Dear Prof. Jinkyu Hong,

Many thanks for handling the review process for our manuscript. The time and effort devoted to our manuscript by you are very much appreciated.

We agree with the editor and previous reviewers that the comparison of GloSea6 and GloSea5 did not provide a clean quantitative analysis of the effects of implementing a multi-layer snowpack scheme. Therefore, in this revision, we have added 4-member ensemble experiment for 24-year (1993-2016) that implements a single-layer snowpack scheme in the GloSea6 model configuration (referred to as $G6_{single}$ in the main text). This allows us to quantitatively evaluate the impact of the snow scheme on the seasonal forecast system through comparison with the existing GloSea6 experiments. Furthermore, by comparing GloSea5 with $G6_{single}$, we can evaluate the impact of updates beyond snow physics.

As the title of this manuscript addresses, the main results compare the differences between GloSea6 and $G6_{single}$ to confirm the snow insulation effect. Fig. 2 compares the results with GloSea5, which demonstrates the seasonal cycle of land surface and atmospheric variables relevant to snow. As previously worried by reviewers, significant differences are found in the comparison between GloSea5 and $G6_{single}$, so comparing the snow insulation effect with GloSea5 may lead to misleading conclusions.

Furthermore, when the multi-layer snowpack scheme is used in an offline LSM experiment and a fully coupled forecast model, the results are inconsistent depending on whether the atmospheric model is coupled or not. This suggests that the improved snow physics is more evident when the land surface model is coupled to the atmosphere, thereby demonstrating that the realization of snow characteristics should be a priority in the process of developing a model.

This revision has faithfully incorporated the aforementioned updates, where the modified text is colored yellow in the main manuscript. It is hoped that the revised manuscript meets the journal's standards. I would like to express my sincere appreciation for your efforts in treating this manuscript over the past year again.