

## Author responses

We would like to thank the reviewers and the editor for reviewing and accepting our paper. In the current version, we have added one more change as described below. In black, you can find the editor comment. Our answer is in blue. Changes made to the manuscript are highlighted in red.

Thank you for addressing the reviewer comments. With regards to the addition to the abstract I requested I am concerned about the writing, and worry it might dilute the impact of the statement. "More complex schemes do not generally yield better results, emphasizing the need to first improve the existing microphysical parameterizations with observational constraints that have the potential to infer microphysical parameters." Can you please clarify what is mean by " emphasizing the need to first improve the existing microphysical parameterizations with observational constraints that have the potential to infer microphysical parameters"? Observations constraints do not "infer". What parameters? Can the statement be made less wordy? And the link between the clauses is unclear as the second clause seems to argue for possibly greater complexity where the first might be instead for simplicity.

We have shortened the abstract and now simply state the conclusions drawn in the main part of the paper:

More complex schemes do not necessarily lead to better results in the prediction of heavy precipitation.