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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Aerosol physical and optical properties in the Eastern Mediterranean Basin, Crete, from Aerosol Robotic Network Data" *by* A. Fotiadi et al.

Anonymous Referee #1

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Review of the paper ACPD6-7791 by Fotiadi et al.

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General comments:

The paper presents high quality data of the aerosol properties at a very interesting and complex location in the Eastern Mediterranean, regarding aerosol sources and meteorological conditions. There are many interesting well documented results in the paper, however the way they are presented and organized do not help the reader to follow them. I would suggest that the discussion part of the paper should be slightly

restructured and shortened in order to avoid many repetitions and similar explanations of more or less the same finding.

Specific comments:

The abstract of the paper should avoid so many numerical results (e.g. line 15-16) and should not refer already to plots of the paper. Please rephrase and in general highlight better the major findings related to the seasonal variability of AOT and its relation to sources, the size distribution of the aerosols and the variability of the Angstrom exponent, by avoiding the style usually used in the discussion part of a paper.

Page 7792, line 25: As it is written the authors claim that the highest values are related to almost every direction. Please rephrase.

I would suggest to group the discussion under the following headings i) seasonal variability of the AOT, (where the authors should avoid at this point to explain the spectral differences and the meteorology) ii) seasonal variability of the Angstrom parameter (here they should try to shorten the existing paragraph 3.2 and maybe omit figure 4) iii) AOT, Angstrom exponent and wind directions (here they should give emphasis on meteorological conditions) and iv) Size distribution. Parts of the existing paragraph 3.3 can be included in the proposed (iv)

It is not necessary to show figure 3 and most of the relative discussion in p7802. The error bars in Figure 2 also show and indication for the large daily variability

The data presented in table 1 would be more helpful if plotted e.g. as new figure 3.

The authors should avoid repetitions in the conclusions for the origin and type of aerosols.

Minor comments

In the y-axis of figure 4 the label is in Greek.

Labels in Figure 5 are hard to read

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In the caption of Figure 8 they state AOT at 340nm but the figure shows AOT at 500nm. Please correct.

Interactive comment on Atmos. Chem. Phys. Discuss., 6, 7791, 2006.

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