

Author Response: Changes to the Manuscript

Responses to Reviewer #1:

1. In the new figures 12, 16, 20, note more clearly which variable is derived from MWR and from PIP, either in the caption or in the subfigure titles.

Thank you for this comment, the captions have been updated. The new captions are as follows:

Figure 12: Additional observations of precipitable water and liquid water content from the MWR and hydrometeor size distribution from the PIP on 15 April 2020 (a) precipitable water content (b) liquid water content (c) distribution of hydrometeor density vs. diameter.

Figure 16: Additional observations of precipitable water and liquid water content from the MWR and hydrometeor size distribution from the PIP on 3 September 2020 (a) precipitable water content (b) liquid water content (c) distribution of hydrometeor density vs. diameter. Note the different y-axis scale in panel (c) compared to Fig. 12.

Figure 20: Additional observations of precipitable water and liquid water content from the MWR and hydrometeor size distribution from the PIP on 4 January 2022 (a) precipitable water content (b) liquid water content (c) distribution of hydrometeor density vs. diameter.

2. New Fig 5: title of subfigure f) should be precipitation rate

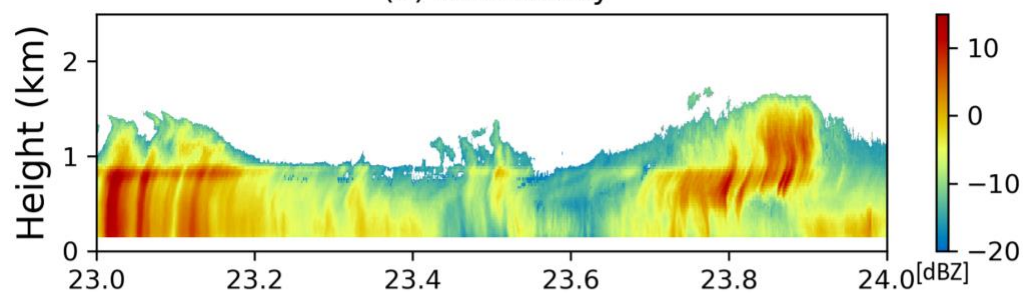
Thank you for this correction, the plot title has been adjusted in the revision.

3. New Fig R3,4,5: Please check the linear depolarization ratio subfigures. Commonly, LDR is filtered with signal-to-noise-ratios (SNR) of 5-10 dB. Was SNR-filtering applied here?

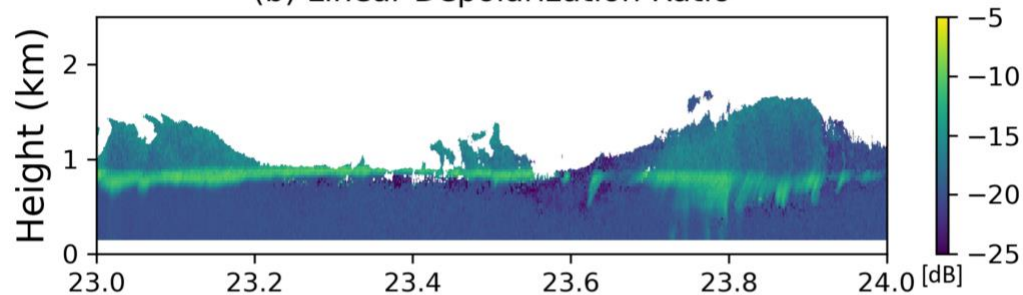
Thank you for this comment; for the purpose of identifying events with significant LDR was subject to an SNR constraint, and so a mask of $SNR > 5$ dB is now applied to the plotted variables in those figures. New figures now look as in below:

3 September 2020

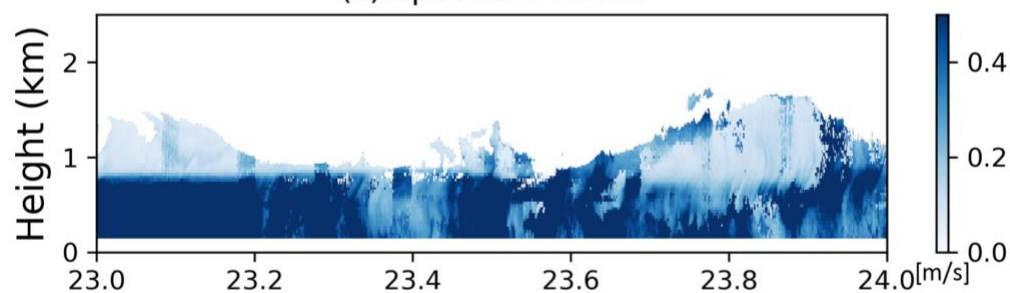
(a) Reflectivity



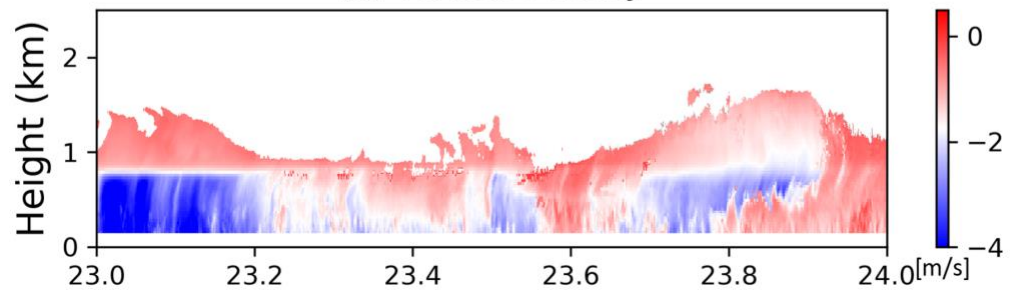
(b) Linear Depolarization Ratio



(c) Spectrum Width



(d) Vertical Velocity



Time (UTC)

Responses to Reviewer #2:

The authors have done a nice job responding to previous reviewer comments. The revised analyses and discussion have certainly improved the paper. I have identified a handful of required technical edits, outlined below.

Line 30: “with” should be “when”

Line 114: “available routinely” would be better as “routinely available”

Line 143: November should also be mentioned – it is higher than May, which is mentioned.

Line 165: “ranging from” would be better as “spanning”

Line 209: delete “very”

Line 224: “potential” should be “potentially”

Line 522: “expenses of” should be “expense for”

Thank you for these corrections, all have been made.

Several figures remain blurry, especially Figure 19. I am not sure the reason, but it should be resolved prior to print.

Thank you for pointing this out, to address this the paper has been reformatted into LaTeX to avoid Microsoft Word scaling the original image files. Additionally they have be reproduced with DPI increased to 350.