

Interactive comment on “Scale and space dependencies of soil Nitrogen variability” by Ana M. Tarquis et al.

Anonymous Referee #2

Received and published: 21 July 2016

Overall, it is an interesting work that addresses scale-dependence of structure in series. Three components of the work require better explanations. 1. The transect crosses areas with different treatments. This is reflected in responses to N shown in Fig. 3. The multifractal formalism does not allow for trends. How then the deterministic component of variation is reflected in multifractal parameters? 2. Distances of 5 and 10 m are mentioned as the distances at which structure is best revealed. Why the numbers are round? What is the method of finding these numbers? Do these numbers depend on the spatial increment of measurements? 3. Authors are talking about structure throughout the manuscript. But what is structure? How is it defined? It is important for future attempts to relate structure and function.

The manuscript requires editing for English. There are many small pesky errors. Here are examples from first two pages. Page 2 9 Change “can be seen as the result of” to

C1

“exhibit” 14 Change “Logsdon” to “Logsdon” 18 Change “on a” to “in” 20 Change “the scaling property” to “scaling propertirs” Page 3 5 Change “in” to “to” 9 “common”? 12 How a surface site can be located near an aquifer? Wat are you trying to say with this characterization? 15 levels 21 “Nitrogen” not capital

Interactive comment on Nonlin. Processes Geophys. Discuss., doi:10.5194/npg-2016-32, 2016.