

## Response to David Chandler

It's great to see another long record of supraglacial stream discharge from Greenland. In your paper you have reviewed some existing data sets and point out that this new record is of unprecedented length. There is one existing long record that you have missed – admittedly quite hard to find – that is about the same duration (from June to August in 2012), and I thought this should be included in your intro & summary table. It may also be interesting for comparison, as it is from a larger stream at a higher location in the same region of the ice sheet. Full details were provided by Wadham et al. (2016), the information on stream gauging is mostly in the supplement to that paper (<https://bg.copernicus.org/articles/13/6339/2016/bg-13-6339-2016-supplement.pdf>). This record was collected similarly to yours, using stage monitoring and a rating curve from discrete discharge measurements, but we used salt dilutions instead of cross section / water velocity. Measuring the cross-section in this bigger river would have been difficult (and risky) except during a few cold periods with low flow - as a result, all the cross section measurements would have been biased towards low flow conditions. The salt dilutions seemed to work fine though. It's interesting that you observed little change in the cross section – although we never measured the cross section profile, we found that a single rating curve was adequate through the whole season, which suggests a consistent cross section profile at our site too.

Reference: Wadham et al. (2016), Biogeosciences, 13, 6339-6352, doi:10.5194/bg13-6339-2016.

### **Author reply:**

Thank you for the suggestion! We are grateful that you alerted us about this data set. We will include Wadham et al. (2016) in the introduction and also discuss the comparison with our results. It is interesting to know that the cross section profile at your site has not changed significantly similar to ours. We will rewrite the manuscript to add this study into our discussion.