

***Interactive comment on “Rate coefficients for the gas-phase reaction of OH with (*Z*)-3-hexen-1-ol, 1-penten-3-ol, (*E*)-2-penten-1-ol, and (*E*)-2-hexen-1-ol between 243 and 404 K” by M. E. Davis and J. B. Burkholder***

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Response to anonymous referee #1 on ACPD-2011-11

We thank the anonymous referee for taking their valuable time to review our manuscript and making constructive comments. We have addressed the comments in our revised manuscript as specifically outlined below.

Referee Comments: Technical errors Page 2379, lines 21 and 24. The parentheses around the OH in the chemical formula [CH<sub>3</sub>CH<sub>2</sub>CH<sub>2</sub>CH=CHCH<sub>2</sub>(OH)] and

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CH<sub>3</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH=CHCH<sub>2</sub>(OH)] do not seem necessary, nor are they consistent with the style used for CH<sub>3</sub>CH<sub>2</sub>CH+CHCH<sub>2</sub>CH<sub>2</sub>OH on line 14.

Fixed

Page 2380, line 6. Replace "several" by "four".

Changed

Page 2386, line 1. The total pressure was varied between 20 and 100 Torr, so replace "24" by "20".

Corrected

Page 2387, line 22, and page 2388, line 4. Replace "2-hexena-1-ol" by "2-hexen-1-ol".

Corrected

Referee Comment: Page 2389, line 13, and Table 6, footnote "b". Since the authors go into some detail in footnote "b" to Table 6 about the relative rate measurement of Atkinson et al. (1995), they could further note that the errors cited are two standard deviations of the rate constant ratio (1.67 ± 0.06) combined with a ±20% estimated uncertainty in the rate constant for the reference compound (E-2-butene).

Response: The footnote for Table 6 has been revised as suggested and now reads "The quoted error is 2σ of the measured rate coefficient ratio (1.67 ± 0.06) combined with a ±20% estimated uncertainty in the rate coefficient of the reference compound, where k(296 K) = 6.48 × 10<sup>11</sup> cm<sup>3</sup> molecule<sup>-1</sup> s<sup>-1</sup> for the OH + (E) 2 butene reference reaction was used;".

Referee Comment: Figure 4. For (Z)-3-hexen-1-ol, one of the error bars on a room temperature rate constant appears unduly large on the negative side, extending down to ~5E-11 cm<sup>3</sup> molecule<sup>-1</sup> s<sup>-1</sup>. The rate constants listed in Table 6 indicate the errors on the rate constant of Jiménez et al. (2009) extending down to 7.17E-11 cm<sup>3</sup> molecule<sup>-1</sup> s<sup>-1</sup>.

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Response: You are correct. We misinterpreted the reported error limits and used the incorrect value in the figure. The figure has been corrected and is now consistent with Table 6.

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Interactive comment on Atmos. Chem. Phys. Discuss., 11, 2377, 2011.

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