

Dear Editor and Referees,

On behalf of all co-authors, we sincerely thank the Editor and the Referees for their careful evaluation and constructive comments on our revised manuscript entitled “Glacier response to the transition from lake- to land-terminating following a glacial lake outburst flood at Jinwu Glacier, southeastern Tibet” (MS No.: egosphere-2026-1492).

We have carefully considered all comments raised in this second round of review and revised the manuscript accordingly. Our point-by-point responses are provided below, and all corresponding changes have been incorporated into the revised manuscript.

Reviewer #1:

Comment (1): *One concern stated in the first review has not been fully addressed. While the scope of the surface-elevation and flow-velocity analyses has been adjusted, the interpretive part of the discussion (Sect. 5.1) never mentions the icefall, which strongly complicates the interpretation of upstream ice dynamics (in Sect. 5.2 the icefall appears only as a source of image-matching noise). I encourage the authors to discuss their findings in light of this physical setting. This is particularly important because Sect. 5.1 still invokes stress transmission across the icefall: L283–286 attribute the reduced thinning in the 500–750 m reach to reduced longitudinal stretching caused by the terminus slowdown, and L290–291 state that such events "can modify ... dynamic coupling between the upstream and downstream sections." This is difficult to justify with the likely dynamic decoupling across the icefall, a mechanism that the authors themselves acknowledge in their response. The same applies to the abstract, where the upstream velocity change is presented in connection with the GLOF (L21–22), and to the conclusions (L361–363), where upstream dynamics are reported without noting that this section may be disconnected from the terminus.*

Response: Thank you for pointing out this important issue. Following the suggestion, we have revised Sect. 5.1 to consider the role of the pronounced icefall in interpreting the contrasting dynamic behavior of the lower and upper glacier sections. The previous attribution of reduced thinning in the 500–750 m section to reduced longitudinal stretching associated with the terminus slowdown has been removed, as has the statement that the GLOF modified dynamic coupling between the upstream and downstream sections. The revised discussion instead treats the icefall as an important geometric and dynamic boundary separating the near-terminus region from the upstream glacier tongue, supported by additional studies showing that steep icefalls and abrupt changes in ice thickness or bed geometry can limit longitudinal stress transmission and the upstream propagation of terminus perturbations. Corresponding changes were also made in the Abstract and Conclusion to clarify that the upstream analysis section lies above the pronounced icefall and may be dynamically decoupled from the terminus.

Technical corrections:

Comment (2) : *L81: The citation should read "RGI Consortium, 2023" rather than "Consortium, 2023".*

Response: We have corrected the citation in Line 81 to “RGI Consortium, 2023” as suggested.

Reviewer #2:

Comment (1): *L81: Citation should be “(RGI Consortium, 2023)”.*

Response: We have corrected the citation in Line 81 to “RGI Consortium, 2023” as suggested.

Comment (2): *L149-150: “Local extreme outliers were then identified and removed using a 3×3 pixel moving window.” How were they removed using the moving window? Moving average? Median filter? Or something else?*

Response: Thank you for pointing this out. For each 3×3 window, the centre pixel was removed when its absolute deviation from the local median exceeded 1.5 times the median absolute deviation (MAD). We have revised the text to clarify this procedure.

Comment (3): *L178-182: “We modelled the dependence of DEM-differencing errors on terrain slope and maximum absolute curvature. The binned NMAD values were interpolated to generate pixel-level elevation-change uncertainty maps. Standardized elevation differences were then used to model the spatial correlation of DEM errors with a double-range exponential variogram.” Please describe how the DEM-differencing errors are modeled. The second and third sentences are unclear to me. What are “the binned NMAD values?” Where can I find more details about the “spatial correlation of DEM errors with a double-range exponential variogram?” The variogram does not exist in Sections 4-5, nor in the Supplements.*

Response: Thank you for pointing this out. We have revised Sect. 3.3 to clarify how the DEM-differencing errors were modelled, including the slope–curvature binning, calculation and interpolation of binned NMAD values, and variogram-based treatment of spatially correlated errors. We have also added empirical variograms and fitted double-range exponential models for both DEM-differencing periods to the Supplement (Fig. S4).

Comment (4): *Section 5.2: the authors discussed the DEM / DEM-differencing uncertainties here, but there is no information regarding how the DEM analysis is relevant to the main topic (i.e. dynamic adjustment of a glacier after the terminus becomes land-terminating). If the authors decided not to make a connection between glacier elevation changes and the GLOF*

event (as per concerns raised in the first round of review), I think it is still necessary to describe such a decision and reasoning somewhere in the paper.

Response: Thank you for this comment. We have revised Sect. 5.2 by stating that the 2014–2025 DEM-differencing interval spans several years both before and after the 2020 GLOF and therefore cannot isolate an event-scale elevation response. We also clarified that the DEM-derived elevation changes are used to characterize the longer-term thinning pattern of Jinwu Glacier rather than to attribute the observed thinning directly to the GLOF.