

***Interactive comment on “Dissolved organic carbon dynamics in a UK podzolic moorland catchment: linking storm hydrochemistry, flow path analysis and sorption experiments” by M. I. Stutter et al.***

**W. Worrall (Referee)**

Fred.Worrall@durham.ac.uk

Received and published: 26 March 2012

Review of Stutter et al. This is a good study that well deserves publication. I have a few general comments and then some more specific comments below.

General comments i) The paper seems to want to comment on the dynamics of peat soils whilst it is based upon an organo-mineral soil. I think the authors should re-visit the places in the manuscript where they make this link and be certain it is not stretched too far. ii) The paper really only presents data from two events and so it

C450

is not surprising that they are different and although the level of detail in which each event is considered is admirable the authors should be cautious about concluding too strongly when compared to studies that have considered statistically powerful numbers of events. Specific comments P211 line 19 – incomplete sentence P212 line 1 – This sentence implies that the result of this paper is already known in the literature? P212 line 17 – sentence implies there are examples and so these should be cited. P212 line 21 – please can you break up this sentence into more palatable parts. P213 line 4 – what is meant by biogeochemical processing? P215 – can we have the percentile flow of the antecedent flow conditions? P217 line 9 – the bracket needs re-phrasing as I don't know which reference has the full equations. P217 line 15 – how were end-members defined? In EMMA a PCA is used, was that done here? P217 line 24 - where was this longer “2 yr” analysis defined? P217 line 26 – does defining seasonal variation mean that you accounted for it, if so how and did it fit well to the data? P218 line 10 - remove phrase “August 2005 and November 2006”. P219 line 21 – this sentence begs a reference. P220 1st para – was soil moisture data mentioned in the methods? P221 line 23 – “This could show . . .”, this what? P222 last para – not sure any of this was in the methods. P224 2nd para – should this not be in the past tense? P226 line 1 – not a sentence. P226 line 12 – undefined acronym. P226 - numbered points are poorly punctuated, eg. some need question marks? P229 line 6 – not too surprising that two events are different from each other. This sort of question could only be answered if there were more events. P231 line 1 – poor English. P231 2nd para – should also included impact upon flocculation during water treatment. P233 1st para – given that only two events were considered the results discussed here are somewhat inevitable and I don't think this has been demonstrated.

Interactive comment on Biogeosciences Discuss., 9, 209, 2012.

C451