

Response to referee comments

We thank all three reviewers for their helpful comments and suggestions. We are now working on a revised version of the manuscript, addressing all the reviewers' comments and concerns.

Most importantly, two of the reviewers asked to better phrase the motivation of the study, and the insights, significance and implications of the results, also in comparison with previous studies.

We agree with the reviewers that these aspects of the manuscript can be improved, and we are paying special attention in our revision to these important comments.

We prefer to address these issues fully when we submit the final response along with the revised manuscript, after we have completed the revision, to make sure we give a comprehensive and satisfying response.

Related to the above, Reviewer #2 also seems to suggest that we may have missed a large body of literature on three topics:

1. PV streamers during AWB as precursors to cyclones, more generally than in the context of Mediterranean cyclones only.
2. Baroclinic cyclone life cycles
3. The modification of the jet pattern by rearrangement of flow anomalies in blocking events

For (1), while we have found some relevant studies in the context of Mediterranean, tropical and subtropical cyclones (e.g., C. Davis , 2010: Simulations of Subtropical Cyclones in a Baroclinic Channel Model", <https://doi.org/10.1175/2010JAS3411.1>), we are not sure if the reviewer referred to midlatitude cyclones more generally. Note that the recent review paper on Mediterranean cyclones that the reviewer suggested mostly addressed these "class" of cyclones in the context of Mediterranean cyclones. It could be very helpful to know which papers exactly the reviewer is referring to, also in regard to (2).

Similarly, for (3), we are searching the literature and found some relevant studies (e.g., Yamazaki, A. and H. Itoh, 2009: Selective absorption mechanism for the maintenance of blocking. *Geophys. Res. Lett.*, 36, L05803, doi:10.1029/2008GL036770), but not exactly what the reviewer seemed to suggest. Hence, it would be very helpful to get more specific references to the papers the reviewer was referring to.

We will submit our full response and revised manuscript soon and thank the reviewers again for their helpful comments.

Sincerely,
Talia Tamarin-Brodsky and Nili Harnik