

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

Anonymous Referee #1

Received and published: 31 January 2014

This document on Overview of the Manitou Experimental Forest Observatory is a very basic description of a very important and extremely multidisciplinary trace gas field site. It is much on the order of the Hyytiälä site in Finland, Blodgett forest in California, Harvard Forest and the Proffit site at the University of Michigan, so it is relatively rare.

If one is to judge this descriptive paper on if the work is new and novel, I'd give it a luke warm grade, as it is a site characterization paper. But I have had many conversations with colleagues making long term flux measurements and I appreciate the importance of producing a site description paper, as documentation for ensuing papers, and this is that paper. So I think it has merit, especially in ACP where this group continues to

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publish products of their research.

So given the paper has merit how can it be improved. I am a huge fan of producing more, better and extensive site meta data on the vegetation and soils. The information on site meta provided is sketchy at best. More information on physiological variables would be nice as I know Peter Harley measured these at the site; in fact the paper states 'Physiological parameters (e.g.sapflow, photosynthesis, and BVOC emissions) were measured on all trees within the experimental plot. Similar to the speciation seen in ambient air, branch-level measurements showed that the BVOCs emitted in the highest concentrations were methanol, 2-methyl-3-buten-2-ol, and monoterpenes'. I want to know more about stand inventory, disturbance history and its spatial variation of plant biomass, as deduced from remote sensing, eg Landsat or Ikonos. I want to know more about the flux footprint climatology and the representativeness of the site for making eddy covariance flux measurements. Information on soil moisture and rain and temperature climate is satisfactory. But sunshine climatology is important too, the daily integral of incoming solar radiation. And I want to see more basic soil and topography information

The organization and content could be improved.

The goals of the paper are 'This article describes the Manitou Experimental Forest Observatory, presents on-going research at the site and highlights some initial findings. More specific scientific results and publications can be found in the publication list (Table S2) and within the individual articles as part of this special issue of Atmospheric Chemistry and Physics'

Yet, If this is an overview on the site why the digression on some case study data. We need to have this paper focus on its intent and not be duplicative of data that may be published in a more specific analysis. So climatology on the atmospheric chemistry, eg ozone levels and nox levels would be ideal. Focus on the ecophysiology, biometeorology, atmospheric chemistry climatology of the site and leave the case study

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material for other papers.

Coupled chemistry modeling is a diversion too.

So clean up the paper and remove material that is in other papers and just describe the site in gory and gritty detail.

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