

Interactive comment on “Aerosol characterization in Northern Africa, Northeastern Atlantic, Mediterranean Basin and Middle East from direct-sun AERONET observations” by S. Basart et al.

Anonymous Referee #4

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The paper is a valuable documentation of the Aeronet sun photometer data and its potential to retrieve more than AOD from these data. I thus recommend publication in ACP.

I have some suggestions which amount to a minor but necessary revision:

1) The fine fraction retrieved with the method in the paper is not compared to the results from the Aeronet retrievals themselves. Also those inversions provide information about the fine fraction and even the weights of the two modes eventually present in the

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aerosol size distribution. I think it is necessary to compare the results found in this paper with the official Aeronet products. Without this the paper is not easy to connect to other work in the field. A discussion of such a comparison would be obviously needed as well.

2) The table 1 should be changed to a table which contains the average results as depicted in the figures 5/6/7. At least the average annual fine fraction (per season) and average AOD and eventually even the aerosol water AOD due to humidity growth should be given for each station. Eventually one could add the orginal Aeronet retrieval values for these stations for the same period. Such a table would be more interesting then most of the metadata found now in the table. These metdata are partly found anyway on the Aeronet webpage. Positions are also documented in figure 2.

Interactive comment on Atmos. Chem. Phys. Discuss., 9, 7707, 2009.