Atmospheric
Measurement
Techniques
Open Access

Discussions

EGU

Interactive comment on "Unraveling hydrometeor mixtures in polarimetric radar measurements" *by* Nikola Besic et al.

Anonymous Referee #2

Received and published: 19 April 2018

The paper discusses the issue of hydrometeor mixtures in the Dual-pol measurements using a statistical approach. The study is completely, if I may say that, "legitimate". Indeed, the hydrometeor classification looks for the dominant or the highest probable one and that it. The mixing in the volume radar is very important due to the geometry of measurement and the volume size and by consequence, it leads to a lot of approximation and errors especially in quantitative measurement. But for sure, the mixing remains completely normal and important as physical phenomena. It is really difficult to follow; sometimes there is a kind of displacement in conversation to other subjects which are related but does not give any boost to the paper. I was excited to see the title, but at the end, I am somehow disappointed. The statistical approach is good but it could be complemented by some changing in parametrization in the scan. What I

mean is, Authors can start for example with 2 degrees of resolution in the Azimuth angle then decrease it until the minimum possible value in the scan. Then the statistic will be very helpful. The same thing with the RHI from a large resolution to a smaller one. The first approach (the bin based one) looks better than the second one is much more difficult to understand it, I invite the author to add more fluidity and clearance to this part.

But in general, the paper follows the series of one of the main topic of the LHTE and Meteo Swiss. Elegant work, the validation could be better, with larger figures (I used 400% zooming to see something .. impossible with a printed version) and as I mentioned before, more fluidity is needed and maybe playing with the Azimuth and elevation resolutions.