Overall comment:

Note that Fig. 10 and some values in sections 5 and 6 have slightly changed due to using an older version of a data file. Now all time scales, diffusivities and R(0) are consistent throughout the paper. Note also that for better readability we have divided Section 3 (Theory and Methods) into subsections. For further clarity we have also reorganized Section 5 (The effects of the mean flow on eddy diffusivities) with respect to subsections.

Editor Comments

We thank the editor for their helpful comments and suggestions to improve our manuscript. Please find our point-by-point responses to your comments below. Editor comments are shown in black and our responses are shown in blue. Edited text in the manuscript is shown in purple. Unchanged text that has been copied in for completeness is shown in gray.

I'm only doing writing comments:

* "x" and "y" are as far as I can tell not explicitly defined in the text, although there are implicit references suggesting these are "zonal" and "meridional" respectively. I raise this because since the work talks about major and minor axis and mean flow suppression, "x" could plausibly mean "direction along the mean flow". There is also "i,j=1" to mean "zonal" which doesn't help.

Much safer to explicitly define them. Would suggest doing "i,j=x,y", then defining "x" and "y" here. Otherwise, define them around Equation 12

We are not sure where exactly the editor refers to with 'here'. According to the editor's suggestion we defined the terms x and y just after equation 12. L206: … where x is the zonal direction and y is the meridional direction

* abstract: Consider rewriting abstract such that references to "xx" "xy" etc. are dropped completely, unless the authors decide the directions are going to be defined explicitly here. (The investment in words to make the details make sense self-consistently within the abstract is, to me, not entirely worth those details being in the abstract at all.)

We agree with the editor and adjusted the abstract accordingly. Please see the changes made to the abstract in the tracked changes document.

* general: there are various places where the sentences are long, and could really do with adding some commas to break it up a bit (e.g. line 54 after "T", line 168 before "which", some others in the results sections I didn't note down when I went through the article)

We have corrected the suggested lines accordingly. We further checked the results section and added commas where helpful to ensure a smooth read through. We hope that unrecognised comma issues will be resolved during typesetting.

* line 99: formatting, "Grisel et al (2010), Grisel et al (2014) AND Chen et al (2014, 2015)" or similar

Changed accordingly.

* line 110: add an "and" after the comma (like the second bullet point in line 112-114)

Changed accordingly.

* line 142: footnote unnecessary and inconsistent, since acronyms are defined in text for all other cases. Change to "Coordinates Ocean-ice Reference Experiments (CORE)" probably

We apologize for the inconvenience and changed the footnote according to editors suggestion.

* line 147: formatting and brackets, "...Runge-Kutta scheme (Grisel et al, 2010)."
Changed accordingly.

* line 150-151: remove ", hereinafter refereed to as OSCAR,", since the use of acronym makes that part redundant
Removed.

* captions of Fig 1: "for the 28/11/2016" and "is shown 28/11/2016" doesn't make sense as is, edit accordingly. ("for the DAY OF" and "is shown FOR THE DAY OF" maybe)
Changed accordingly.

* line 155: "in-situ" with a hyphen?
Changed accordingly.

* Eq 3 and 4: consider using

\left\langle symbols \right\rangle to have full height brackets.
Changed accordingly.

* line 201: "...Rypina et al (2012) AND Grisel et al (2010)..."
Changed accordingly.

* Eq 17: full stop after the equation
Changed accordingly.

* Eq 19: comma after equation
Changed accordingly.

* line 228: no indent (probably one too many empty lines in LaTeX)
Indent removed.

* line 484: formatting of the degrees symbol inconsistent with the one at line 485
Changed accordingly.