

Interactive comment on “On the importance of small ice crystals in tropical anvil cirrus” by E. J. Jensen et al.

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This paper provides a very comprehensive analysis of ice shattering and its potential impact on the interpretation of past measurements of small crystal concentrations.

I have only a few technical comments to improve the presentation.

P5325, l25 : “discussed here than the midlatitude cirrus analyzed in Field et al.” Could be replaced by : “discussed here than in the midlatitude cirrus analyzed in Field et al.”

p5327, l12: typo: “should” twice

p5327, l19 to 26: this paragraph replicates the previous discussion about why it is important to improve ice measurements. It could be simply removed.

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P5328, l16: typo in “demonstrated” (n missing)

P5330, l14: I don’t understand the sentence: “that tests for image roundness are excluding when processing ice data” could be rephrased differently

p5330, l26: Would be could to provide a very short description of the probe mounting on the DC-8 for comparison with what is said above about the WB-57.

P5332, l2; “would be strewn out” is not clear for non native English speakers. “become spatially separated in the sheared flow under the wing” as in the summary and discussion is more understandable

p5336, l11: I would repeat here the condition, because “same as” is not clear: 2D-S concentration (o is missing) $<50\mu\text{m}$ to remain within 0.5 and 1.5 times etc.”

p5341, 23: I don’t think it is necessary to add “hours” when writing “14.4 UT time period”

Fig. 16: Is it possible to add the flight track superimposed on the satellite image?

Fig. 17: Would be better to indicate what is the sampling frequency of these measurements because it affects the frequency distribution. I assume 1Hz??

Finally, the authors could indicate in the summary and conclusions their views about ice splintering. Does it has to be revised significantly because of shattering or is it a different issue ?

Best regards Jean-Louis

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