Review 3rd : Coastal Eddies as Vectors for Connectivity During the Summer in the Levantine Sea

by Yotam Fadida et al (2026)

Following the previous reviews, the authors clarified the scope, their methods and data used in their study. In particular they provided valuable appendix figures and extended discussion to explicit the uncertainties and limits of the study. For the scientific part, the present manuscript do not call for major comments.

The revised version now better emphasize the results, with a shoaling from about 120m to 50m of the deep chlorophyll maximum associated with anticyclonic coastal eddies detached from the Levantine coast. This contribution is still largely focused on biogeochemistry, adding new data from the previous studies, in particular Efrati et al, 2013. But even in the revised form, the manuscript does not significantly answer to physical oceanography questions (which could be, among others, the origin or driving processes of these coastal eddies) and therefore do not fit in the scope of *Ocean Sciences*.

I suggest the manuscript to be transfered to *Biogeosciences*.

Please find below my minor comments.

Minor comments :

- L. 7, explicitly mention that you used an event-based approach, with three events.
- L.12, rephrase this sentence
- L.49: please be more precise on mesoscale typical size, as it varies significantly across the Mediterranean Sea.
- L.53: Zodiatis et al (2023) A and B are the same article.
- L.66: Please describe more explicitly to which other coastal systems you refer, and why such comparison is useful.
- L.146, typo in parenthesis
- L.163-174: This paragraph is quite long, and mostly introduce previous SSH-based studies. It should better fit in the introduction to explain your choice of chlorophyll remote-sensing data, prior to methods.
- L.272: The Rhodes gyre is not a cyclonic eddy, it is a gyre, which is much larger. + typo ‘eddies identified’. If you want to discuss more about the Rhodes gyre, additional physical studies could be cited (e.g. Marullo et al, JGRO, 2003, Theocharis et al, Deep Sea Res, 1993, and maybe others)
- L.288: The mergings of coastal eddies coming from the Nile mouth and the Levantine coast to larger offshore anticyclones was already discussed by Barboni et al (2021).
- L.334 and later: the 4 digits accuracy of ‘1,500 kg’ is not associated with any uncertainty. Scientific formulation ‘1.5 x10^3 kg’ is expected.
- L.393-394 (and more broadly Section 4.1) : Previous studies already further documented the formation, detachment and drift offshore. You should discuss further on this particular aspect, more clearly highlightening your contribution. Gertman et al. (2010) showed the trapping of a buoy in such coastal eddy exporting waters offshore. Efrati et al (2013) already estimated the width, depth and flux associated with similar anticyclonic coastal detachment.

- Section 4.1 or 4.2. At some point should be also discussed the fact that coastal mesoscale eddies are only anticyclones. Are cyclones also present ? What is their impact ?
- L.477-471: Efrati et al (2013) already suggested that these local detachments could sustain plankton niches.
- L.481-484: this accumulation of citations is not linked to your previous results. These studies are further not on the same region, then without explanation the comparison seems off-topic.