

We thank the editor for his careful reading of our answers to referee #2 comments. You will find below our answer to the editor comment:

Would you please confirm that the correction to floe diameter in Eq 12 is purely typographical, and has no implication for the calculations that you present? (Response to point below from Referee 2.)

P11L13: 'Note also that Horvat and Tziperman (2015) and Roach et al. (2018) are considering floe radii in their study, while we are working with floe diameters (hence adding a factor of 2 in Eq.12).' Horvat & Tziperman (2015) also have a factor two in their equation for lateral melt using floe radius. Should you have a second factor two?

We confirm that the correction to floe diameter in Eq 12 is purely typographical. This factor 2 was missing in the first version of our manuscript but has always been taken into account in our model.

The factor 2 in Horvat & Tziperman (2015) arises from the cylindrical derivative term in their computation of the rate of change of the cumulative number of floes with respect to time, while the factor 2 we added in the equation comes from the time rate of change of the diameter (which is twice the one of the radius). Our formulation and the one of Horvat & Tziperman (2015) are equivalent, the only difference being the floe size variable we consider.

We do not include a marked-up manuscript version in this response since no change has been done to the manuscript.