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Atmospheric Measurement Techniques Discussions

Interactive comment on "Accuracy and precision of ^{14}C-based source apportionment of organic and elemental carbon in aerosols using the Swiss_4S protocol" *by* G. O. Mouteva et al.

Anonymous Referee #3

Received and published: 18 July 2015

Review of the manuscript entitled: Accuracy and precision of 14C-based source apportionment of organic and elemental carbon in aerosols using the Swiss_4S protocol By G.O. Mouteva, S.M. Fahrni, G.M. Santos, J.T. Randerson, Y.L. Zhang, S. Szidat, and C.I. Czimczik

The paper focuses on a procedure to determine the OC and EC fractions in order to assess the contributions of fossil and non-fossil sources in carbonaceous aerosols. The procedure, based on the 14C analysis of OC and EC samples, following the Swiss_4S protocol, is carefully described step-by step.

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Interactive Discussion
Discussion Paper

The overall idea of the manuscript is good, with practical applications: to converge towards a common protocol for OC and EC 14C measurements. In that sense, I think the manuscript core falls within the scope of AMT. Furthermore, the manuscript itself is clear, well written and consequently, easy to read (although the description of the procedure becomes a little long).

I only notice a weak point in the ms: in my opinion, the conclusions are extremely brief and do not contain all the essential information shown in the paper.

Some minor points are the following:

I don't understand the change of the format in the names and the order of the Tables (Table 1, Table A1, Table A2, Table 2)

In Table A1, are the uncertainties in the column $\pm$? Why are some of them negative?

In Figure 3: Are the text in X-axis size or sample size? The right part of the figure (from 0.1 to 1) is unnecessary. You can adapt and resize the four panels to take up all the available space.

Interactive comment on Atmos. Meas. Tech. Discuss., 8, 3933, 2015.