



TCD 6, C751–C752, 2012

> Interactive Comment

Interactive comment on "Observations of widespread accelerated thinning in the upper reaches of Svalbard glaciers" *by* T. D. James et al.

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Thank you very much for your positive and constructive comments on our manuscript and we apologise for the delay in responding. We hope we have satisfactorily addressed your comments below.

- We agree with your statement on the title of our submission and have changed it accordingly.

- We do not believe we have stated, based on Fig 4, that the glaciers are experiencing the highest thinning rates in their upper reaches. Max thinning is in all cases at the glacier termini. It is the change in thinning rates at elevation that are similar or indeed higher than elsewhere on the glacier. This we attempt to show in Figure 5 but we have edited the text to reflect that this is not the case at all sites. We hope this is now clear.





- We agree with your comment about an additional figure and in fact in a much earlier version of this manuscript we attempted to produce such a figure. However, we found that it does not work. The thinning rates presented in Figure 4 are an areal average and this signal does not present itself in a 2D plot. We considered delineating 'affected' areas in Figure 2 but found this was not possible given there is no clear boundary between what is and is not 'high elevation thinning'. Our solution was to include contoured DEMs in Figure 2 so the results in Figure 4 could be better interpreted. We hope this is satisfactory.

- We are grateful for your input on the potential causes of the enhanced thinning and have found this very useful in our discussion.

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Interactive Comment

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