

## *Interactive comment on* "Trends analysis of PM source contributions and chemical tracers in NE Spain during 2004–2014: A multi-exponential approach" *by* Marco Pandolfi et al.

## Anonymous Referee #3

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The main problem with this manuscript is that it reads like a technical report rather than a scientific publication. Therefore, although the analysis made in this paper may be scientifically sound, the outline of the manuscript requires some fundamental revisions before I can recommend accepting this paper for publication. My detailed comments in this regard are given below.

## Major comments

The authors should define clearly the scientific goals/aims of this paper. Currently, the last paragraph of section 1 merely lists what has been done in the paper without specifying what the authors aim to solve or find out in doing all this analysis.

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Section 3, and especially 3.3, like a huge number of trend values which all can be found in the tables. This not only makes the text extremely unappealing to read, but also the most important findings of this analysis remain hidden behind these numbers. I strongly recommend the authors i) to shorten this section considerably, ii) to remove most of the trend values from the actual text, and iii) to bring up more explicitly the most important findings.

The paragraph on line 79-97 does not fit to the introduction of a scientific paper. Some of it could be part of the methods section, if needed. Even then, any citations to Wikipedia are highly questionable.

Section 5 is currently a single long paragraph. I would recommend the authors to organize this section better and perhaps to put different types of conclusions in separate pagraphs.

Minor/technical comments

Various sections should be called sections, not paragraphs in the text.

Ammonium sulfate and ammonium nitrate sound a bit strange names for sources, as they are compounds that originate from a number of sources as a result of atmospheric processing.

Line 156: please specify EUSAAR protocol.

The language of the paper requires some improvements here and there. Some examples: - there is something wrong the sentence on lines 76-78 - line 133: ...will be discussed later - line 250: ...(not shown), we concluded... - line 270: ...what was observed... - there is something wrong the sentence on lines 280-284

Interactive comment on Atmos. Chem. Phys. Discuss., doi:10.5194/acp-2016-33, 2016.