

Interactive comment on “Evaluation of two ozone air quality modelling systems” by S. Ortega et al.

Anonymous Referee #1

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The paper gives a detailed description of two modeling systems for ozone air quality calculations. I agree with referee 2 that the description of the implementation of the two modeling systems is well prepared.

It is a challenging task to implement a modeling system and to get good results. I feel that this is a challenge that has been faced and tackled by many other groups. There are several challenges: local topographic effects, landuse, local emissions etc. A large part of the paper is used in describing the implementation of the modeling systems.

When implementing a new model it should be extensively evaluated for much longer than 3 days. The validation should also include other species than just ozone.

There are speculations about possible causes of high ozone calculated for a forested mountain area. The paper would be much more interesting if it would attempt to address such issues.

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All in all my main concern about the paper is that it is not very innovative. Basically the paper describes the implementation of already existing models (in a new setting). Then the models are run and comparisons are made with measurements.

Comment to Figure 3, low morning values. Background ozone in the free troposphere is typically around 40 ppb. At night ozone levels can be very low near the surface because of titration effects and/or dry deposition (but dry deposition is very low at night) combined with a lack of venting through a shallow night time inversion. If the wind were to disperse the pollutants, surely it would bring in ozone close to background (~40ppb) values?

Interactive comment on Atmos. Chem. Phys. Discuss., 4, 1855, 2004.

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