

Interactive comment on “An investigation of ozone and planetary boundary layer dynamics over the complex topography of Grenoble combining measurements and modeling” by O. Couach et al.

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This paper concerns an evaluation of ozone (O₃) and planetary boundary layer (PBL) dynamics over the complex topography of the Grenoble region through a combination of measurements and mesoscale model (METPHOMOD) predictions for three days, during July 1999.

By visual inspection (Fig 11) the regional model METPHOMOD yields comparative results with LIDAR measurements, at least for three of the four data sets presented.

The paper would benefit from a short discussion about the representativeness of the relative short periods results for a more general assessment of the model perfor-

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mance. Also, METPHOMOD has been evaluated in more traditional evaluation programs, a reference would be appreciated.

This paper goes beyond usual evaluation because most photo-chemical models are usually evaluated only with respect to ozone measurements. But how does this model compare with traditional ground-based ozone- also from other studies?

We refer to a critical review of photochemical models and modeling (Russell and Dennis, AE; 34 (2000))

"In fact we most likely know less than we think about the systems we are simulating; we probably cannot distinguish when a model is performing well or not; and we surely cannot say why the model is or is not performing well. What is clear is that model evaluation should go beyond comparison of a single (or two) species with a limited set of measurements."

Have results been obtained for other species than Ozone, then please show them?

Also, the paper would benefit from presenting the statistical parameters from the three day analysis in comparison with Lidar data, so the intercomparison becomes quantitative.

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