

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

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The air mass backward tracing is a classical approach, but now gradually becoming outdated due to advancing advection-diffusion modelling techniques (direct and reverse/adjoint) that provides much more detail results.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

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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!

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

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