Reply to Reviewers

A modified stratiform cloud microphysics parameterization: evaluation using the Community Atmosphere Model version 6 single-column model. Pant et al.

Line numbers refer to marked MS.

We thank the reviewer for reviewing our manuscript and for giving us inputs to improve the manuscript. The reviewers comments/suggestions are marked in red color and in italics.

1. L. 639: typo in revised text for small and large size ranges.
We are sorry for this, now this has been corrected.

2. Fig. 3: Adding average bias provides more insight, but also adding RMSE and correlation coefficients would also be of interest. For example, it's useful to know if one approach correlates better than the another, even if the better-correlated approach might have a larger bias, and large RMSE is possible even with small bias, if errors compensate at different levels.

We kindly appreciate the reviewers view point that average bias could be misleading sometimes. Thus, RMSE values are added.

The corresponding changes are, shown in the below figure:

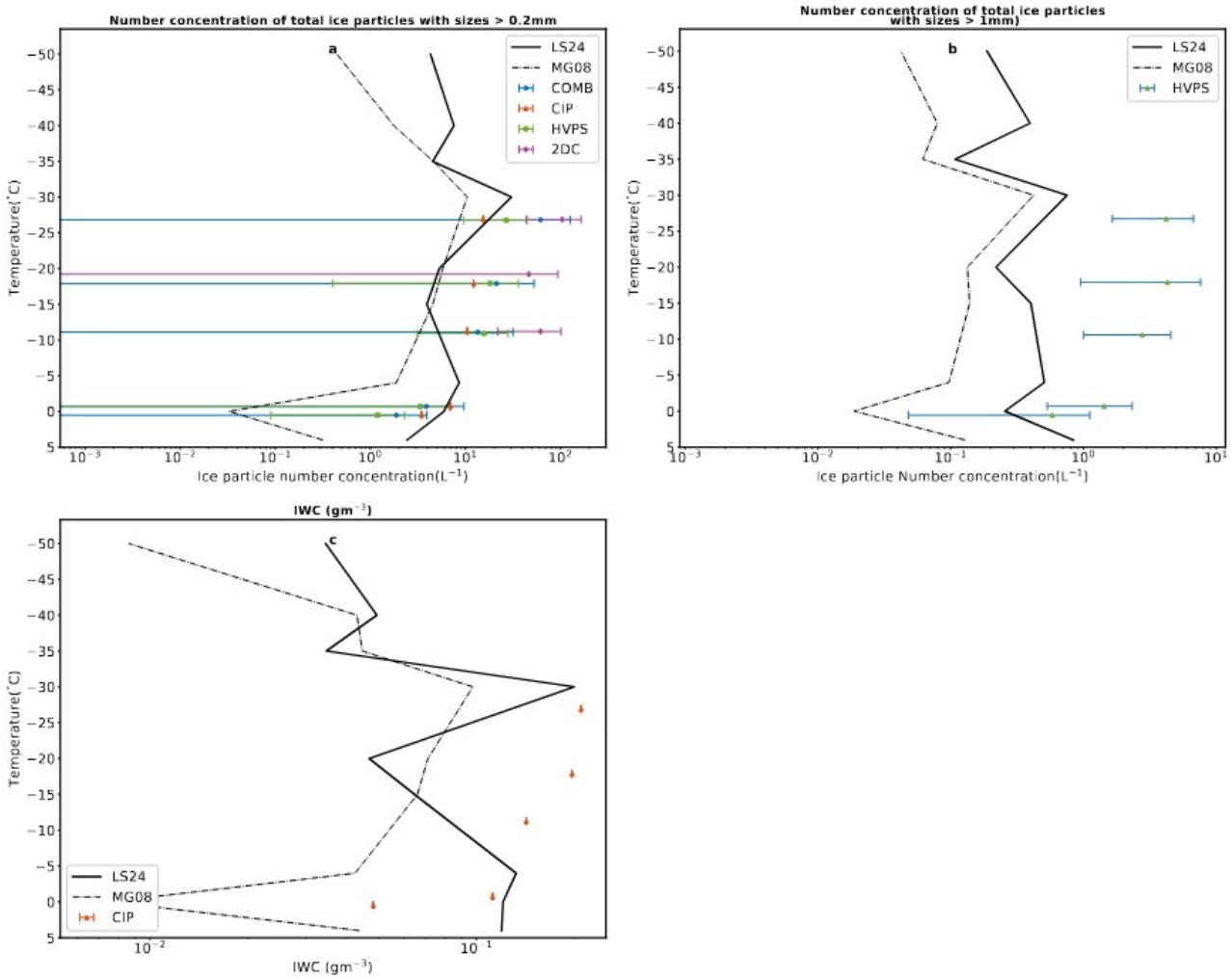

Figure 3. Predicted (a) concentration of ice particles with sizes > 0.2mm compared with observations from the 2DC, CIP, HVPS-3 probe and COMB, LS24 average bias is -58% and MG08 is -84.0%, normalized Root Mean Square Error (RMSE) for LS24 is 66% and for MG08 is 97% (b) ice number concentrations of all ice particles with size > 1 mm compared with aircraft observations from the HVPS-3 probe, LS24 average bias is -86% and MG08 is -95%, normalized RMSE for LS24 is 103% and for MG08 is 113% and (c) total IWC from the MG08 (dashdotted black line with square) and LS24 (solid black line) simulations, LS24 average bias is -32% and MG08 is -66%, normalized RMSE for LS24 is 43% and for MG08 is 65%. Error bars shown are standard errors of observation samples.

As per authors best of knowledge the purpose of the model validation is to quantity accuracy. Correlation coefficients do not quantify accuracy, instead they quantify only correlation. Therefore these are not included in the manuscript.