**Geoscientific
Model Development
Discussions**

Interactive comment on "Automated sequence analysis of atmospheric oxidation pathways: version 1.0" *by* T. M. Butler

Anonymous Referee #1

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In this manuscript, the author describes an algorithm that can, by following reaction pathways, determine from the output of a complex chemical model the overall effect of the oxidation of a specified chemical species. In general, I think this is a useful tool, and publication in GMD thus seems appropriate. The paper is well written, and the use of examples of increasing complexity is a nice way of demonstrating both the validity and utility of the algorithm.

As the author is clearly aware, and as is clearly stated in the manuscript, the contribution of HO_2 to the NO_2 / O_3 production is not being counted in the present analysis. Thus, I wonder if presenting HO_2 yields (along with the currently presented NO_2 yields) might be worthwhile? Either way, I look forward to seeing the follow-up manuscript in which the ozone production potential of the various VOC is studied in more detail.

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One minor comment – The 'ethyl glyoxal' referred to on pg. 1011 should be ethylene glycol, I think.

Interactive comment on Geosci. Model Dev. Discuss., 2, 1001, 2009.