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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Clouds, photolysis and regional tropospheric ozone budgets" *by* A. Voulgarakis et al.

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We wish to thank the 1st reviewer for their positive response and their suggestions for minor corrections. Below, we describe the changes that we have made following these suggestions:

Page 13896, line 20: Added one extra sentence in the end of this paragraph to clarify that downward transport is not affected by circulation changes caused by clouds.

Page 13898, line 14+15: Done. Also slightly rephrased.

Page 13900, line 21: We agree that the global isoprene lifetime is heavily dominated by what happens in the source region, and only very coarsely accounts for the subtle balance of changes in chemistry and transport that are occurring. However the global

statistic is the most representative and directly comparable between runs. So we believe that it should remain as a central part of the discussion, especially since, to our knowledge, this is the first time that one provides an estimate of the global effect of clouds on isoprene. To make the picture more complete, we also add a sentence in the end of this paragraph, noting the effect of clouds on boundary layer isoprene lifetime, over specific regions where isoprene emissions are high.

Page 13900, line 24: Removed this sentence.

Page 13902, line 12: Removed "greatly".

Page 13902, line 18: Defined the runs more clearly in the 2nd paragraph of Section 5.

Interactive comment on Atmos. Chem. Phys. Discuss., 9, 13889, 2009.