The authors' revisions have improved the quality of the manuscript. However, some elements of the model they developed still need to be clarified before publication. The comments marked with * are the most important to address.

Questions regarding the model

P5L26: 'LIM3 provides sea ice floe size, thickness and concentration to WW3.' Is this floe size a grid-cell average? If so, how is the average computed?

P5L30: 'WW3 then returns the WRS to LIM3, as well as the updated floe size if fragmentation has occurred.' Is this floe size passed from WW3 to LIM3 the maximum floe size Dmax?

P5L33 and P8L14: 'If fragmentation has occurred in the wave model, the FSD in LIM3 is re-arranged, transferring sea ice from large floe categories to smaller floe categories. The resulting FSD obeys a power-law similar to the one assumed in WW3.' And 'our redistribution is set to a power-law with a constant exponent as soon as fragmentation occurs.' My interpretation of the wave fracture scheme is as follows: 'We assume wave fracture results in a truncated power law defined for floe sizes up to some calculated Dmax, under the constraint of conservation of area. Dmax represents the largest size of floes remaining after the fracture event.' Is this correct? If so, I think it should be described in this way, rather than using worlds like 'set' or 'force' or 'rearrange.'

Eq. 6: The integral of the FSD from zero to infinity is 1. Is the integral from Dmin to infinity the ice concentration, c? If so, is the FSD modified by any process that affects c? (For example, loss of ice area by basal melt).

P8L20: What is the value of the constant exponent?

P9L5: 'Noisy Dmax distributions' and 'smoother FSDs' - are these in space, or across floe size, or in time? Why are smoother FSDs desirable? It is argued earlier that wave fracture is a violent event.

*P10L6: 'Dmax is advected with the FSD in LIM3.' However, Dmax is not an area-conserved quantity, so should not be advected as an area-conserved tracer - see Horvat & Tziperman (2017). This should be discussed in the text. It is still not clear to me why Dmax needs to be defined in LIM3 if LIM3 contains a FSD. If wave fracture results in a truncated power law defined by a parameter Dmax in WW3, then the FSD in LIM3 will be zero in categories with a size greater than Dmax. The FSD can be advected in LIM3 and there is no need to advect Dmax.

Eq. 12: I presume that a similar equation, without the integral over floe sizes, is used to evolve the FSD under lateral melt - this should be clarified in the text.

*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?

Typographical comments:

P2L22: `Most of the recent efforts' - replace with 'several recent efforts'

P2L32: 'floe size distribution' should not be capitalised

P3L10: 'forcing a wave model by sea ice properties' -> 'forcing a wave model with sea ice properties'

P5L21: 'we remove the first 3 days' -> 'we exclude the first 3 days from the analysis'?

P5L31 'LIM3 takes into account the WRS in its ice transport equation, and advects the sea ice and its information on floe size. This information is carried by a newly implemented FSD, the sea ice concentration being distributed among floe size categories.' I don't think that 'this information is carried by a FSD' makes sense. LIM3 advects the FSD, which is defined as an areal distribution.

P7L1 'It is therefore necessary to exchange information on floe size between the two models, which can be done by using a FSD.' Similarly, the exchange of information between the two models is not 'done' by the FSD, rather the FSD is exchanged between the two models (or parameters defining the FSD are exchanged - this should be clarified).

P9L20: 'really small' -> 'very small'

P14L12: References to Tsamados et al. (2015) and Roach, Dean & Renwick (2018) should be added when discussing basal/lateral melt compensation.

P21L21: 'In WW3, a fragmentation event occurs if, firstly, waves with a wavelength λ apply a strain on sea ice greater than a given threshold, and secondly if $\lambda/2$ which is assumed to be the value of the new maximum floe size is lower than the current D max value in the wave model' -> Do you mean that both conditions are required for wave fracture, or only one?