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Comment

## ***Interactive comment on “Amino acids in Arctic aerosols” by E. Scalabrin et al.***

**E. Scalabrin et al.**

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We would like to thank the referee for the helpful comments. All the technical corrections have been checked and the text has been modified. Our responses to the specific comments are given below. 1) The discussion of the intrusion of volcanic emissions is based only on back-trajectories and no effective evidence of a deposition (at ground level) is reported. I agree that there is a reasonable probability to have a contribution from this eruption. However, as the authors pointed out in their comments, there are other works presented at conferences and workshops that independently demonstrate this. Therefore I believe that it would be better to include some of these other works in the bibliographic references because this will give more support and strength to the conclusion relative to the contribution of volcanic emission to the observed concentration of amino acids.

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Response: We add in the references the other study about the volcanic ash in the Arctic, as you recommend us.

2) The LOD in table 1 are expressed in ng/m<sup>3</sup> but the other concentrations in the paper are reported in fmol/m<sup>3</sup>. It would be better to use the same measurement units also for the LOD in order to facilitate the comparison with the other table and to see effectively how much the concentrations are larger than the LOD. I understand that the sampling volume are different in the different samples, however, it could be used the average sampled volume or the minimum sampled volume (in this case it would be a precautionary LOD).

Response: We insert in the table the LOD values in terms of fmol/m<sup>3</sup> and we add in the text at page 17373, line 3: "The LOD values in terms of fmolm<sup>-3</sup> were calculated using the averaged sampling volume, 11982 m<sup>3</sup> and 11613 m<sup>3</sup> for slotted and background filters respectively".

3) Page 17379, line 14: This reviewer does not understand what the authors means for "sample flux" in the sentence "In addition, the sample flux of Leu and Ile...". It would be probably better to modify this sentence.

Response: We replaced "sample flux" with "concentrations"

Please also note the supplement to this comment:

<http://www.atmos-chem-phys-discuss.net/12/C8395/2012/acpd-12-C8395-2012-supplement.pdf>

Interactive comment on Atmos. Chem. Phys. Discuss., 12, 17367, 2012.

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