Atmos. Chem. Phys. Discuss., 7, S6488–S6489, 2007 www.atmos-chem-phys-discuss.net/7/S6488/2007/ © Author(s) 2007. This work is licensed under a Creative Commons License.



ACPD

7, S6488–S6489, 2007

Interactive Comment

Interactive comment on "Cospectral analysis of high frequency signal loss in eddy covariance measurements" by A. Wolf and E. A. Laca

A. Wolf and E. A. Laca

Received and published: 31 October 2007

Dr Eugster -

I follow your work and appreciate your time to consider our manuscript.

Our expression for the transfer function is not a typo but a misreading of Horst (1997) and Massman (2000), in which we used the integral form of the transfer function (which has the exponent 1) instead of the unintegrated form (with exponent 2). We will change this and reprocess, but I want to emphasise that the spectral correction we applied had a very small effect (possibly larger), and that the main results are in terms of the cutoff losses as dependent on z/L.

If I understand your work in Eugster and Senn, it is essentially similar to Horst (1997). I do not have anything to refute or confirm in this regard; I simply applied a transfer



function to the cospectrum as an established concept (although I made a mistake in the equation), which had a small but relevant effect on our method to calculate the cutoff losses.

Thank you for Panofsky reference. When asking around, colleagues had a sense that this method existed but we could never find a reference for it. I don't think Panofky's equation is really correct for fluxes though, because the integral of the cospectrum equals the flux only in when f-weighted and in log-linear coordinates.

Adam

Interactive comment on Atmos. Chem. Phys. Discuss., 7, 13151, 2007.

ACPD

7, S6488–S6489, 2007

Interactive Comment

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper