

***Interactive comment on “***

**On the sub-micron aerosol size distribution in a coastal-rural site at El Arenosillo Station (SW-Spain)” by M. Sorribas et al.**

**Anonymous Referee #1**

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The data set consisting of number-size distributions collected over a two year period at a monitoring site in southwestern Spain appears to be of good quality and its analysis and presentation would be valuable to the scientific community.

The analysis and presentation, as they presently stand, do not meet the standards of ACP discussions and will need major revisions to be acceptable.

The presentation of two-year, grand average number concentration is not valuable to the community for regional comparisons, model initiation or testing. The results must, at a minimum, be sorted by air mass type and trajectory analysis over a reasonable

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transport distance and time. The local vertical structure of the atmosphere at the site should be included in the meteorological analysis.

Other moments of the size distribution in addition to the number concentration, total or by mode, should be presented.

Several of the figures could be eliminated or replaced with a sentence or two of text.

The results and conclusions with respect to trends and new particle production rates and processes are very weak.

The narrative needs to be extensively edited for proper English language usage.

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Interactive comment on Atmos. Chem. Phys. Discuss., 11, 3813, 2011.