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Interactive comment on “Overview of the Manitou Experimental Forest Observatory: site description and selected science results from 2008–2013” by J. Ortega et al.

J. Ortega et al.

ortega.john@gmail.com

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We sincerely appreciate reviewer #2 for agreeing to thoroughly review our manuscript and express thanks for the helpful comments. We have addressed these comments below.

We agree that the manuscript goes into more details regarding instrumentation and results than typical site description or “overview” papers. Many of the co-authors were strongly in favor of including specific gas- and particle-phase data in this paper in addition to the basic site description. We did our best to come up with a compromise and

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believe that including specific data to augment the basic site description strengthens the manuscript.

Information regarding data policy has been augmented in section 1.3. The following text was added:

Campaign data and long-term observations are available at the following web site: <http://www2.acd.ucar.edu/campaigns> Other long-term data is available upon request from the corresponding author.

We have double-checked for consistency in the numbering of tables, and figures, and that it is consistent with the text.

1657/17: ..data are available Thank you for noticing the error. See above for re-wording of this section regarding data availability.

1658/20: : : :show very little We have corrected the typographical error (thank you for catching it).

1663/21: Please double-check and mention, where appropriate, what substrate/variable was measured/investigated (i.e. ambient air, fluxes, emission samples, leaf litter, ..) This observation was in ambient air using the PTR-TOF-MS. The sentence now reads:

The PTR-MS showed that ambient concentrations of several other BVOC (including cymene, camphor, nopinone, pinonaldehyde and sesquiterpenes) were also elevated after this vegetation disturbance.

1664/17: Provide trees species that were investigated. The only tree species at the site is Ponderosa pine. This has been added to the sentence to make it clear.

1666/12: Has MEFO been defined? The MEFO abbreviation was introduced in the abstract as well as in the introduction and again in section 1.3.

1676/17: Mean and standard deviation results should be given with same number of

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significant and decimal digits. Please double-check standard deviation result. 5.2 ppbv seems amazingly low. Does this result reflect the variability of hourly mean values? Or maybe daily mean values?

The value given of 5.2 ppb was mistakenly calculated using an incomplete data set. It has been re-calculated using the complete month (August 2011) and found to be 27 ppb. This has been corrected in section 4.1. We appreciate the mistake being brought to our attention. The rest of that section has been changed to be more consistent with units and significant figures for NO_x, SO₂, CO and ozone concentrations.

1677/23: Front Range Urban ??? The word “area” has been added after “urban”.

1678/23: ..in Indiana, USA : : : A comma has been inserted between “Indiana” and “USA”. 1695: Inconsistency in figure formatting, i.e. font size of axis titles, legends, titles, date and time format should be corrected. We have done our best to clean up some of the figures to make them more clear and consistent.

1701: Discussion of data should be in the text not in the figure caption. Figure caption should explain the figure. Discussion has been removed from the figure caption.

1702: Are there any thoughts on the large disagreement between the modeled and measured HCHO flux? There seems to be a large discrepancy in these results that is not really addressed in the text?

On page 1666 (section 3.1), we state that "The missing HCHO source is thus consistent with oxidation of VOCs with light- and temperature-dependent emission profiles. The strength of HCHO fluxes cannot be accounted for by the oxidation of measured MBO and terpenes (also see Sect. 3.2)." A detailed analysis of this issue is presented in DiGangi et al. (2011). We have referenced DiGangi et al. (2011) in this section to emphasize the point.

The following sentence was added at the end of section 3.1: A detailed analysis regarding HCHO sources and oxidation is discussed in DiGangi et al. (2011).

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The addition of Table 1 and the new Figure 2 can be viewed in the response to reviewer #1.

Interactive comment on Atmos. Chem. Phys. Discuss., 14, 1647, 2014.

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