

## ***Interactive comment on “Multi-pollutants emissions from the burning of major agricultural residues in China and the related health-economic effect assessment” by Chunlin Li et al.***

### **Anonymous Referee #2**

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This study investigates the emission factors of multi-pollutants from five major crop residues in China, and tries to estimate emission inventory and their corresponding health-economic effect. This paper is well organized and presents some interesting data. However, detailed explanations about the design should be given to ensure the data quality.

- 1) When the crop residues were dehydrated at 100 degree C for 24 hrs, what are the impacts to the emission factors and PM compositions?
- 2) There are huge variations on EFs of crop residues, and they depend on lots of factors such as, sources of crop residues, burning temperature, burning efficiency etc. What are the differences between chamber study and open burning? As the burning

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last about 1 min only (in chamber study), can it represent the real open burning results? Moreover, what is the dilution ratio in the chamber study?

3) The detection limits (MDL) for all analysis should be provided.

4) It is interesting to determine char and soot, however, the temperature protocol is IMPROVE, but not NIOSH. Any calibrations have been performed with pure soot and char (standard)?

5) Please describe how to screen agricultural fire from MODIS daily fire products? What are the selecting criteria?

6) In this study, five crop residues were selected to determine their multi-pollutants emission factors, but there are other major crop residues not considered in this study, e.g. sugarcane, barley etc. There should be a reason to explain why such crop residues were not considered and how to determine the emission inventories in some provinces (with high sugarcane and barley production).

7) There is some typo errors found in the manuscript: Line 215, “costume-built” should be “custom-built” Line 330, “Corp straw” should be “Crop straw”

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