

Dear Editor,

Thanks for the additional corrections suggested. Here a summary of the last corrections we implemented before sending our final paper version:

**Editor:** line 99: elevation

**Authors:** Modification done

**Editor:** line 101: To my experience melt season is the more familiar term.

**Authors:** Modification done

**Editor:** line 120: A slope of 0.34% corresponds to an elevation difference of only 1.8 m along the 540 m long channel. Is that correct? it seems more than that in Fig. 1d?

**Authors:** Indeed, we probably did this mistake by taking only the shorter upperpart of the channel in the calculation. The slope between P5 and P1 is 0.72% (3.33 m of elevation for 464.4 m of distance). We implemented this new slope value.

**Editor:** line 134: The more common units for thermal conductivity are W m-1 K-1

**Authors:** We did the modification, and we also added "K" instead of "°C" for the other units to respect the S.I standard (example: the specific heat capacity of water) and make the text more consistent. Note that we kept "°C" for absolute measurement of temperature.

**Editor:** line 165: record

**Authors:** Modification done

**Editor:** line 359: indicates

**Authors:** Modification done