Reply to suggestions for revisions

General comments:
The authors have incorporated my comments from the first round of review and the manuscript has improved. In particular, it is nice that the term "eddy" is more precisely defined in the revised manuscript. However, there are some obvious errors in their figures and I have very minor comments. Thus, I recommend minor revisions prior to publication of this manuscript.

Minor comments:
(Line numbers refer to those in the manuscript with tracked changes.)
1) Line 6: Replace "mixed layer depth" with "MLD".
2) Line 9: It is better to use "mesoscale ocean current anomalies" instead of "ocean eddies" here.
3) Lines 95-97: I agree with the authors that the new names for sensitivity experiments better represent the experiments. I recommend the authors to also state whether wind stress is calculated relative to surface current or not.
4) Line 108: "g" should also be defined.
5) Lines 147-148: It seems that the sentence "We agree that it is important to clarify that in our analysis, "eddy" refers not only to coherent vortices but also to all mesoscale processes that the filter can smooth out." is a part of the authors' response to my comment in the first round of review an should be deleted.
6) Line 254: Replace "domain" with "domains".
7) Figure 1: Replace "sea surface salinity" with "eddy kinetic energy" and "eddy kinetic energy" with "mixed layer depth (MLD)".
8) Figure 3: Replace "a)-c)" with "(a), (d), (g)", "d)-f)" with "(b), (e), (h)", and "g)-i)" with "(c), (f), (i)".
9) Figures 6-9: The authors forgot to update figure legends after changing the names of sensitivity experiments.

1) Line 6: We replaced "mixed layer depth" with "MLD".
2) Line 9: We agree it is better to be specific about the fact that we are addressing the advection by mesoscale ocean current, instead of ocean eddies in general.
3) Line 95-97: Wind stress is calculated from the model friction velocity and 10-m wind directional components (Perlin et al, 2020), and is not calculated relative to surface current.
4) Line 108: "g" represents the gravitational acceleration.
5) Lines 147 - 148: We deleted that part of the sentence.
6) Line 254: We replaced "domain" with "domains".

7) Figure 1: We fixed the caption.
8) Figure 3: We replaced "a)-c)" with "(a), (d), (g)", "d)-f)" with "(b), (e), (h)", and "g)-i)" with "(c), (f), (i)".
9) Figures 6-9: We updated the figure legends.