

**Review of revised submission of: “Inter-comparison of surface meltwater routing models for the Greenland Ice Sheet and influence on subglacial effective pressures” by Yang et al.**

The manuscript is much improved by the changes made, in particular the clarification of the figures, the addition of Table 1, and the clarification around the methods. I have one lingering comment with respect to the description of the methods: SRLF partitions flow into open-channel flow and flow through snow using Darcy’s law, whereas the RWF partitions flow into interfluve or open-channel flow. However, in this study the SRLF assumes flow over the whole ice surface can be modelled using open channel flow, but the RWF continues to partition flow into ‘fluve’ and inter-fluve. The difference, as far as I understand, is that a hillslope can be snow free and therefore not appropriately modelled by Darcy’s law, however it is also not appropriate to model a hillslope as a ‘fluve’ because flow processes differ there. Therefore, the RWF allows hillslopes and channels to be modelled separately even when they are bare ice, and the SRLF does not. I think a short note on this distinction would waylay any confusion for readers, as well as a very short explanation of how processes differ between fluve and inter-fluve regions even under bare ice conditions (presumably diffusive vs. advective properties, but perhaps there is more?). This will help the glaciological audience understand the distinction between ‘hillslope/inter-fluve’ flow and flow through the snow pack. This would also help readers digest section 4.5.

Otherwise, I recommend that the paper be published with the technical corrections outlined below.

- Spacing in the in-text references needs to be corrected (there needs to be space after, not before, the semi-colon).
- Spacing – page 3, line 29 (.Routing)
- Page 3, line 16: A in-text reference could be provided to Table 1.
- Page 4 - Heading 2.2 needs to be on a separate line
- Page 4, line 31 – an extra ‘to be’ needs to be removed.
- Page 5, line 18 –  $hp$  needs to be corrected to  $h_p$ .
- Page 5, line 28 – perhaps unimportant, but I dislike the phrase “used to fill supraglacial lakes” and prefer something more along the lines of “model filling of supraglacial lakes”.
- Page 9, line 7 – I dislike the term ‘confirming’, and would prefer something to the effect of ‘consistent with findings indicating that catchment size controls surface meltwater routing delays’
- Figure S1 is redundant with Figures 2 and 3
- Figure S4, column 2 – the negative in the  $m^3s^{-1}$  is not showing up.