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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Urban-rural interactions in a South Korean forest: uncertainties in isoprene-OH interactions limit understanding of ozone and secondary organic aerosols production" *by* S. Kim et al.

J.-F. Müller

jean-francois.muller@aeronomie.be

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I find interesting to test different oxidation mechanisms against the reported observations near Seoul, but I'm at a loss regarding the choice of the different scenarios. I understand that α is the OH yield in the reaction of isoprene peroxy radicals with HO_2. The reference given for its adopted value (2.6), Wolfe et al. (2012), is not appropriate. Such high yield was proposed by Lelieveld et al. (2008) as an artificial OH recycling reaction introduced in order to match the GABRIEL campaign measurements. But there

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is a wide consensus that the OH yield is of the order of 10% or less (e.g. Liu et al., 2013). I fail therefore to see the relevance of simulations combining HPALD chemistry with a high value of α.

Liu, Y. J., I. Herdlinger-Blatt, K. A. McKinney, and S. T. Martin, Production of methyl vinyl ketone and methacrolein via the hydroperoxyl pathway of isoprene oxidation, Atmos. Chem. Phys., 13, 5715-5730, 2013.

Interactive comment on Atmos. Chem. Phys. Discuss., 14, 16691, 2014.