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Comment

Interactive comment on “Temperature influence on the natural aerosol budget over boreal forests” by L. Liao et al.

M. Kaasik (Referee)

marko.kaasik@ut.ee

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The air mass backward tracing is a classical approach, but now gradually becoming outdated due to advancing advection-diffusion modelling techniques (direct and reverse/adjoint) that provides much more detail results. I consider the methodology of this paper still acceptable, but I encourage the authors to switch to new methods in their further research!

Some specific comments:

1. Page 33316 line 3: how the temperature at trajectory height was estimated – did the HYSPLIT model give it? I suggest to explain that in the text there. One should expect large errors in surface temperature estimations for strong surface-based inversion

C11196

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conditions that are rather frequent in Northern Europe.

2. Page 33316 line 18: travelling height of the parcel is continuously below the mixing height - what this assumption is based on? Please explain in text!
3. Page 33323 line 19: how the dry deposition loss of particles is calculated? Diffusive deposition (resistance scheme)? Gravitational sedimentation is rather negligible for particles smaller than 0.5 micrometres. Please explain in the text!

Interactive comment on *Atmos. Chem. Phys. Discuss.*, 13, 33311, 2013.

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