7) Understood. That said, I am still having trouble distinguishing between all of the red AC tracks.

My main point with Fig. 1 is to show the general locations of the ACs without having the reader need to know the exact details of each track. I have tested making each track a different color, but have found that the figure becomes a bit messy when doing this.

8) Seems like a potentially viable speculation. Add to the text?

16) I recommend that you think a little bit more about this issue from a diabolically driven ridge-building perspective.

For comments 8 and 16, I added a new paragraph in section 3b on L375–393 of manuscript v3. Regarding the possible role of latent heating and associated negative PV advection by the irrotational wind on upper-tropospheric ridge amplification, see the text on L375–385 of manuscript v3. Regarding the possible role of cyclonic wave breaking on the cyclonic loop of AC16, see the text on L385–393 of manuscript v3.

11) Have you considered the possible dynamical impact of a relatively low DT? If, say, the level of maximum ascent is situated between 750–700-hPa instead of between 600–550-hPa in a typical midlatitude cyclone, the partial omega/partial p could be strongly enhanced in the lower troposphere with resulting more rapid and vigorous lower level cyclonic vorticity growth? Just a thought.

I agree that given an expected lower DT in the Arctic compared to the midlatitudes, the level of maximum ascent may tend to be lower for ACs compared to midlatitude cyclones, such that the partial omega/partial p may be relatively enhanced in the lower-troposphere for ACs compared to midlatitude cyclones, which may enhance lower-tropospheric cyclonic vorticity growth for ACs. Since I feel this comparison between ACs and midlatitude cyclones is beyond the scope of the paper, and since this comparison has not been done, I prefer not to add this speculation to the paper.

14) What is the physical basis for this statement? "The lower tropopause over ACs and the axi-symmetric cold core structure of ACs may contribute to ACs having a longer lifetime after reaching peak intensity compared to North Atlantic extratropical cyclones.” I am confused about what you are trying to say here.

My thinking is that a lower tropopause over ACs in association with TPVs superposed with the ACs and an axi-symmetric structure may correspond to a more resilient tropospheric-deep circulation that helps ACs to last a relatively long time after reaching peak intensity. Something that I did not mention before is that there may tend to be weaker horizontal wind shear over the Arctic relative to the midlatitudes, such that ACs and associated TPVs may tend to experience less disruption due to horizontal wind shear compared to midlatitude cyclones, allowing ACs to tend to last longer after reaching peak intensity compared to midlatitude cyclones.

17) Interesting response. Consider adding a version of this text to the conclusions and suggestions for future research section?

I added text on L545–562 of manuscript v3.