

We thank Ludovic Räss, the editor, for his comments on the revised manuscript. We appreciate the time and effort he invested in reviewing it again. We have addressed these comments and updated the manuscript accordingly.

Dear authors,

thank you for addressing the remaining comments raised during the second round of revision. Before we can release the manuscript for publication, I would like to ask you to perform the following technical correction. Namely, it would be ideal if you could improve the rendering of the super/sub scripts in many of your variable, as they are now mostly all in italic. This is currently confusing, as it suggests that they are all variables which is actually not the case. E.g., in eq. (1), J_{obs} and J_{reg} do not refer to obs and reg being variables and should thus not be rendered in italic. Same logic applies to mdl and others.

Thank you for pointing this out. We changed the following subscripts to no longer use italics throughout the manuscript: obs, mdl, reg, bed, scaled, min, max bins, orig, torch.

Also, you may want to rename sfc as it could be confusing now being s times f times c.

We renamed *sfc* to *S* throughout the manuscript and figures, choosing a capital letter for consistency with the other target observations, *V* and ΔM .

I would appreciate if you could take some time to revise this final technical aspects in order to have your manuscript finalised for publication.

Best regards,
Ludovic Räss