

# Segregation Effects and their Impact on Chemical Transformation Rates and Vertical Eddy Fluxes of Atmospheric Trace Constituents

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## Abstract

Segregation effects play a prominent role in turbulent plumes of reacting species (e.g., Lenschow, 1982; Georgopoulos and Seinfeld, 1986) and in turbulent diffusion flames (e.g., Moss, 1995). Since the dispersion of highly reactive trace species in the atmospheric boundary layer can strongly be affected by chemical reactions (e.g., Kramm and Meixner, 2000), the corresponding segregation effects have to be considered. Results of such segregation effects determined during various field campaigns for the chemical reactions of ozone with NO and NO<sub>2</sub> are to be presented and their impact on the corresponding reaction rates and the vertical fluxes of these trace species are to be pointed out. These results underline that, at least, second-order closure principle are indispensable for computing such segregation effects.

## References:

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