

## ***Interactive comment on* “Characteristics of wet carbon deposition in a semi-arid catchment at Loess Plateau, China” by Linhua Wang et al.**

### **Anonymous Referee #1**

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Review of “Characteristics of wet carbon deposition in a semi-arid catchment at loess plateau, China”

This manuscript reports the concentrations of DOC and DIC in rain from the Loess plateau. This could be a relevant contribution to the field as there is a dearth of these measurements, and the relevance of wet deposition on OC cycle is not well understood. The major problematic issue of this manuscript is the use of English. In addition, the redaction should also be significantly improved. I suggest that the manuscript could be considered after a major revision in terms of writing and improving the flow of the discussion. Other technical issues are listed below.

- A major issue is the use of English. The manuscript needs a major revision in terms of grammar and phrasing.

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- Four and five significant figures are given for the numbers! Probably the uncertainty associated with these measures would not allow to use more than 2 or 3.
- The three last sentences of the abstract need to be re-written.
- Line 26 “massive exchange of physical processes” means nothing. Review the use of English (grammar and meaning).
- Line 52. In addition to scavenging aerosols, rain scavenges the gas phase organic compounds.
- The writing of the introduction needs to be improved so it flows better. There are some sentences that do not make sense in this context (for example lines 73-74).
- Which were the blanks for DOC and DIC?
- Lines 151-152. It may be important, but its relevance should be demonstrated in terms of a mass balance or comparison with other sources and/or fluxes.
- Try to be concise and not repeat data and ideas in the discussion. For example, at lines 232-233, these concentrations were given before.
- The discussion could be shortened significantly, and the message would be more clear.
- The concentrations of DOC are sometimes very large. I have doubts that these concentrations can be supported by scavenging of aerosols (even dust). There may be a contribution of scavenging organic matter present in the gas phase, but this is never discussed or mentioned.
- I suggest to look at the air-mass back trajectories for the different sampling events. This could provide important information on source regions, and maybe explaining the different concentrations of DOC in July and September.

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