

I appreciate the authors taking the time to address my previous comments. I had, however, hoped that the authors would have been a bit more creative in addressing some of my comments, which would not have required additional analysis. Here, I provide small suggestions on further addressing some comments that I think deserve more attention.

- For a new system aimed at emission verification, it seems strange to not in any way mention trends in the manuscript. Emission targets are generally set in terms of relative emission reductions, rather than absolute emissions, so it seems that that would be where verification efforts are focused. I would like the authors to reconsider adding a few sentences on the practicalities of moving to a longer timeseries, and on possible implications on the results. This is partly done in the new L765-774 paragraph, but this is for some reason focused on Switzerland, whereas the presented study is for Europe. For a reader who is not completely up-to-date on existing verification efforts, it is hard to otherwise place this study in context.
- L672-674: This is a very implicit way of stating that the different model systems use different spatial correlations. I suggest making it more explicit, since it seems important. In addition, an easy way to check the influence of the different spatial correlation lengths on this comparison would be to have a look at the same observational error statistics for inversion INV-E1-O1-S3.2. Have the authors done this? Is FLEXVAR-200km still better performing than FLEExKF?
I understand that the difference in performance is relatively small, but the authors themselves raise the point, so I would like them to make these small efforts to find more clearly where the difference comes from.
- The authors go through considerable effort to compare different inverse modeling systems. I understand that it is hard to compare explicitly and quantitatively the computational costs of the different systems. However, I would like to see some small discussion of the practical (dis)advantages of the different inverse systems (as in the author's reply to the final point of my first review), since this is an important part of choosing which inverse system to use.