

Second review of “Technical note: Bimodal Parameterizations of in situ Ice Cloud Particle Size Distributions”, by Irene Garcia and coauthors, submitted to EGUSphere.

Overall, I like your responses to my first review. I have several additional comments, mostly minor, that I would like the authors to consider in their revision of this revised article.

1. As I noted in my first review, are the actual size distributions bimodal? Your Fig. 2 shows normalized PSDs, which assumes the Kramer et al. mass dimensional relationship based on Mitchell. Could you put in supplemental information showing PSDs from the different projects. Could the bimodality be due to shattering? Alternatively, the sample volume of the probes for the small particles is very small compared to the larger sizes, thereby making their concentration artificially large.
2. Eq. 2. The problem I see is that deriving  $D_{eq}$  assumes a mass dimensional relationship. If  $D$  is used rather than  $D_{eq}$ , then the PSD relationships are independent of the assumed mass dimensional relationship and are based on the measurements themselves. Could you comment on this.
3. Line 140. You mean  $D_{eq}$  or  $D$ , being the physical diameter.
4. Often when cloud tops are close to or somewhat below 255K, the upper parts of the cloud are liquid or mixed-phase. I think the cutoff temperature should be perhaps 265K to completely rule out liquid water. See the article: *A global view of midlevel liquid-layer topped stratiform cloud distribution and phase partition from CALIPSO and CloudSat measurement*
5. Legend, Figure 5 d. "parameterization" fix spelling
6. 232. "crystals" fix spelling
7. 250. Underestimates
8. 282. Remove crystals. The larger particles might be aggregates, which wouldn't be ice crystals
9. 284. datasets