

Second round review of: “Multi-scale observations of Hurricane Dennis (2005): The effects of hot towers on rapid intensification”

General:

The authors have addressed most of my concerns, but I still have one major problem with the paper, though I believe the problem can be addressed by changes in wording and tone.

Major comment:

The authors have gone out of their way to define the hot tower as the strongest of the strong convection in the TC, but the evidence is somewhat lacking that convection that meets the hot tower threshold in particular played a “pivotal” role in Dennis’s rapid intensification, as is claimed in the conclusion and elsewhere. In other words, there is no direct proof that it matters that convection is **that** strong. Certainly, these hot towers preceded Dennis’s rapid intensification, there is no debating that. The circumstantial evidence provided by other studies combined with the current observations is *suggestive* that the HTs had something to do with the intensification. However, the towers were accompanied by a large increase of convection in general, and this general increase in convection might have been of equal or greater importance in generating the warm core. My assertion is backed up by the studies I have already cited and ongoing research that **strongly** suggests that HTs have very little to do with rapid intensification in general (Ed Zipser, personal communication). I can only recommend this study for publication after the authors back off on the claims of the *degree* of the role that HTs played.

Minor comments:

- 1) verb tense agreement – you should skim the paper to make sure this is taken care of. A few places I noticed problems are:
 - a. in the second paragraph of section 3 (p 12-13) – ie, “landfall of the system *occurs*”, “the storm *begins*”
 - b. p 26: “*is* active from the time Dennis emerged...”
- 2) p 17, first sentence: “the eastern eyewall is sloped indicated most clearly by”... a few words seem to be missing here
- 3) Figs. 8 and 13 – what’s with the white fill in the arrowheads? That should be changed because it makes your color-filled data look nosy and the arrows somewhat difficult to interpret in places. Also, try using a solid fill for “EYE”.
- 4) p 20 – it appears you call on Fig. 14 before Fig. 13 in the text