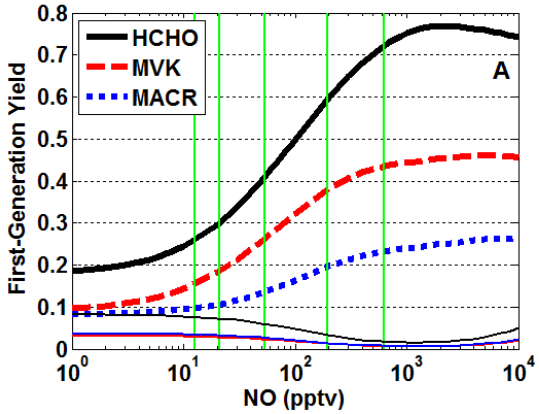
We thank the reviewer for their consideration. Responses are given below. Given that these are minor changes, a marked-up revised manuscript is not provided.

1. Ultra low NO. Although not the focus of the paper, NO levels less than 100 ppt are common where isoprene is oxidized (even happens in the US). I suggest that the authors explain the sources of HCHO (and MVK/MACR) in this regime as the yield shown in this study is not explained by the branching ratios produced in OH chemistry illustrated in the manuscript.

At the lowest NO values, carbonyl production is a combination of RO2 + RO2 chemistry and ozonolysis (due to a fixed ozone mixing ratio of 50 ppbv throughout the simulation, representative of average values observed during SENEX/SOAS). We have modified Fig. S3A to show the yields from ozonolysis, and we have added some text to Section S1. The last two sentences now read:

"Outside of this range (< 20 pptv NO), calculated yields are less certain due to a lack of constraints on model HO_2 and RO_2 concentrations. At the very-low NO_x end, 30 – 40% of the carbonyl yield stems from isoprene ozonolysis (thin lines in Fig. S3A), with the remainder resulting from a combination of $ISOPO_2$ + RO_2 and $ISOPO_2$ 1,5-H-shift isomerization channels."



2. Discussion of the ISOPOO + HO2 rate. Suggest that the authors not cite Paulot et al. for the slow rate of this reaction found in some versions of RACM. Paulot adopted this rate FROM RACM and later revised the mechanism in both GEOS-CHEM and in the EPA isoprene mechanism described in Xie et al. to use the much faster (and more likely correct) rate.

We have removed the reference to Paulot et al. in Section 6. The relevant sentence now reads:

"Deeper investigation reveals that the rate constant for reaction of $ISOPO_2$ with HO_2 in RACM2 is a factor of 2 lower than those used in both MCMv3.3.1 and the AM3 mechanism, which are based on the experimentally-derived parameterization of Boyd et al. (2003)."

Boyd, A. A., Flaud, P. M., Daugey, N., and Lesclaux, R.: Rate Constants for RO2 + HO2 Reactions Measured under a Large Excess of HO2, J. Phys. Chem. A, 107, 818-821, 2003.