

Q: P1 L10 Both conservation laws of circulation

A: suggestion followed.

Q: P1L20 and transport heat ... over long distances

A: suggestion followed.

You may also cite a recently accepted paper showing lagrangian trapping of floats for >1yr (<https://www.nature.com/articles/s41598-019-49599-8>)

A: suggestion followed.

Q: P1L25 because they contain most of and are responsible for most of the eddy transport...

A: suggestion followed.

Q:P2L48 you didnt take into account my remark about "voyages"

A: we have now modified voyages to research cruise.

Q:P4L88 please reformulate. "identify surface AEs ($SSTA > 0$) and subsurface ($SSTA < 0$)

A: suggestion followed.

Q:P6 L144 please refer to the method used (Wang et al?) to infer the coefficients

A: suggestion followed.

Q:P15 L334 please reformulate

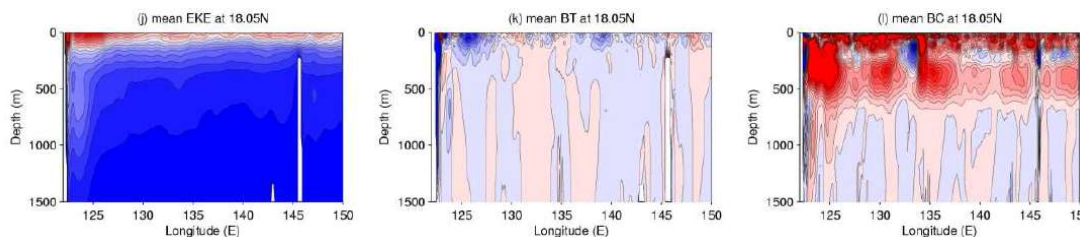
A: suggestion followed.

Q:Fig 7 there are two panels a

A: suggestion followed.

Q:P17L359 what about $H_1=1000\text{m}$ or more, isn't it more realistic for the bottom layer of open ocean eddies?

A: Yes, the eddy thickness would be much thicker given weaker stratification in deeper layer of open ocean. If $H_1=1000\text{m}$ or more, then the upper and low layers are relatively smaller in two-layer model. So it is more like a plane model (as assumed in previous theoretic studies) but two-layer model in this study. Besides, the eddies in this region were only about a few hundred meters according to the previous statistics [e.g., Wang et al., 2017]. As it was illustrated in the sensitive analysis, this would not change the main results and conclusions.



Q:P18L387 in 2015 during a merger event.

A: suggestion followed.

Q:P18L392 be the sum of

A: suggestion followed.