Review for revised manuscript of " Retrieval simulations of a spaceborne differential absorption radar near the 380 GHz water vapor line" by Millán et al.

This paper evaluates the potential of using spaceborne differential absorption radar (DAR) operating near the 380 GHz water vapor absorption line to detect water vapor in the mid- and upper atmosphere, especially inside deep convective systems. The authors identify optimal radar frequency triplets that minimize precision errors and biases using large-eddy simulations (LES) and end-to-end retrieval experiments. The manuscript is well-structured and addresses a significant challenge in atmospheric remote sensing. The methodology is robust, combining LES-driven simulations with retrieval algorithms to assess DAR performance. However, there are some questions and comments that may need to be further considered and major revision is necessary.

General Comments:

Abstract: The vertical resolution in the manuscript is inconsistent with the vertical resolution in the table 2. What is the reason for this difference? It should be supplemented in the manuscript.

Introduction: Please provide a clearer explanation in the introduction section of the advantages of using the 380 GHz water vapor absorption line over the existing 183 GHz absorption line for retrieval, emphasizing the importance of this absorption line.

Table 1: The radar forward model description references Table 1, but the function expressions of the assumed particle size distribution are not explicitly listed in the table. Please add it in the revised manuscript.

Specific Comments:

Line 189: Correct "radiooccultation" to "radio occultation".

Lines 216–220: The precision improvement via along-track averaging (Figure 7) is compelling, but the discussion lacks a quantitative comparison to existing instruments. Adding a paragraph contrasting DAR's precision after averaging with other methods would emphasize its novelty.

Line 258: Remove duplicate "the" in "the the types".

Line 285: The statement "biases are generally much smaller than precision errors" conflicts with Figure 6b, where biases for some triplets exceed 800%. Please check it.