

Interactive comment on “Can we explain the trends in European ozone levels?” by J. E. Jonson et al.

F. Dentener (Editor)

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The ACPD version of this paper provoked a series of detailed comments and concerns from the 2 anonymous reviewers. While a lot was taking into account in the final accepted version; there were also some issues that could not be resolved (like in any paper). I would like to make the final remarks from the reviewers available for reference.

Reviewer 1: 'I think that most of my comments, particularly those related to the location of the sites and the discussion of winter and summer NO₂/O₃ trends both from measurements and model runs, have been considered by the authors. The boundary conditions (and to some extent their impact on the results of the model runs) are

now better described in the 2nd and 3rd paragraphs of Section 5.2 as well as in Section 5.3. The manuscript has improved considerably and I support its publication after some minor revisions (follows a list'

Reviewer 2:

I had two major comments on the paper: the choice of using the emep model for doing a study on boundary conditions, and the presentation which was a mixture of literature overview and own results.

The first comment is hard to repair by the authors since it would imply redoing their study. Nevertheless, the information to be gained by this study on boundary conditions is now put forward in a way that makes it clear and accessible. Also they have improved the analysis of the comparison with measurements.

Concerning the second comment it is still a lengthy introduction, but since the discussion of own results has improved it is better to see what they have contributed to a better understanding of the trends.

My main conclusion is that it is worthwhile publishing since it contains interesting information on trends that is useful to share with others. The data the modellers have obtained in their study contains enough material to write a second article. I would recommend to use the model to seriously address the problem of inter-annual variability!

Interactive comment on Atmos. Chem. Phys. Discuss., 5, 5957, 2005.

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