

Dear Pr Hetland,

Thank you for editing our manuscript "The Vertical Structure of a Loop Current Eddy".

We deeply appreciated the detailed guidance of your decision letter.

As you mentioned, reviewer 1's suggestions involved significant supplementary work. In particular, estimating the error on the geostrophic velocity in the context of a fast drifting eddy and a slowly navigating glider, was not trivial. We hope that you will find our new error estimate method convincing.

We felt reviewer 2 was still somehow negative about the manuscript, despite the relatively few major comments. She/He however did not come back on any of her/his initial comments on the previously submitted version of the manuscript, which gave us the hope that she/he might have been satisfied by our first series of revisions.

We took into account all the reviewer's comments and wrote a detailed answer to each of them. The manuscript and figures were modified according to their suggestions.

As you will see, the length of the manuscript increased significantly again, as both reviewers asked for supplementary figures and discussions. In particular, two new figures, along with a new paragraph were necessary to describe the error estimate on the geostrophic velocity required by reviewer 1. Expansion of our discussion on the unusually high salinity observed within the LCE, and comparison with historical observations, required by Reviewer 2, also considerably lengthened the discussion section.

Please, note also that the data used in this study were funded by PeMex through the Mexican Secretariat of Energy, and will not be 'public' until 2020 because of a confidentiality agreement signed between PeMex and CICESE in the frame of the CIGOM consortium (<http://www.cigom.info/>). However, they will be at the disposal of the reviewers, with no restrictions, for the sake of transparency.

We sincerely hope that this revised version of the manuscript will match your expectations, and are looking forward to hearing your advice.

Best regards,

Thomas Meunier