

Dear ACP Editorial and Production Team

Below is a short list of the final improvements we included, before uploading the final files (text and figure files).

The paper should now be (again) a BACCHUS Special Issue Contribution

We submitted the paper to ACP as BACCHUS special issue contribution (end of March 2019). But no BACCHUS editor could be found within six weeks (until 5 May 2019). So, we saw no alternative..., and withdrew the manuscript. We re-submitted the paper at the same day (in May 2019) as a regular paper so that non-BACCHUS editors could take it. And that worked. Now the paper is accepted and recommended to be even a highlight paper.

Back to BACCHUS special issue: Because the article is one of the main papers with key BACCHUS results, it should be a BACCHUS Special Issue paper.

We inserted already the special issue statement... in the uploaded manuscript.

Final improvements (as suggested by the editor)

Mike Fromm's message to the authors:

Ansmann et al.'s responses to my review were totally satisfactory, with one exception. They refer to the Dust Infused Baroclinic Storm (DIBS) as a mesoscale convective complex (MCS). There is no basis that given in the DIBS papers they cite. The DIBS is a synoptic-scale dynamics driven storm, not a complex of thunderstorms. I would hope that Ansmann et al. will either remove the MCS references, or make their own argument for it.

We agree and changed accordingly!

Reviewer #2

The authors have satisfactorily addressed all my concerns and the paper is now almost ready for publication in ACP in my view. Some minor improvements are suggested below.

Page 4, lines 8-10: This could reduce cirrus cloud lifetimes by changing the ice nucleation mechanism from homo- to heterogeneous; see, for example, Storelvmo et al. (2014, Phil. Trans. Royal Met. Soc.) and Gruber et al. (2019, JGR).

Page 22, line 22: prpfilig => profiling?

Page 23, line 9: Two typos here.

We removed the typos and mentioned the statement (reduced life cycle and give the suggested references) in the introduction (page 4).