

We thank the reviewers for taking the time to look at our work and for their pertinent and constructive comments, which helped to improve the quality of the paper by making the discussion clearer.

As in the first round of review, in the attached revised version of the paper, text additions are highlighted in blue, and text removals are highlighted in red. References to line and pages numbers in the following text correspond to this highlighted version of the paper.

1/ Section 2.3.3. Since the default scheme is already ALE or "Quasi-Eulerian", the velocity W , should not be the vertical velocity at the interface between j and $j + 1$, but the relative velocity. I guess when you talk about "typical numerical values $W \dots$ " you are already considering the "good" velocity. If this is the case, using another name for W / \tilde{w} instead of the generic "velocity field" could help to further clarify my original misunderstanding.

Indeed, we did not update the theoretical discussion while adding the clarification on ALE coordinates. We thus added a paragraph (lines 175-180) to clarify this.

2/ The paragraph about TVD is a slightly more clear to me now. Although I still do not fully understand the comparison between a high order linear scheme such as UP3 and non-linear ones such as TVD/WENO that of course are more diffusive since they are designed to handle sharp gradients.

We understand your comment and removed the corresponding sentence (lines 202-204).

3/ Thank you for the discussion on the stability. Could you please clarify what do you mean when you write "Since the upper bound is set by the fact that the evaluation of the UP1 term is lagged in time."?

We realize our discussion on this topic was indeed rather vague. We provided more details in the text (lines 289-296).