Review of "The influence of föhn winds on annual and seasonal surface melt on the Larsen C Ice Shelf, Antarctica" by Jenny Turton and co-authors

First and foremost, I would like to apologize to the authors and editor for the delay in submitting this review. Let me be clear that this delay is not a reflection on the quality of this work, but rather an oversight on my part. This is an interesting paper, and the topic definitely fits within The Cryosphere. I think the paper should go through a round of figure and table edits/improvements, changes to the introduction to give a better perspective on the goals of this study, and some clarifications on numbers stated. Please refer to detailed comments below.

L 46: The study by Datta et al. (2019, https://doi.org/10.1029/2018GL080845) seems to be missing from the introduction and overview (and the reference list), while it seems to share a lot of methods and results. It would be useful to add a discussion on similarities and differences. More generally, I find it challenging to pinpoint the originality of this paper within the realm of recent papers on foehn-driven melt. For example, how is this study different from the Kuipers Munneke et al., 2018 study (https://doi.org/10.1029/2018GL077899), who does focus on a single location but also presents melt maps? And how does this study build from the SEB study by Kuipers Munneke et al., 2012 and from Turton et al., 2018? What are some of its unique features, e.g. the methods, the data, the results?

Figure 1: It would be more logical to zoom in from subpanels a to c, instead of zoom out.

Table 2: it is unclear (1) if this is a new result or simply a repetition of Turton et al., 2018; and (2) whether the data gaps are considered when calculating the foehn frequency. I assume the percentages represent ratios between foehn episodes and total duration of non-missing data – but this is important to clarify; (3) what the agreement/overlap between AWS and AMPS is in general, i.e. what is the frequency of events in AWS only, AMPS only, and both – and why is that?

Table 3: it would be worthwhile representing the numbers in the first columns are percentages as well. What does the 31.4% and 33.7% represent exactly?

Figure 3: this figure needs to be improved considerably. The dots are difficult to see, black and red is difficult to separate, and units need to be added. Use subscripts as necessary.

Table 4: this might be nitpicky but try to use subscripts and superscripts in this table. Would it be an idea to combine Table 4 and Figure 5, to avoid table redundancy/overload?

Figure 4: color scale is not useful for this purpose (this would be a color scale for 0 in the middle, ranging from negative to positive numbers). Consider changing the color scale.

Figure 5: use consistent terminology throughout (e.g. H_{sen} instead of 'sensible heat flux')

Figure 6: same here – this color scheme is not useful for this purpose.

Figure 7:mind the units in brackets.