

Interactive comment on “One decade of parallel PM₁₀ and PM_{2.5} measurements in Europe: trends and variability” by I. Barmpadimos et al.

Anonymous Referee #3

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The manuscript investigates the time evolution of levels of PM₁₀ and PM_{2.5} (and PM coarse) at seven sites in Europe during a decade. Influence of meteorology in the time evolution of these PM fractions is evaluated by modeling. Results are of interest and methodology applied is adequate and innovative. This paper is suitable for publication in ACPD. Given the interest of investigating the time evolution of the PM coarse fraction, sites monitoring simultaneously PM₁₀ and PM_{2.5} were selected for this study. The seven sites selected were mainly located in central and northern Europe; only one site was located in southern Europe but with a major Atlantic influence. Therefore, it should be clearly stated in the text that some conclusions obtained by this study cannot be considered as representative for the whole Europe; thus, specific areas such as the Mediterranean region, with peculiar characteristics for atmospheric aerosols are not considered. This could be of special interest for the coarse fraction given the

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higher influence of mineral dust, mainly accumulated in the coarse fraction, in southern Europe. Probably some other stations from Southern Europe (Greece, Italy, Southern France, Eastern Spain,...), measuring PM₁₀ and PM_{2.5} simultaneously, should have been included in this study. Nevertheless, this paper merits publication. Just a minor question; have you checked the influence of days without precipitation on PM load?

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