

Interactive comment on “Water vapor release from biofuel combustion” by R. S. Parmar et al.

Anonymous Referee #1

Received and published: 10 April 2008

This is a clear and well written paper that provides a detailed account of laboratory experiments of water vapor release from a collection of different biomass fuel types. The results from 16 experiments conducted in a combustion chamber show the amount of water vapor released as a ratio to the CO/CO₂ combustion efficiency. This paper provides a nice contribution to the fire sciences community as this data are limited. Overall, this paper is acceptable for publication in its present form, but there are a few minor comments that should be addressed.

1.Pg. 4489, line 17: How do the ER estimates from this experiment compare to other studies?

2.Pg 4489, line 20: How does the storage time of the fuels affect the samples and fuel moisture content? A short discussion may provide some insight.

3.Pg. 4490, line 9: A fuel moisture content of 40% seems high for wildland fires,

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especially in dry climates. Maybe rephrase this statement or discuss in greater detail.

4.Pg 4490, line 25: Where does the 10% of carbon released in other forms come from? Is there a reference or another study for why this percentage was chosen?

5.Pg. 4491, line 13: the 60% fuel moisture calculated for the Clements et al (2006) study is much higher than what was reported by them. Comment on this difference.

6.While the plots (Figs. 1, 2, 3) are sufficient, they would be easier to read if they were larger in size. Maybe include more time tick marks from every 30 min to every 10 min.

Interactive comment on Atmos. Chem. Phys. Discuss., 8, 4483, 2008.

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