Response to the comments of Referee #2

2020-05-02

The authors thank the referee for the crucial but insightful comments on the first revised manuscript. We did a substantial revision on the current manuscript based on the comments. The address to the comments is as follows,

1. We address the controversy on the efficacy and scientific validation of seeding cloud to produce enhanced precipitation in history and state that our work is a preliminary attempt in science and engineering in the Introduction part.

2. We collected the precipitation data from an AWS set up in the forefield of the Muz Taw glacier and clear off the AgI smoke. After comparing the precipitation data of the two AWSs, we estimate that natural precipitation either does not involve in the target glacier or accounts for up to 21% of the total precipitation recorded by the AWS at ELA.

3. The estimations of the role of artificial snow reducing the melt of the Muz Taw glacier are based on the new result in point 2.

4. In Section 4.1, we introduced how to partition natural precipitation from the total recorded by the AWS at ELA in detail and assess the possible portion of natural precipitation accounting for the total.

5. Figures. We re-edited Figure 2 and Figure 4. We added a new sub-plot on the relationship of the timings igniting the AgI bars and starting recording snowfall in Figure 5. We added Figure 6 on comparing the precipitations recorded by the two AWSs and their ratios.

6. The weakness of the current study is pointed out both in the Abstract and Conclusion parts.

7. We rechecked and edited the language.

8. The changes and corrections related to the comments have been underlined with red lines.