

Interactive comment on “Impact of the vertical emission profiles on ground-level gas-phase pollution simulated from the EMEP emissions over Europe” by S. Mailler et al.

Anonymous Referee #1

Received and published: 4 April 2013

General comments.

This paper clearly shows the importance of using the correct vertical distribution of emissions. This paper is an important contribution to this subject, by systematically performing a number of model runs with the WRF-CHIMERE model using different emission heights, including a recently developed -as far as possible-realistic distribution. The paper is written in a clear way, the structure makes the different steps and results easy to follow and understand

C982

Specific comments.

The use of a relatively coarse horizontal grid resolution with a rather refined vertical resolution seems to be not optimal, furthermore while more refined emission data than by EMEP are available with the MACC-TNO emission data base. The improvement in model performance going from the default EMEP vertical distribution to the more realistic Bieser distribution is attributed to the improved vertical distribution only. However, this assumes that the quantity of the emissions is basically correct, which does not have to be the case

Technical comments

page 3664, line 18, needs in stead of need page 3671, lime 8, were in stead of was page 3674, line 21 detail in stead of datail page 3680, line 4, during in stead of suring

Interactive comment on Atmos. Chem. Phys. Discuss., 13, 3663, 2013.

C983