

## ***Interactive comment on “Ocean properties, ice–ocean interactions, and calving front morphology at two major west Greenland glaciers” by N. Chauché et al.***

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Many thanks to D. Sutherland for general interest in and detailed comments on the data and analysis in our Discussion Paper. We are flattered that he sees value in the data-set & wish to take the opportunity to clarify a few of the points raised.

We realise that our use of “inter-annual” in the context of the paper is difficult and potentially ambiguous; it was not our intention to specifically deal with seasonal-change but merely attempt to understand the change we observe over two contrasting melt-seasons on an ‘annual time-scale’. Given sufficient opportunity, we will seek a less ambiguous way to specifically classify the “between-summer” variability observed and

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our attempt to describe it. We also understand that proving/disproving the working hypothesis regarding the circulation scheme induced by the different interaction modes, is also beyond the possibility of the data in hand. However, we still consider that as the ice-ocean interaction processes identified are actively observed (even over the short observational periods), the schematic figure (6) remains an appropriate representation and guide to illustrate the likely interaction modes operating at each of the glacier fronts.

We are aware ourselves the confusion brought about by different names (& origins) of water masses, and also have had difficulties with the structure of the paper. We have worked with many drafts– but due to the need for simplification/clarity we finally attempted to keep it relatively short and focussed on the impact of the water we observe and the potential variability of ocean/glacier interaction processes in action. Indeed, we decided to submit this paper to the open access forum: “The Cryosphere Discussion” to receive specific feedback from other teams working on this new and rapidly evolving research topic. We remain open to all critical comments and suggestions for improvement both the presentation and interpretation of our dataset.

In this, we appreciate D. Sutherland’s interest and constructive input and will take his comments on board if presented with the opportunity.

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