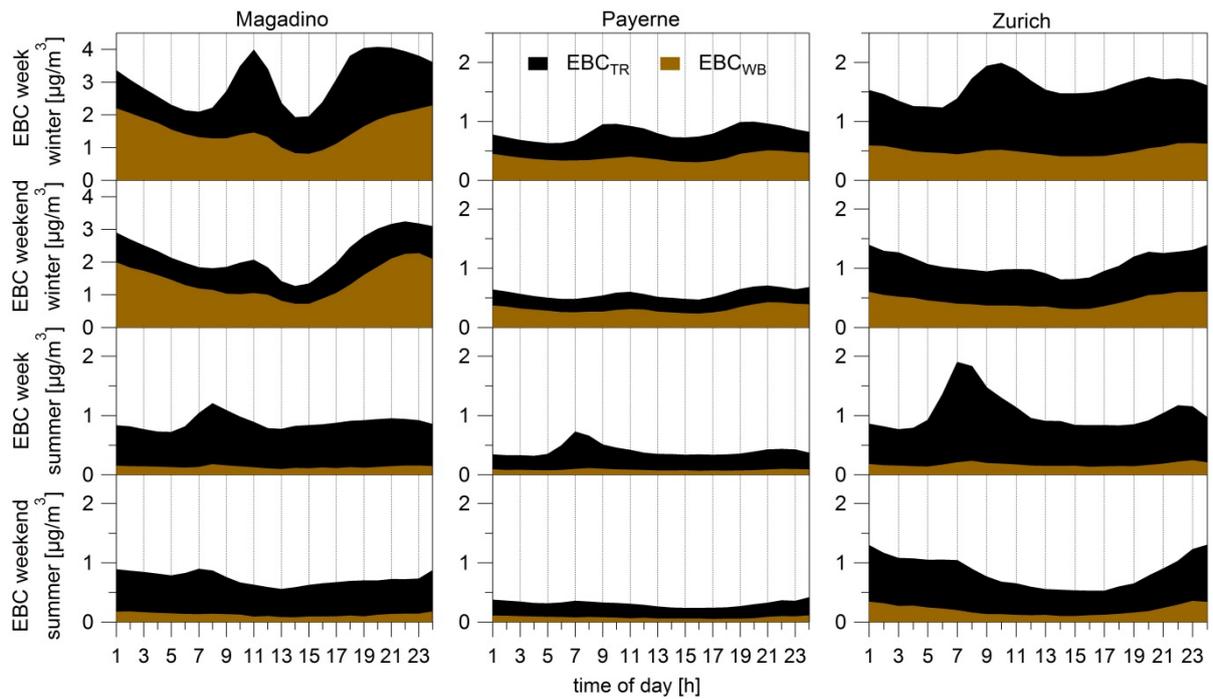


Figure S3: Diurnal cycles of EBC for the stations MAG, PAY and ZUR - 1h averages from 2009 to 2012. EBC_{WB} and EBC_{TR} were calculated using the best α pair ($\alpha_{TR} = 0.9$ and $\alpha_{WB} = 1.68$) as obtained in Sect. 3.2.1 and using the wavelength pair 470 nm and 950 nm. The split uncertainty between EBC_{WB} and EBC_{TR} ($\Delta EBC_{TR}/EBC$) is max. $0.04 \mu\text{g m}^{-3}$.

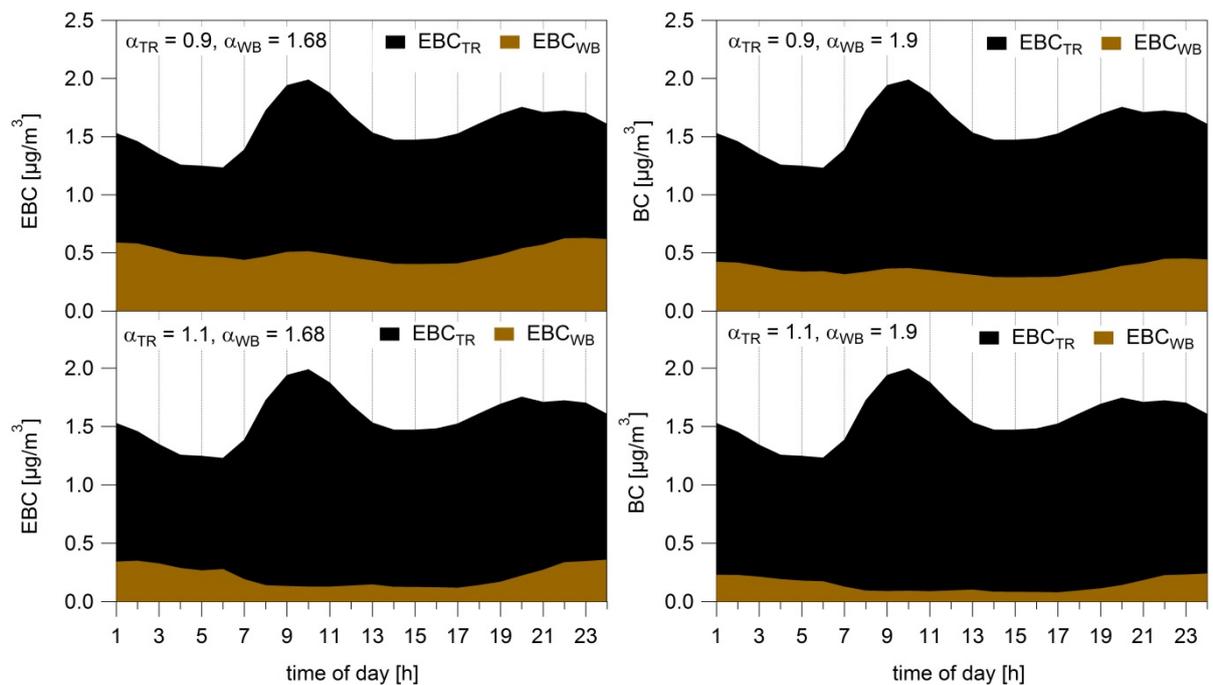


Figure S4: Diurnal cycles of EBC for ZUR - 1h averages for winter week days from 2009 to 2012 calculated with different α combinations and using the wavelength pair 470 nm and 950 nm.