The authors would like to thank the editor and reviewers for their considerate feedback on our manuscript and the acceptance of our manuscript for publication.

We also notice a mistake in the title for the version of the ECHAM-HAMMOZ, which should read ECHAM6.30-HAM2.3-MOZ1.0 instead of ECHAM30-HAM2.3-MOZ1.0.

Responses:

1. Line 129: the definition of the horizontal divergence is incorrect. Note that divergence is not a vector as defined here, and the second term of the divergence operator needs to have an added cos(phi) term in the numerator: (v cos(phi)). Since the divergence is actually never used in the following equations, I suggest just leaving it out.

   Answer: It was a mistake. We removed the equation.

2. Line 120 onwards: It seems that the current notation with the density rho implicitly assumes (for the purpose of the analysis) that the tracer mixing ratio is 1 (as defined in line 109) and that the flow is non-divergent, as it was done in Lin and Rood (MWR, 1996) for the FFSL scheme. Clarify whether the non-divergent flow condition is assumed here.

   Answer: We added the non-divergent flow condition for the advective operator in line 125, which is used to preserve the consistency condition as done in Lin and Rood (MWR, 1996).

3. Line 192: the subscript 'a' in the symbol ϕ_a is undefined. Add a definition.

   Answer: Done.

4. Figs. (22)-(24): The authors switched to a different color scheme which is appreciated. However, it is obvious that the colors saturate and the range of values in the simulation is not captured. In addition, discrete colors are a better choice (as in the earlier version of the manuscript) instead of the new gliding color scheme. The most adequate color scheme here would use non-equidistant spacings that are tailored to the simulation data. Overall, the current plots convey the main message that the AMR grid captures certain regions, therefore changing the colors again is not a must-do correction. It would be a nice-to-have enhancement/improvement of these figures.

   Answer: Thank you for the kind suggestion. We decide to leave it as it is.