



EGUsphere, author comment AC1
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Reply on RC1

Eva Gorrochategui et al.

Author comment on "A model for simultaneous evaluation of NO₂, O₃, and PM₁₀ pollution in urban and rural areas: handling incomplete data sets with multivariate curve resolution analysis" by Eva Gorrochategui et al., EGU sphere,
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We thank the reviewer for the comment. And yes, we agree that measurement uncertainties were not included in the bilinear model factor decomposition estimations. The environmental agency source data did not provide them. Otherwise, we could have applied the weighted version of ALS where data uncertainties are included as weights in the least squares estimations. On the other hand, missing data blocks were not included in the least squares estimations, this is the advantage of the proposed method, linear equations were only solved for the known data blocks. Therefore this should not be a limitation. What is true is that some parts of the factor solutions (those corresponding to the missing blocks) are not so overdetermined from a least squares point of view as the other data blocks without missing values, and this can be reflected in the reliability of the estimations of the later. This is an aspect that deserves a deeper study and needs further investigation.