

Interactive comment on “Deposition and immersion mode nucleation of ice by three distinct samples of volcanic ash using Raman spectroscopy” by G. P. Schill et al.

Z. A. Kanji (Referee)

zamin.kanji@env.ethz.ch

Received and published: 17 March 2015

This manuscript discusses the deposition and immersion mode ice nucleation behaviour of three volcanic ash samples as well as Kaolinite (KGa-1b) and Na/Ca Feldspar as references. The data presented is of timely interest to the readers of ACP, in particular the ice nucleation community. The methods used are sound and have been validated before in previous publications. The major conclusion is that not all volcanic ash samples have the same ice nucleation activity in immersion mode. In addition, Na/Ca Feldspar content was not found to be a good predictor of ice nucleation efficiency, rather it is proposed that the Silica (quartz) content would better explain the

C853

ice nucleation ranking behaviour of the ash samples in immersion freezing.

The paper is written well and limitations are also discussed. I have suggested a few minor revisions, additions and have a few questions, all indicated directly in the manuscript. I recommend the paper to be published after the minor comments are addressed.

Please also note the supplement to this comment:

<http://www.atmos-chem-phys-discuss.net/15/C853/2015/acpd-15-C853-2015-supplement.pdf>

Interactive comment on Atmos. Chem. Phys. Discuss., 15, 1385, 2015.