

Interactive comment on “3-D polarised simulations of space-borne passive mm/sub-mm midlatitude cirrus observations: a case study” by C. P. Davis et al.

C. P. Davis et al.

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General comments:

We feel that the suggested change to the title and the abstract would over-play the generality of the results, which were obtained from only a single 3D scenario generated from a single cloud episode at Chilbolton. A restatement of the purpose and scope of this paper, and the plan for further work is given in response to reviewer #2.

Specific comments:

Almost all of the specific and technical comments will be addressed in the revised article. In particular an improved description of the IPA calculation will be given, possibly

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with the help of a simple diagram. The reviewer raises an important point regarding the choice of the MH97 particle size distribution. This parametrization was chosen out of convenience (its use of mass equivalent spheres, and IWC - T dependence) It is also the parametrization used for all operational EOS-MLS retrievals. Hindsight suggests a different size distribution could have been chosen, however, we feel that this issue is not critical to the results of this work. On page 14 we chose a 3rd degree polynomial because it doesn't appear that a 2nd degree polynomial could adequately model the optical path - dl relationship.

Interactive comment on Atmos. Chem. Phys. Discuss., 6, 12701, 2006.

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