

***Interactive comment on “***

**Characterization of a volcanic ash episode in southern Finland caused by the Grimsvötn eruption in Iceland in May 2011” by V.-M. Kerminen et al.**

**Anonymous Referee #2**

Received and published: 25 October 2011

This paper presents the aerosol characterization during a volcanic ash episode in southern Finland caused by the Grimsvötn eruption in Iceland on May 2011. The authors assess the physical and chemical properties of volcanic aerosol particles after being entrained into the surface air as well as how these particles could be separated from other natural and anthropogenic aerosol particles present in the air masses measured. In addition, the authors discuss the compatibility of their observations both with

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satellite measurements and dispersion model simulations. Even if the methodology used in this study is well assessed, the information presented is very important for the scientific community that carries out research studies on the characterization and dispersion of volcanic ash. Moreover, the assumptions and results are clearly presented and overall the paper is well organized and written. In my opinion, it can be published in ACP journal. I have only a few minor comments:

Page 24936, line16: Please provide the acronym of SMEAR.

Page 24941, lines14-15: Please provide more detailed information on the back-trajectory calculation (e.g., arrival time, arrival levels, how long have the back-trajectories been extended?).

Page 24942, lines 15-16: The authors write “The PM1 mass concentration did not show any noticeable increase during the episode”. Why? Could the authors give an explanation of what they have found?

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Interactive comment on Atmos. Chem. Phys. Discuss., 11, 24933, 2011.

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