Review of **Natural Tropical Oscillations phase impact on stationary and westward travelling planetary waves** by Didenko et al.

This paper presents a thorough investigation of how combinations of ENSO and QBO phases impact planetary waves (both stationary and traveling). They use an idealized middle and upper atmosphere model to investigate and present detailed results of implications on planetary waves 1 and 2, and westward traveling waves of various periods. I found this to be an excellent study that is well motivated, well structured, and well presented. I have a few minor comments that I recommend the authors consider before publication.

General Comments:

1. Introduction: I really enjoyed reading this introduction, it is one of the best I've reviewed in some time. It was informative, well-structured, and comprehensive, and did a good job of motivating the work. Excellent.
2. Results: Your results section presents a lot of information in a very concise manner. I would like a little bit more discussion of the implications of these results. For instance, you motivated the work very well by discussing the relationship of these waves with the polar vortex and SSWs. Based on these results, what can you say regarding the potential impacts of these oscillations on something like the polar vortex?

Specific Comments:

3. Line 56: I would add the formation of cold waves across other regions in addition to east Asia, like North America for instance
4. Line 93: Mention approximate heights of the F2 layer / top of the dataset. Additionally, more details about the vertical and horizontal resolutions of the model would be nice
5. Line 103 – 104: consonant → consistent
6. Line 106: Friedrich et al. (1993); Wallace et al. (1993) → Friedrich et al. (1993) and Wallace et al. (1993)
7. Line 108: "In this work one of the latest versions of the MUAM was used", which version exactly?
8. Line 133: Important advantage → An important advantage