

Interactive comment on “Development of a regional-scale pollen emission and transport modeling framework for investigating the impact of climate change on allergic airway disease” by R. Zhang et al.

M. Sofiev

mikhail.sofiev@fmi.fi

Received and published: 11 June 2013

Dear colleagues,

I have read the paper with great interest despite the model validation appeared quite thin and not very impressive.

But I have to point out that nearly every reference to SILAM model contains wrong information.

1. For already several years, SILAM is not “Finnish Emergency Modelling Framework”
C2685

as you quoted it in p.3981. As stated in our last-year paper Sofiev et al, 2012, its name is “System for Integrated modelLling of Atmospheric coMposition”.

2. Efstathiou et al., 2011 has used the major elements of SILAM and COSMO-Art emission terms while making their module. This may be worth mentioning too.

3. In p.3984 you suggested that we used w^* instead of u^* . Well, it is as far from reality as it can be. We made a combination of 10m wind speed with w^* -based correction to accommodate the effects of both mean wind and convection. We never thought to skip u^* , just used the related parameter - 10m wind speed. The relation is not 1:1 but it is still sufficiently strong for forests. The 10m wind was taken instead of u^* because there is no need to use much energy to lift pollen in air, it falls out of catkins freely, you just have to slightly shake them. The analogy with wind tunnel studies does not work. In those studies the momentum flux was used for lifting the sand out of the floor, while birch pollen just needs a bit of air motion to be picked up after it falls out of catkins.

Interactive comment on Biogeosciences Discuss., 10, 3977, 2013.