

The authors would like to thank the reviewer and editor for these corrections. Our responses are included below, in bold italics.

Minor issues:

Line 258 – ‘those’ should read ‘thus’

Changed

Line 418 – in these data modern carbon is not ‘more significant’ than fossil carbon, it is 35% at most according to the preceding text.

Changed to ‘significant’ (removed more)

Table 1 and 2 – OOA-REG is included as a factor, but never mentioned in the text. Not clear what that is.

We have now defined OOA-reg (line 336) and re-added the paragraph describing OOA-Reg that was cut during overzealous cutting (starting line 395): Oxalate and OOA-Reg covaried with an R^2 of 0.62 ($n=53$). Regional OOA was identified as thus due to its low temporal variation, its correlation with SO_4 , and a low correlation with wind direction (Figure S8). This factor was removed from the atmosphere during periods of rain and experienced a slow recovery afterwards. At the beginning of the experiment (Sept 11th-13th), regional OOA and SO_4 did not correspond; however, during the middle and end of the campaign, temporal variations of the regional OOA and SO_4 corresponded fairly well ($R^2=0.65$, $n=3328$). The reason for the initial high SO_4 and low regional OOA is unclear from the data set as-is; however, MO-OA and SO_4 also had similar time series trends ($R^2=0.50$, $n=3328$) and MO-OA was high at the beginning of the campaign. The closeness of the two spectra’s composition, as well as the nature of the aerosol type (not from a specific source but rather aged bulk organic aerosol), in which variations would logically occur, may have led to the imprecise separation of these two factor types.

Figure 1 – make site schematic readable – too small. Regarding the discussion of this in the context of gradients, I would say the BC and NO_x wind roses suggest that you are not so much seeing the direct emission/roadway signature as a regional signature, or that the on-average higher windspeeds when the wind is from the roadway is counterbalanced by more stagnant conditions when wind is from other directions.

Changed the site schematic to make more clear, and also changed the paragraph discussing traffic influence: (starting line 231): BC and NO were associated with all wind directions, though slightly higher from the highway direction, which suggested that the measurement site was influenced by both traffic emissions and also often by regional, traffic-influenced background air masses. In order to better describe the traffic influence, we defined high traffic periods (HT) within the dataset.

Figures 2 and 7 – bar charts of high-traffic and all data should be labeled (panel ID)

Added labels.

Mislabeled/swapped figures 8/9 – Modern/fossil figure is called Fig. 8 in text but labeled as Fig. 9; vice versa for HOA/BC figure.

Changed (thanks for pointing this out! Ack).

Figure S12 is repeated as S14 in the SI.

Removed S14