

This manuscript was revised according to our response to the reviewers- all of our changes are tracked line-by-line in the submitted documents.

In addition to the reviewer's comments, we added two new analyses to support our hypothesis on why we observe the change in timing of daily maximum discharge through the melt season; (1) time series of water level in the weathering crust (cryoconite hole) and, (2) change in hydraulic geometry parameters through the melt season.

We also changed the method of estimating contribution of energy balance components to melt energy. The initial method was to normalize the proportions of melt energy to one by dividing individual proportions by the sum of absolute proportions. However, to avoid confusion, we simplified the method to include both positive and negative proportions instead. For example, the proportion of net longwave radiation was changed from -0.32 to -0.08. Initially these proportions were normalized and expressed in percentage. But in the revised manuscript, they are simply expressed as a change in proportion from -0.32 to -.08, corresponding to a change in contribution of 24% to melt energy.