

General comments:

The authors have made multiple revisions to the manuscript which have strengthened the quality of the analysis. I appreciate the authors’ detailed responses to my previous comments and questions. Although the manuscript has been significantly improved, I do have a few comments and questions that I would like the authors to address before the manuscript is acceptable for publication.

Scientific comments:

- 1) Line 136: Consider revising “RI rate” to more broadly state “TC intensification rate”
- 2) Lines 207–209: I don’t feel like this phrasing is a fair comparison to HAFS. HAFS is also publicly available and real-time graphics are available via NOAA.
- 3) Line 394: This claim is not consistent with the moisture (and ventilation) differences discussed later in Fig. 10.
- 4) Lines 413–414: The authors may wish to note that this topic (the role of humidity) will be explored later in the analysis.
- 5) Lines 523–531: Does this mean that the filtering is applied after the QG forcing term is computed? Wouldn’t it make more sense to smooth the TC vorticity field and then compute the forcing term? Or are the results quite similar?
- 6) Figure 8: Why is 500 hPa the focus here, when the previous figure examined vorticity advection at 300 hPa? Wouldn’t the trough be more prominent at 300 hPa and the TC circulation also weaker there, better illustrating the impact of trough forcing?
- 7) Lines 560–561: On a related note to the previous comment, I’m left wondering if the trough appears broader because the TC is also deeper in the P80 subset at this time?
- 8) Lines 620–621: What do the authors mean by a “more efficient upper-level outflow”?
- 9) Lines 626–627: I am confused how enhanced ascent weakens the winds aloft. Wouldn’t the TC vortex also become deeper (and winds increase)? Or do the authors mean the background environmental winds?
- 10) Lines 631–633: Previous work (e.g., Alland et al. 2021) argues that ventilation limits TC development by limiting the areal extent of upward vertical mass flux. While I agree that decreased ventilation in the P80 subset is favorable for RI, is it because there is a more “efficient coupling between the outflow and ambient flow” (which I do not fully understand what the authors mean by this) or perhaps, more simply, that less ventilation favors greater vertical mass flux in the TC inner core?
- 11) Figure 12: I think the addition of a schematic is helpful here. However, I recommend specifying in the figure caption what the colors/each arrow corresponds to in the figure caption. For example, what do the upward-sloped red arrows represent?
- 12) Lines 764–765: Allowing the convection or the vortex to remain vertically aligned?

13) Figure A2 caption: The authors may wish to explicitly specify the dates and time this period covered to aid the reader.

Typographical errors/suggestions:

- 1) Line 154: Revise “how important is” to “how important it is”
- 2) Line 155: Change “TC” to “TCs” (plural)
- 3) Line 186: This paragraph is quite long. Consider starting a new paragraph with the sentence that begins “While the underlying dynamics...”
- 4) Line 203 (and elsewhere): Be consistent with the “TC” acronym usage.