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***Interactive comment on* “On the abundance and source contributions of dicarboxylic acids in size-resolved aerosol particles at continental sites in Central Europe” by D. van Pinxteren et al.**

Anonymous Referee #1

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Review of “On the abundance and source contributions of dicarboxylic acids in size-resolved aerosol particles at continental sites in Central Europe” by van Pinxteren et al.

This study reports on size-resolved aerosol composition data collected in Germany with a focus on dicarboxylic acids, which represent an important class of organic species. Analysis of the data includes PCA to help with source apportionment. Back-trajectory data are also used. The topic of this work is of interest to this journal. While the methods are not novel, the results are of importance to help with process-level understanding of the formation mechanisms of organic acids. The key conclusions reached

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about organic acids include the following: (i) a key source is photochemical formation in polluted air masses likely occurring in the gas phase on short time scales; and (ii) a key source includes secondary reactions likely occurring in the aqueous phase on longer time scales. The results support the conclusions. The methods used are described well and proper credit is given to related work. The title is appropriate. The paper is written well and the tables and figures are good. I recommend publication of the work.

Interactive comment on Atmos. Chem. Phys. Discuss., 13, 32093, 2013.

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13, C9843–C9844, 2013

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