

Study of Saharan dustfall in Southern Europe: preliminary results from the AIRUSE LIFE+ Project

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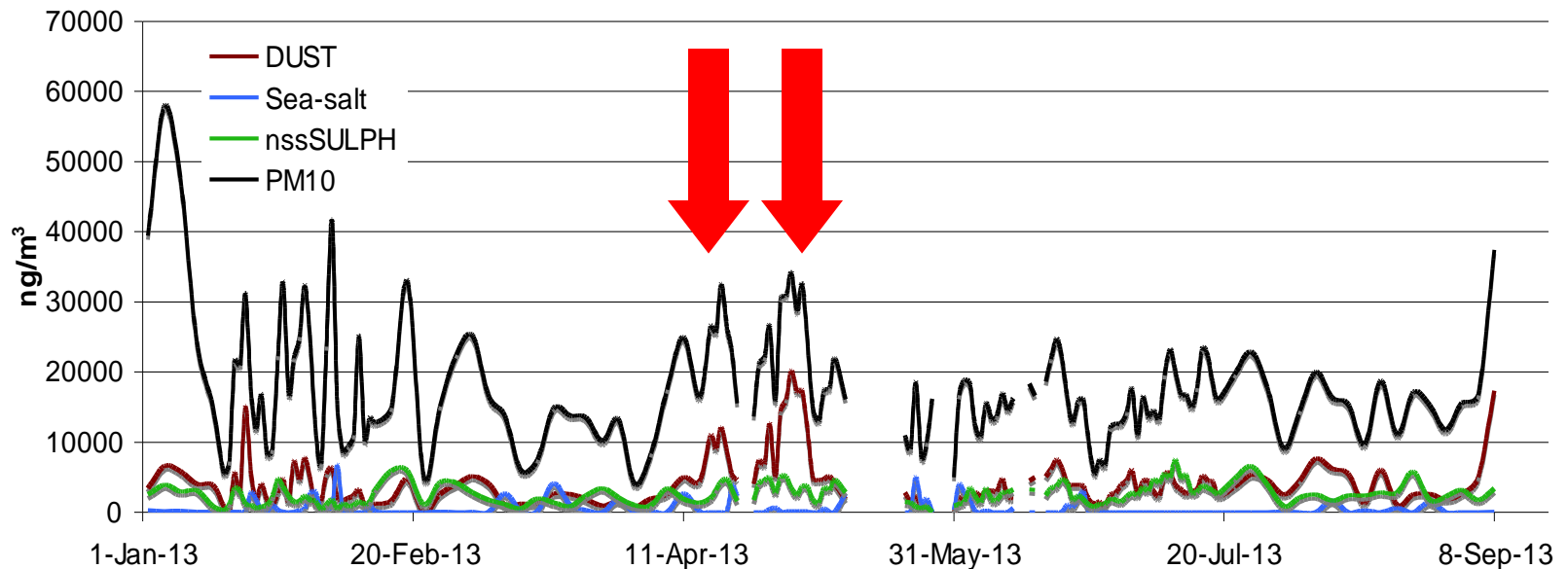
The AIRUSE project

- The AIRUSE project aims at testing existing and future mitigation measures and to develop new strategies for the improvement of air quality in Southern European countries (www.airuse.eu).
- The project includes PM10 and PM2.5 sampling in 4 urban sites in **Barcelona** (Spain), **Athens** (Greece), **Porto** (Portugal), and **Florence** (Italy), for long periods (□ 1 year), on a daily basis in order to get a time-extensive data set giving an overall representative picture of the PM composition in these cities.
- Models are used to forecast African dust episodes in order to schedule more intensive samplings.
- Samples are analyzed for the elemental content (by PIXE and ICP), the ionic content (IC), carbon fractions (EC, OC, TC by TOT; CC), levoglucosan, organic speciation.

Preliminary results on dust

- PIXE analyses, performed at the INFN-LABEC laboratory, allow the assessment of the concentrations of all the soil markers.
- $[\text{mineral dust}] = 1.35 [\text{nssNa}] + 1.66 [\text{nssMg}] + 1.89 [\text{Al}] + 2.14 [\text{Si}] + 1.21 [\text{nssK}] + 1.40 [\text{nssCa}] + 1.67 [\text{Ti}] + 1.43 [\text{Fe}]$

Florence



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