Interactive comment on “Spatial and temporal variations in ammonia emissions – a freely accessible model code for Europe” by C. A. Skjøth et al.

Anonymous Referee #2

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This manuscript describes a method for developing ammonia emissions that includes improved temporal and spatial variability. This is an important need, and merits publication in Atmospheric Chemistry and Physics.

I do believe that the paper could benefit from a more balanced presentation of the results. I suggest the authors address these issues before publication in ACP.

- Page 2135 describes that the correlation between the simulated NH$_3$ and measurements improves at all sites. It is also true that the bias increases at most sites. Please discuss why the correlation is improved, but the bias is not.

- Because there are large seasonal variability, it would be best to report the bias metrics normalized by the mean, as a percentage rather than an absolute amount.

- On page 2136, the results of Figure 11 are discussed and compared to the results in Table 3. I find it very difficult to reconcile these data. In Table 3, Langenbrügge with the new emissions has a more negative bias and an improved correlation. In Figure 11, it seems the ammonia concentration increases considerably at this site, causing large divergence from the 1:1 line. How can these both be correct? Are these points to the right outliers? It would be possible to interpret if the authors used a box plot rather than a scatter plot with so many overlapping points.