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Comment on acp-2021-427

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Community comment on "Input-adaptive linear mixed-effects model for estimating alveolar lung-deposited surface area (LDSA) using multipollutant datasets" by Pak Lun Fung et al., Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2021-427-CC1>, 2021

The manuscript provides an interesting approach on analysing LDSA with advanced statistical methodology. However, one sentence in the introduction caught my eye: The authors state that "Despite the extensive research of feature selection methods, the inclusion of random effects together with the fixed effects as linear mixed-effects (LME) model has received little attention in air pollution research". This is probably true for LDSA but for aerosol number concentrations mixed effects models have been used at least in Mikkonen et al. (2011) and (2020).

In their short summary, authors state that they automatised the selection process of the best model. As this kind of automatisation has been seen highly risky in statistical analysis, I hope the formal review will go through the justifications of the automated selection.

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