The authors well revised the manuscript taking into account all review's comments. I have minor comments below.

1. Please provide brief case descriptions for: 1) the two cases in section 5.1 and section 5.2 and 2) each case in Table 2. The case description would be important to understand which types of clouds the technique can be applied to and which types of clouds are suitable for the technique. For example, what MCS type did each case represent; continental convective system or oceanic convective system? Are they multi cell convective system, leading stratiform type, or parallel stratiform type? What was the stage of these systems (e.g., developing/mature/dissipating)? Some readers may want to use the coefficients estimated in this study, because there are many cases that only radar data are available. For many observations, it is very difficult to obtain in-situ IWC and particle image data from aircraft rather than radar data. In that case, case descriptions are very useful to know which types of clouds are suitable for the technique and which coefficient values can be used.

Response:

We thank the reviewer for this suggestion. We have added information about the storm system as much as we know to sections 3 (L 4-8, P5), section 5.1 (L 18-19, P8) and 5.2 (L 9-10, P 14) in the revised manuscript. We've also added MCS type and size to each selected case in Table 2.

2. Were there differences in estimated coefficients or error values between convective regions and stratiform regions?

Response:

From our observation, IWC in stratiform regions are generally much lower than that in convective regions (about less than 0.5 g/m3 vs. 1-3 g/m3). Kdp shows a similar behavior (less than 0.4 deg/km vs. 1-3 deg/km). Hence, applying the linear regression to separate convective and stratiform regions will result different coefficients. The absolute values of errors are lower in the stratiform regions (due to smaller IWC) but the relative errors are in similar ranges.

3. I am not sure why the flow chart of Kdp estimation is more important than a flow chart of the IWC retrieval presented in this study (to me, a flow chart of the IWC retrieval is more useful). Can the Kdp estimation settings impact the IWC retrieval or error values? Can the Kdp estimation be a source of uncertainty in the coefficient estimates and IWC retrieval? When using different filtering size, can these values change?

Response:

The accuracy of Kdp estimate is very important in this work or, in general, any quantitative precipitation estimation which can be found in literature. Parameters used in Kdp estimation algorithm are normally tuned to work best for a given system. In our algorithm, Kpd estimates are not critically sensitive to the range filter size but large filter size will remove small scale feature in the Kdp field.

As suggested, we have added a flow chat of the IWC retrieval in section 2.2 of the revised manuscript.

4. Figures 6 and 12: Please add bias and RMS values for the Z-only estimate (green dashed line) for reference.

Response:

Added bias and rms values for IWC(Z) estimates as suggested.

5. P. 21, line 21: I think that “narrower” is not a good word for Fig. 14. Because the y axis is not the same scale in the two plots, it is very difficult to compare the variability. Can you use a different word or a different parameter comparing the two plots (e.g. normalized value); for example, standard deviation divided by maximum value (or divided by range of IWC ((1-Zdr^-1)*IWC))?

Response:

We completely agree with the referee. We have modified the Fig. 14 to include linear fits with coefficients computed from all data point (Table 2). Also, the y-axis are scaled to the maximum values of IWC and $(1 - Z_{DR}^{-1})IWC$ for comparison. We found the legend in the figure was messed up and it is now fixed. The text in the manuscript has been also modified correspondingly to reflect the change.

In addition to the changes listed above, we’ve combined PIP images (Fig. 11) and 2DS images (Fig. 12) into a single figure (Fig. 11 in the revision) to improve the presentation. Last, major changes in this revision are highlighted in yellow.