This is the review of the paper entitled "*The impact of oceanic heat transport on the atmospheric circulation*" by Knietzsch et al. This paper studies what is the impact of an increased OHC to the atmospheric circulation and heat transport, and analyzes the dynamical and thermodynamical responses in the atmosphere. For this they use a simplified aquaplanet/slab ocean model with prescribed ocean heat content.

This paper is well written, and explores in depth the momentum and heat budgets in the atmosphere.

My opinion is that this paper should be published after minor revisions. This paper has improved considerably from the initial submission, and I believe the authors addressed the main points raised by the reviewers in the first draft of the manuscript.

My major point would be for the authors to explain and give some more physical insights about the results found in this paper. I suggest some in the minor comments below. Specially, approximately in the lines 235 to 260 there is not too much physical explanation on the underlying processes. In my opinion this would benefit the paper considerably.

Here are some minor comments:

l.215 - by lowest and highest temperatures you mean equator and 90N? Please specify.

l.236 - Took me some time to figure out what I had to observe in Figure 4. The authors should clarify that the small differences in the total heat transport profiles indicate atmospheric compensation.

l.238 - What is the zonally averaged atmospheric meridional transport? Isn't it just the meridional heat transport or is the same as the zonally symmetric part?

l.247 - Please explain why latent heat explains the eddy part.

l.248 - Extra "f" in the sentence.

l.250 - Why the word "however" in this sentence?

l.254 - I do not understand the reason why geostrophic eddies do not transport potential energy. Please clarify.

l.266 - How does it compare to observations, at least broadly? Since the maximum OHT was selected to be close to the observed, the location and strength of the cells should be similar given similar maximum OHT strength.

l.267 - Please clarify that this decrease of 85% is for an increase of 4PW (I guess), or the slope of cell strength?

l.269 - Is this a shift or expansion poleward? Please clarify this and how this parameter is estimated (core or boundary of cell?).

l.272 - Why is it a thermally indirect cell? Is it friction dominated?

l.277 - Any idea on why the magnitudes of the reconstructed cells are underestimated? Is this because the forcings are not mutually independent?

l.285 - Why friction is more important at lower levels? Is this because of the friction is strong within the Ekman layer close to the surface?

l.333 - heating is correlated to temperature "differences".

l.589 - This is an important point about the potential role of ocean dynamics to the negative feedback explained in the paper. Apart from the MOC in the north Atlantic, there are also responses due to the equatorial thermocline. Previous works show that in warmer climates there is a response similar to an El Nino in the Pacific (e.g., Some of Alexey Fedorov's papers). Slab ocean models do not capture the same magnitude of signal in the tropics. Additional words have to be said about the potential role of ocean dynamics in the model.

Figure 8 - there are two letter (e) panels.

References: There are several references missing in the main text.