

We thank the reviewer for the careful reading of the revised manuscript and for the constructive comments. Our responses to the remaining comments are provided below.

1. The sentence in the abstract has been revised as follows:

For the GPM DPR, reflectivities simulated using the Thompson PSD showed closer agreement with the observations than those using the Abel PSD; this agreement should be interpreted in the context of the limited independence between the observations and the retrievals used as input to the CRTM, which themselves rely on PSD-related assumptions.

2. The sentence in the conclusions has been clarified to emphasize the dependence of the retrievals on PSD-related assumptions.

Similarly, GPM DPR simulations were shown to be highly sensitive to the choice of PSD, with the Thompson PSD \citep{thompson2004,thompson_explicit_2008} producing reflectivity magnitudes more consistent with observations than the Abel PSD \citep{abel2012}. However, this apparent consistency should be interpreted cautiously, since the retrievals used as input to the CRTM are not fully independent of the observations and themselves rely on underlying PSD assumptions. As a result, these findings may reflect greater consistency with the assumptions employed during the retrieval process rather than definitive evidence of deficiencies in any particular PSD, which would require independent evaluation using, for instance, in situ measurements.