Dear Olaf Eisen,

Thank you for taking over the final check of our manuscript and for considering it to be accepted for publication in TC. We revised the manuscript and fixed the issues you raised (see answer to your comments below). We hope that you are satisfied with our corrections.

Kind regards

Thorsten Seehaus

Editor Comments (Authors answers are indented in **bold face type**):

2.27
EB: Structure of the sentence starting with “Whereas” does not seem to be OK.
We appreciate this advice and restructured this sentence.
Now reads "Whereas, glacier-wide surface lowering was observed by various author groups (e.g. Berthier et al., 2012; Rott et al., 2014; Scambos et al., 2014) at former ice shelf tributaries along the northeastern AP."

OE: Sorry, the grammar is still wrong! This is a main sentence, no reason to start with „whereas“ - delete.

According to the editor’s suggestion we deleted “whereas”.

7.10: OE: This sentence is wrongly written, please rewrite or split.
"The resulting average coverage by velocity measurements along the profiles is 97% and 90% of all extracted profiles have got a data coverage of more than 93%."

Thank you for this advice, we revised this sentence:
The resulting profile coverage by velocity measurements is in average 97% and data coverage of more than 93% is obtained for 90% of all extracted profiles.

7.16:
"resulting evolutions of the flow speed"
I’d say "evolution of flow speeds" is more consistent, as you use „speeds" later.

We appreciate this advice and corrected this sentence accordingly.

17.26: Fix: add „…s will"
Upcoming sensors will hopefully fix …

Thank you for this advice. We added “..s”.

Figures:
7 and S169: graph „velocity change category“: what are the three symbols for between legend and labels? Typesetting error? Please check. Likewise for „Flux gate“, where it is however more clear what is meant. Mention these symbols in caption.
Add a) to e) to graphs.

We used the symbols for the “velocity change categories” already in Fig. 3. In order to facilitate a better comparison and to better illustrate the meaning of the velocity change category ratings (numbers), we added the symbols to the plot. For the Flux gate/ catchment area ratio plot, we also added the pictograms in order to better illustrate the meaning of the numbers. We added information regarding these issues to the caption and added a) to e) to the graphs:
Figure 7. Boxplots of cluster analysis input variables (Sector “West”) for each group. Whiskers extend to the most extreme data points. Panel (b): The symbols used for the velocity change categories (see Table 3) are the same as in Fig. 3. Panel (d): The pictograms illustrate the catchment shape (see Section 3.3).

S149: At least mention in the caption of the first of these figures what the date in the legend stands for.

According to the editor’s suggestion, we revised the figure captions (Fig. S149-S156):
Surface velocity across the terminus of XXX Glacier (left) and median values of each profile (right). Dashed line: maximum ice thickness of across glacier profile; Dates in legend: mean dates of SAR acquisitions used to calculate the surface velocity fields.