

Review of:

Source apportionment of PM_{2.5} at a regional background site in North China using PMF linked with radiocarbon analysis: Insight into the contribution of biomass burning

The authors have done a great job in adding the requested information and clarifying the manuscript. As a result, it is has once again undergone even more improvements than after the first round of revisions. However, I am still not convinced that the radiocarbon discussion is clear and reliable. The reason for that is that major conclusions are drawn for biomass burning from region represented by sample M1, which in the text itself is described as "not ideal" (p. 9 l. 21). Further, radiocarbon samples on the order of a few hundred micrograms are very small and the C isotopes very difficult to measure. Therefore source apportionment results using ¹⁴C usually have a much higher uncertainty than 1 – 3%, which is reported here. Instrumental uncertainties and the AMS capacity are still not clear. I think that the idea of the authors and the way they use ¹⁴C to verify the PMF results is correct, however the ¹⁴C results are suggestive rather than conclusive and I think the level of uncertainty is highly underestimated. If however this was made clear in the manuscript, it would be much easier to understand and interpret the results.

Also, despite requesting for more citation during the last two rounds of reviews, there are still citations missing for e.g. in section 3.4. Implication for PM alleviation and also there are still a few typos throughout the manuscript. Overall the manuscript is interesting and informative, but there are still problems that need to be addressed.