

Interactive comment on “Variability in regional background aerosols within the Mediterranean” by X. Querol et al.

X. Querol et al.

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1. “The paper identifies and describes the major factors controlling levels and chemical composition of aerosols in the regional background along the Mediterranean Sea. Therefore data from three stations over a longer time period (seven years) are evaluated. The different natural and anthropogenic sources, physical and chemical transformation processes and meteorological transport processes that result in different concentration levels and compositions are discussed in detail. The paper is well-structured and written systematically. The length of the text is adequate. The data are presented clearly in Tables and the graphs give an informative report and situated for presentation in black-and-white. The conclusions are a good understandable summary of the very
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complex results. I agree with the comments by referee 1. Because there are no other data for the described region available over the time frame of seven years a critical discussion of artefacts is necessary to explain the possible uncertainties in the results.”

Reply: Thanks for your valuable comments. As recommended we added comments in text concerning the uncertainties concerning mineral matter, OC and EC and PM comparability following your comments and those from Dr. Wenche Aas.

2. “Detailed comments: Table 3: between FKL and ERL the horizontal line seems to be missing.”

Yes, in the online manuscript the horizontal line is missing. We have corrected this error in the revised version.

3. “Figure 4: The figure-caption would be better understandable if you write instead “Seasonal evolution of PM in PM1 or PM2.5 and PM1-10 or PM2.5-10 at Montseny, Finokalia and Erdemli.” “Seasonal evolution of PMin PM2.5 and PM2.5-10 (Montseny and Erdemli) or PM1 and PM1-10 (Finokalia).”

We agree with referee two in the confusing caption. We have corrected this error in the revised version.

4. “Figure 5: Also here you can improve the figure-caption and write instead “PM major composition ($\mu\text{g}/\text{m}^3$ and %) at Montseny (MSY), Finokalia (FKL) and Erdemli (ERL) in PM10, PM2.5 and PM1.” “PM major composition ($\mu\text{g}/\text{m}^3$ and %) at Montseny (MSY) and Erdemli (ERL) in PM10 and PM2.5 and Finokalia (FKL) in PM10 and PM1.”

As in the previous clarification, we have modified the caption according to his comments.

Thanks again for your comments.

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