

General comments

I would like to thank the authors for their thorough and diligent incorporation of the comments made in the previous two reviews. This revised manuscript represents a marked improvement over the initial submission, and I have little to add at this stage.

I have suggested a few very minor revisions, outlined below. Overall, I believe that this manuscript represents a valuable contribution to our understanding of glacier surging in the Karakoram region. The analysis and arguments presented by the authors are detailed, clearly articulated, and well supported by the data. I therefore consider the manuscript suitable for publication in its current form, subject to the minor revisions noted below.

Specific comments

L50–56: The current wording on Line 53 make it sound like surge-type glaciers in the Karakoram do not conform at all to either hydrological or thermal control mechanisms. I suggest rephrasing this to indicate that surging in this region does not neatly fit either end-member model and may involve elements of both. Similar behaviour has been observed in other regions, such as Svalbard, where surges are typically considered thermally controlled, yet some large glaciers remain warm-based throughout their surge cycle (e.g., Sevestre et al., 2015). This highlights that heterogeneous surge behaviours within a given region are not uncommon and may reflect glacier-specific characteristics. The authors may also consider citing Benn et al. (2023), which shows how these differing behaviours can be explained within the framework of the enthalpy balance theory.

Lines 333–334: The sentence describing the increase is temporally inconsistent: the increase is defined between June 2015 and June 2017, but is said to be “observed in June 2015.” Please clarify the timing or rephrase to avoid ambiguity.

Line 207: I believe that this should be referring to Eq. (2) instead of Eq. (1).

Line 350: In the figure caption of Figure 5, it should say “orange line” instead of “green line”.

References

- Benn, D. I., Hewitt, I. J., & Luckman, A. J. (2023). Enthalpy balance theory unifies diverse glacier surge behaviour. *Annals of Glaciology*, 63(87-89), 88–94.
<https://doi.org/10.1017/aog.2023.23>
- Sevestre, H., Benn, D. I., Hulton, N. R., & Bælum, K. (2015). Thermal structure of Svalbard glaciers and implications for thermal switch models of glacier surging. *Journal of Geophysical Research: Earth Surface*, 120(10), 2220–2236.
<https://doi.org/10.1002/2015JF003517>