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Biogeosciences
Discussions

# *Interactive comment on* "Dissolved organic matter characteristics of deciduous and coniferous forests with variable management: different at the source, aligned in the soil" *by* Lisa Thieme et al.

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This paper by Thieme et al. utilizes different analytical tools to characterize Dissolved organic matter characteristics of deciduous and coniferous forests with variable management. This is a very well written paper. The authors provided a lot for details regarding their sampling schemes, their approaches and their analysis. Very well done. I had few minor comments regarding the incubation experiments, geochemical data of the sites including pH, as well as FTICR MS data processing. The authors have generated a lot of data, however I felt the discussion was a bit weak or weaker than the rest of the paper. I would have loved to see more focus on both the biological and geochem-



ical controls on soil processes rather than just explaining the data in context on how it compares to other studies. At certain times, the discussion felt as if it was a repetition of the results rather than generating hypothesis about the cause of such differences and providing some strong hypothesis regarding control on SOM degradation and the effect of management. Page 5, line 31, did you check if o.2 um was enough to eliminate microbial communities originally present in the samples? Pages 4-5 what was the total number of samples and how was it distributed in terms of management? Line 16, can you give the break down for the 466 samples? Line 16, what do you mean by: To balance uneven sample numbers, we calculated mean EEMs per plot and ecosystem flux resulting in a dataset with 79 samples. Did you collapse the 466 samples into 79 samples to allow for plot versus plot comparison? what was the variability within the same plot? Line 20, how did the optical data look for these samples? Do you believe that differences due to management is higher than that between plots within the same forest? Page 7, line 14, only six spectra were averaged? Typically, we do at least 100. Can you provide more details regarding formula assignment and the rules that were used? What was the number of unassigned formula? What were the ranges of C, H, N, C, OS, P? that were used? Figure 2, its hard to see the zoom in but be careful about peak splitting as this can affect your formula assignment. Even though it is hard to see, it appears you had some peak splitting.

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