The authors study 2 clouds within a thunderstorm case, using a 35 GHz cloud radar with 45 degree elevation. They use spectral polarimetry to study particle properties and other processes. Valuable improvements have been made to the original manuscript.

I recommend the following **minor corrections** before publication.

I'm not sure if you mention the radar you are using, is it the CLARA radar?

Abstract line 2: change "thunderstorm clouds" to "them"

Sub-sections: I appreciate you following my suggestion to re-structure, however I believe the AMT guidelines state that three sectioning levels are allowed, i.e. 5, 5.1,5.1.1, thus the new sectioning you have chosen might not be allowed.

Line 170: link to the relevant figures (Figs. 3 and 4?)

Line 251: Can you comment on the accuracy of the vertical air velocity estimation?

Line 394: "The centre of the cloud that contained lightning activities was more than 10 km away from the radar, thus the radar could only see the edge of the cloud."
Could you elaborate on this slightly, e.g. What is the maximum distance that can be seen? Are you saying it's 10km, or is it the value of 14969.9m given in Table 1?

Line 398: Also provide the time here (I think you include it later - 16:20:11 to 16:21:37 UTC?)

Line 403: "mainly shows downdrafts from 16:15-16:18"
I think you mean that within the time period examined, these are the times when downdrafts occur. However, saying the cloud "mainly shows downdrafts" could be misinterpreted as you saying there are mainly downdrafts, as opposed to updrafts. At 16:15-16:18 there are updrafts and downdrafts (at different heights)

Line 404: In the second paragraph of section 5.1.1, there is a discussion about updrafts and downdrafts on the edge of the thunderstorm compared to the core, saying that you would expect updrafts in the core. You say that at 16:18-16:22 the core is in sight, while before and after that period (at 16:15-16:18 and after 16:22) the radar sees the edge of the thunderstorm. In Fig A1 it is obvious that at 16:15-16:18 the radar is looking at edge, but is 16:22 – 16:25 not looking at the core?

Line 409: The first two panels are before the negative KDP is observed, right? If so, it would be helpful to the reader to mention that explicitly here.

Fig 12 and Fig 16 seem like they could be combined somehow as they show overlapping time periods. (Though the times chosen in both figures seem a bit random, the time difference between consecutive panels is not the same)

Line 423: In the 4th paragraph of section 5.1.1, you question whether the vertical alignment of particles (as seen by the negative sZDR values in the right part of spectrum at 16:21:05) is associated with cloud electrification before lightning. This is done by comparing the times and distances when negative KDP is observed (Fig 11b) to the times and distances of the lightning strikes in Fig B2.
I find some of the text confusing here. You say "negative KDP appears at a distance of 7600 m to 9300 m away from the radar", and "one would expect to observe negative KDP also for ranges beyond 9000 m". Do you mean *height* of 7600 m to 9300 m rather than distance from the radar? The range isn't shown on the KDP plot, right?

Line 428: The Wang et al 2019 paper you have cited doesn't have the vertical wind term you have included in Equation 12

Line. 432: For *a* radar

Line 434: "Vt increases with particle size" – this statement is only broadly true

Line 438: How accurate is the ECMWF forecast of vertical wind shear, and how do you think wind shear over Cabauw would compare to the actual values within the thunderstorm?

Line 440: I'm not sure what you mean here, it sounds like you are saying that large ice chains are more likely than other particles to be aligned by an electric field? Please consider rephrasing this paragraph.

Line 460: Have you already discussed somewhere the possibility that lightning may not be measured by the sensor? How likely it that?

Line 464: You could highlight here that the mode is particularly obvious in the 4th panel otherwise some readers may immediately be drawn to the 2 peaks between 6000-7000m that can be seen in the first panel.

Line 465: think it's worth pointing out here that the temperature is measured vertically and not within the cloud.

Line 486: *on* the line of sight -> *in* the line of sight

Line 488: why is sZDR more negative at the edges and closer to 0 for intermediate velocities?

Line 497: Don't you say elsewhere that *large* SLdr and small rho hv could be caused by low SNR?

Line 501: 5.5 km is a large distance - You say in the intro that the magnitude of the electric field decreases to 3 kV m−1 within 5 km away from the cloud edge, and you only

discuss alignment potentially occurring for fields of 10 kV m-1 and larger. So from those numbers it seems unlikely that there would be alignment here.

Line 510: other -> a different

Line 512: don't separate these paragraphs

Line 515/516: upper part of the spectrum -> I think you mean the spectrogram?

Line 517: I think you are saying that at 17:19:09 there could still be the underlying vertical particles that would cause negative sZDR, but there are also other particles introduced into the same velocity bin which are not aligned, and these dominate the signal.
However, if the particles are in the same velocity bin wouldn't they be aligned too?

Line 519: is SLdr shown here?

Line 523: would be good to be more specific with your summary here, e.g. did the alignment occur before/during/after the lightning?

Line 526: spectrum -> spectrogram or spectra

Line 532: lightnings -> lightning strikes

Line 538: enhanced slanted linear depolarisation ratio and reduced copolar correlation not due to low SNR?

Line 539, 595, and Figs 26 and 27 captions: spectogram -> spectrogram

Line 550: ~~An~~ Evidence of differential attenuation …

Line 551: I haven't read that paper in great detail, but noticed a reference to mean axial ratios of 0.75-0.9 for sizes bigger than 1mm. I guess your definition of axial ratio is just the inverse of theirs? I think you define axis ratio but not axial ratio in your manuscript.

Fig. 25: I like the improvements made to this figure.
Consider labelling the panels left to right instead of top to bottom, i.e. a, b, c in the top row rather than a, d, g. Also, you label some y-axes but not others, please label all y-axes. You could also consider flipping the x-axes on panels g, h, i, which would make it easier to compare to the simulations.

Line 561: In this paragraph please clarify which panels you are referring to, e.g. differential reflectivity of the simulated conical graupel is mostly negative (Fig. 25b?). When you say "delta_co reaches a local maximum and decreases slightly before increasing again. ZDR increases and continues to oscillate." – which panels are you looking at here? Differential backscatter phase (delta_co) is plotted in panel c, but panels f and i show the differential phase shift (Phi_DP), is that right? The behaviour you

describe is not obvious in panel c, I think you have changed the axis limits since the last version so maybe that's why.

Line 561: earlier -> at smaller sizes?

Line 570: suggests -> highlights?

Line 573: could this difference be due to air motion?

Line 585: data *from* Gatidis et al

Line 590: Is this differential attenuation (in which case change dB -> dB/km)? It might be clearer to integrate it and give an estimated value of two-way path integrated attenuation in dB.

Line 592: Could you expand on this slightly please? What distance is the storm from the radar?

Line 595: Might be worth mentioning that in the Fig 24 figure caption (vertical velocity rather than Doppler velocity)

Line 628: is shown -> are shown

Line 630: At 17:22:57 you hypothesize that there could be chains at 10003m. This is because the entire ZDR spectrum is positive with values of about 0.2-0.6 dB. You also say that since there is a low copolar correlation coefficient, there could be a mixture of small ice and chains. Can you comment on why chains are the likely particles here rather than having for example plates or columns with varying aspect ratios?