

The impact of embedded valleys on daytime pollution transport over a mountain range

Reply to Interactive Comment

M. N. Lang, A. Gohm, and J. S. Wagner

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Interactive comment by S. Pal

I just read the ACPD manuscript entitled “The impact of embedded valleys on daytime pollution transport over a mountain range” and realized that two important recent references on the boundary layer dilution in mountain valley atmosphere are missing; Authors discussed the impact of different mountain geometries on daytime pollution transport by thermally driven winds. I suggest citing the following representative papers on the subject and discussing: 1. Wind speed and wind reversal in a valley: Pal et al., 2014. Impact of atmospheric boundary layer depth variability and wind reversal on the diurnal variability of aerosol concentration at a valley site. Science of the Total Environment, 496, 424–434. 2. Impact of wind reversal on tracer over a mountaintop: Lee et al., 2015. Meteorological controls on the diurnal variability of carbon monoxide mixing ratio at a mountaintop monitoring site in the Appalachian Mountains, Tellus B 2015, 67, 25659.

Reply by the authors

We thank you for pointing us to the two papers of Pal et al. (2014) and Lee et al. (2015). They address interesting aspects of pollution transport over complex terrain which, however, are different than the key aspects addressed in our study. There are many other similar studies which we have not included in our list of references. Since we are not able to provide a complete list of papers (this is rather an issue for a review paper) we did not include these two references.