

We thank the editor for the careful reading of the manuscript and for the constructive comments. Please note that the editor's comments are reported in **black text**, our answers in **red text**.

CO-EDITOR : Irina Rudeva

I appreciate the changes made to the manuscript and will ask the reviewers to further assess those changes.

Additionally, I would like to clarify the usage of the term 'cut-off lows'. E.g., line 145 in the version with tracked changes says: "clusters 6 and 9, often land based, are shallow summer lows (Sharav heat low and short-wave cut-off)". What do you mean by shallow cut-off lows? Are they confined to the upper troposphere? Based on Fig 3 Givon et al 2021, I agree that cluster 6 is a shallow (low-level) cyclone but, e.g., cluster 8 also shows a signature of a cut-off low; furthermore, RWB in clusters 2 and 5 suggests a formation cut-off low.

We thank the editor for their accurate review, and hope to clarify with the following.

The correct paper describing the clusters is Givon et al. 2024, available at this [link](#).

In line 145, we refer to shallow lows as to low-pressure systems which have a distinct footprint in the lower troposphere and a less distinct pattern in the upper levels (cf. mslp and PV patterns in Givon et al. 2024's Figure 3). To clarify in the text, we specify that « clusters 6 and 9, often land based and displaying a shallow low-level structure, are summer lows ».

Regarding cluster names, these were justified by checking PV cut-off and streamer masks (Appendix C in Givon et al. 2024) and other dynamical features such as cyclone mobility. The specific cyclone clusters displaying cut-off low signatures are discussed in the points below :

- Clusters 5 and 2. While it is true that anti-cyclonic wave breaking often terminates with cut-offs in various levels, these clusters are dominated by a PV streamer that is still connected to the main PV reservoir at the time of the cyclones' maximum intensity (see shading in Givon et al. 2024's Figure 3). In fact, these cyclones tend to peak during their wave breaking phase, before a possible formation of a cut-off.
- Cluster 8, similarly to clusters 2 and 5, shows a PV streamer that is connected with the main PV reservoir. Cyclonic wave breaking is also known to produce cut-off lows, but these tend to get refracted poleward and merge back with the PV reservoir.

To conclude, the cluster names chosen in Givon et al. 2024 are useful to relate to the cluster's dominant driving mechanism, yet do not exclude a-priori the formation of cut-off lows at different stages of the cyclones' development. Here we prefer to relate to the same names for consistency with the reference study.