

Comment on the version “tc-2015-3-manuscript-version4.pdf”

I would like to congratulate the authors on improving the exhibition of their material and making clearer the caveats and details behind their model. The article is good enough as it is (besides a few technical points I noticed). I have only minor comments which the authors may take into consideration if they would like to.

Figure 3: The authors have added a figure in order to show the variation of the ice-drift velocity with wind speed (used as a substitute for interface stress). I would have preferred an explicit plot of quadratic drag coefficient (interface stress squared divided by total shear across the IOBL squared) against the wind speed to assess this variation in parallel with the variation in turning angle. However, from Fig. 3 as it is now, I infer that this variation is not very large, if there is any variation at all (the only case where I would expect such a variation is the $\phi \ll 1$ case, though, which does not feature very prominently in Fig. 3 as it is now). My comment from the first review, that the drift speed is more important than the turning angle, is still valid. The authors might wish to emphasize the $\phi \ll 1$ case for the drift speed more, but I can accept if they choose not to.

p. 25, Appendix:

What you calculate as $C_{\{io\}}$ in the appendix is the drag coefficient between ice and surface ocean (6m, so only slightly into the Ekman layer), not across the entire IOBL. I am not overly surprised you don't find any dependence on interface stress there, since this dependency is a result of the varying height of the constant-stress layer, *together with the full Ekman layer*.

p. 3

l. 22 remove “is”

p. 16

l. 18 increases ice speed *by* up to

p. 22

l. 13 changes *in* shape