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Supplement of

Characterization of PM₁₀ sources in the central Mediterranean

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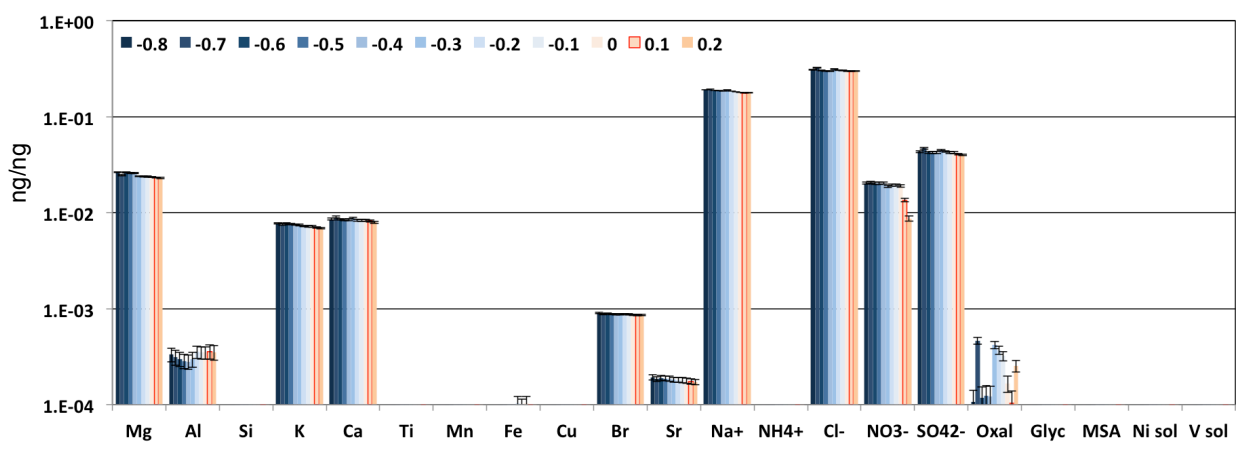
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6 **Supplementary material**

7 Rotational ambiguity was tested by systematically exploring solutions with FPEAK
8 between -1.0 and 1.0, according to a literature approach (e.g., Vecchi et al., 2008). The
9 following figures show, for every identified factor, the chemical profiles obtained by PMF2
10 for every FPEAK with variation in Q value below 5%, with respect to the minimum one. All
11 concentrations are reported with the associated error computed by the PMF2 model. The
12 chosen solution (with 0.1 FPEAK) is surrounded in red. The choice of one out of all the
13 rotated solutions was driven not only by the mathematical outputs of the model but also by
14 physical aspects as the physical sense of the source profiles and temporal evolutions, as well
15 as physical constraints on the reconstruction of the profiles.

16

17 a) Sea salt

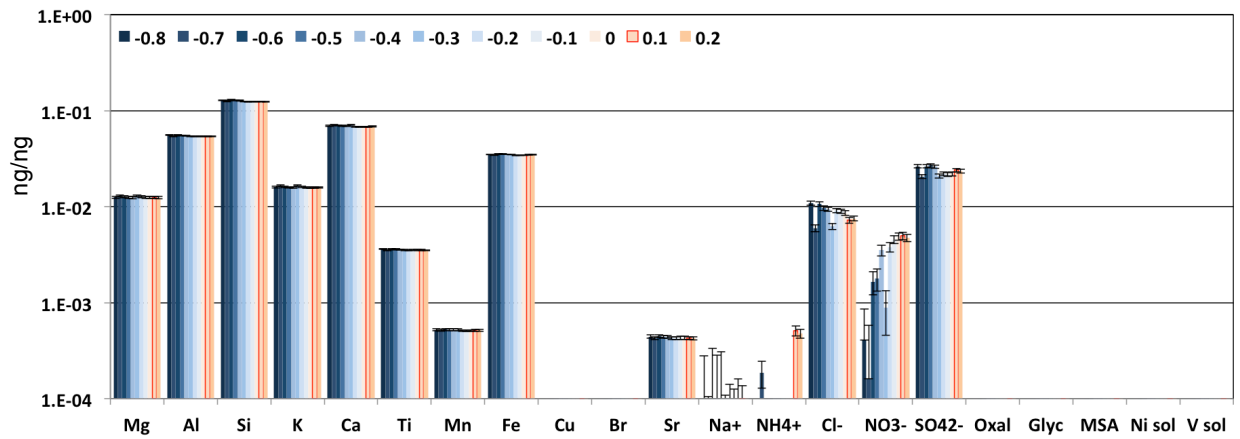


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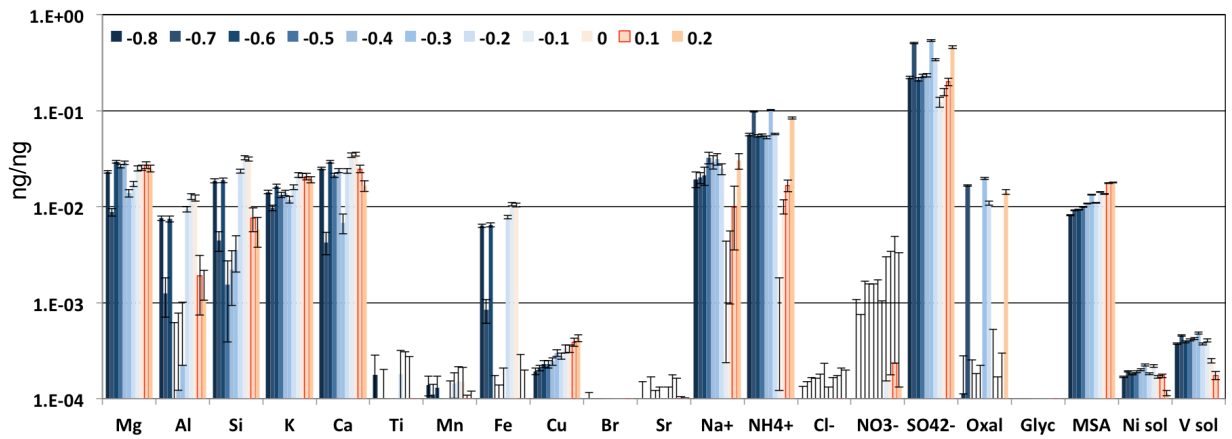
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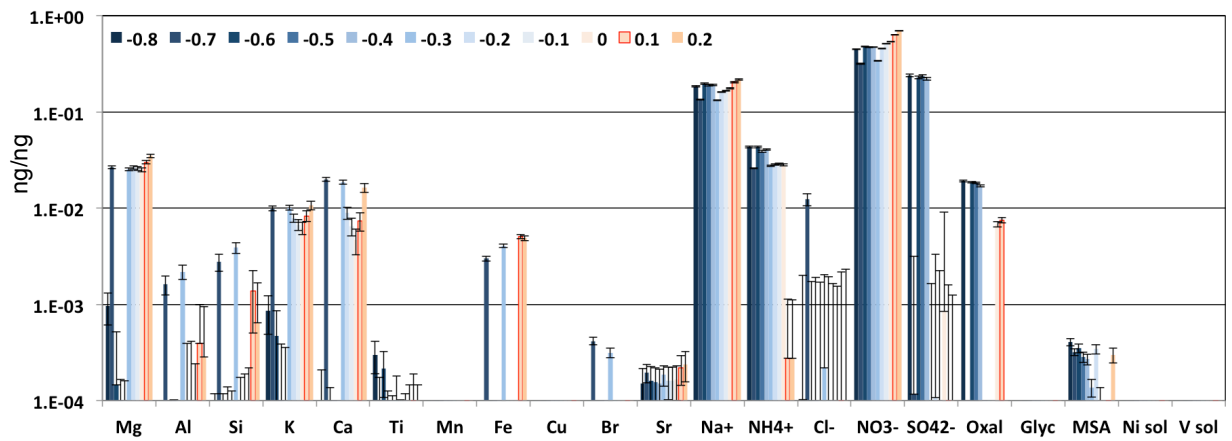
1 b) Mineral dust



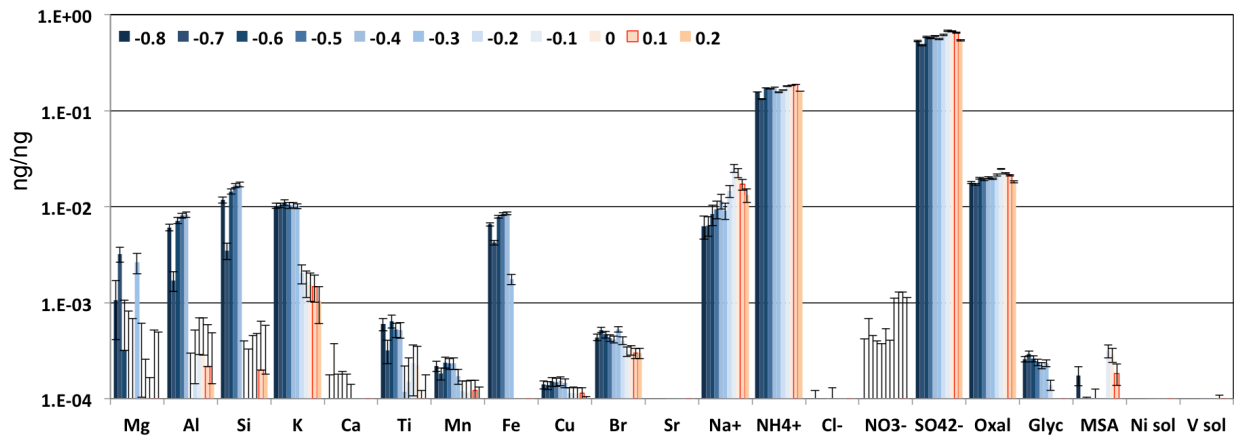
5 c) Biogenic emissions



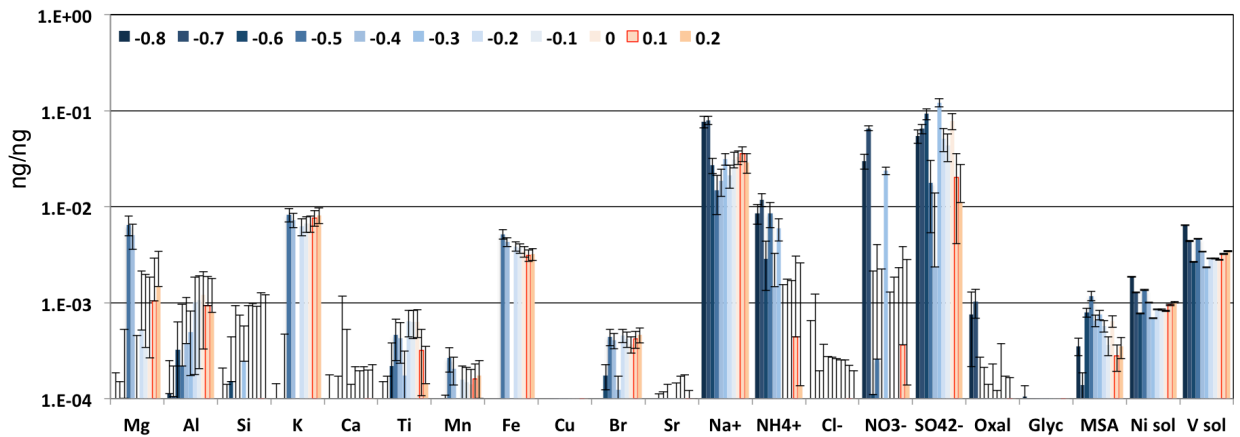
8 d) Secondary nitrate



1 e) Secondary sulphate



4 f) Primary particulate ship emissions



7 g) Combustion emissions

