

**Source apportionment and seasonal variation of PM<sub>2.5</sub> in a Sub-Saharan African city: Nairobi, Kenya, by S. M. Gaita et al.**

**Responses to Anonymous Referee #1**

The authors would like to thank the Anonymous Referee #1 for the critical and thorough review he/she has given to our manuscript.

The responses to his/her specific comments are listed herein;

Specific comments:

1. There are only problems with the third factor. The interpretation of this factor on page 12 (lines 12-19) is confusing. First, it is stated that this factor is attributed to a mixture of biomass burning and secondary aerosol. But then the authors attribute (part of) the presence of Cl and S to marine influences. The Cl and most of the S in fresh marine aerosol is primary and thus not secondary. It is correct that Cl from sea salt could be replaced by S from anthropogenic origin, which would be secondary S, but part of the S in this factor should still be primary S from sea salt. The attribution of this factor seems rather: a mixture of biomass burning, secondary aerosol particles and aged sea salt. Unfortunately, the authors did not measure Na, which is a better indicator of sea salt than Cl, as the latter can be lost from the particle phase during atmospheric transport.

**Response:** The authors have incorporated the referee's suggestion about aged sea salt as part of the discussion on the third factor.

2. Page 3, line 25: "Graeff, 2010" is not in the Reference list.

**Response:** The missing reference has been included in reference list.

3. Page 12, line 25: There is no Fe on the fourth factor; instead Zn and Pb are on this factor and this should be indicated here.

**Response:** Fe has been removed from the fourth factor while Zn and Pb have been included.

4. Pages 21-28, list of References: The titles of journal articles should be in lower case instead of in title case. Furthermore, the journal names are not all in the same style. For most journals, the full name is listed, but for some an abbreviated name is given.

**Response:** All the references have been abbreviated according to the ISI journal title abbreviations index.

5. Supplementary material: It is unclear what the point of this is. There is no reference made to it within the main text. Also, the figures in it should be labeled Fig. S1, Fig. S2, and Fig. S3.

**Response:** The supplementary material includes extra information that did not qualify to be in the manuscript. The figures in the supplementary material have been labelled as suggested by the referee.

6. Technical and other minor corrections:

**Response:** The highlighted corrections have been worked on.