

***Interactive comment on “Comment on
“Reinterpreting aircraft measurements in
anisotropic scaling turbulence” by Lovejoy et
al. (2009)” by E. Lindborg et al.***

E. Lindborg et al.

erikl@mech.kth.se

Received and published: 18 January 2010

We thank the reviewer for the positive review and we are glad that the reviewer "recommends publication". The reviewer found one weak point in our paper. In the second last paragraph we wrote:

"Without justification Lovejoy et al. maintain that scaling laws should be expressed with respect to absolute height, and not with respect to the pressure coordinate that is commonly used in meteorology."

The reviewer interprets this as we were claiming that pressure coordinates should be the appropriate basis when scaling laws for atmospheric turbulence are formulated,
C9793

while the reviewer, on the other hand, suggests that the appropriate basis should be isentropic coordinates. Our intention was just to point out that there is no reason to believe that scaling laws should be formulated with reference to absolute height, which is an implicit assumption underlying the arguments by Lovejoy et al. We are referring to isobars because the measurements are made on isobars. To avoid being interpreted as we were claiming that pressure coordinates is the most appropriate choice we have just skipped the second part of the sentence in the revised manuscript. In any case, the slope between isoheights, isobars and isentropes are so small that there will be no distinguishable difference between the wind spectra along these surfaces at synoptic scales.

Interactive comment on Atmos. Chem. Phys. Discuss., 9, 22331, 2009.