

Dear Dr Nicholas Jourdain,

Thank you for taking the time to review our paper again and accept it subject to minor revisions. Our responses to the minor comments are below in blue text.

- caption of Fig. S3 : what method is used to estimate the density of the distribution of points? (not clear as isolated points may appear with different colours).

**The second sentence of the caption now reads: “The color indicates the density of the distribution of points as measured using a kernel-density estimate using Gaussian kernels.”**

- Sentence L.534-536 does not seem correct to me: “It is also clear from Fig. 9 that the location of polynya formation is associated with a band of high winds with a mean speed of around 8 – 9 ms<sup>-1</sup> exists along the coast from Thwaites Glacier, over the Thwaites Iceberg Tongue and into the eastern area of the ASP study area”.

**We believe this band of higher winds along the coast, extending into the south-eastern are of the ASP study area (around where the polynya forms) is visible in Fig. 9. We have amended the text, to try to be clearer, to:**

***“It is also visible in Fig. 9 that the location of polynya formation, adjacent to the Dotson Ice Shelf, is associated with a band of high winds with a mean speed of around 8 – 9 ms<sup>-1</sup> that extends along the coast from Thwaites Glacier, over the Thwaites Iceberg Tongue and into the south-eastern area of the ASP study area.”***

- L. 538-539: I am not convinced by “it is clear that notable spikes in polynya area do often occur on days with high wind speed”. Either you find a quantitative statistical metrics that indicates this, or you remove this part of the sentence.

**We have removed this text.**

- L. 787 in the Acknowledgments: I got feedbacks from 4 reviewers, not 3.

**We have amended this from three to four.**

Thank you

**Grant Macdonald, on behalf of all authors.**