

Interactive comment on “Aerosol properties associated with air masses arriving into the North East Atlantic during the 2008 Mace Head EUCAARI intensive observing period: an overview” by M. Dall’Osto et al.

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Title: Aerosol properties associated with air masses arriving into the North East Atlantic during the 2008 Mace Head EUCAARI Intensive Observing Period: an overview
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General:

This manuscript presents a comprehensive overview of aerosol measurements during EUCAARI intensive observing period at field site in western Ireland. The nature of

C11220

the paper is sort of an introductory paper. However, the authors present significant new data which has a clear scientific significance and impact. I would recommend the authors to consider the following minor issues and after that I would recommend this ms to be published in ACP.

One of the main issues, the authors should systematically check and comment are the uncertainty/error/variability limits of the data as expressed in +/- in many places. It is not clear whether the +/- refers to error or just variability of the data. This should be mentioned and also it should be explained how these limits are found. E.g. page 26282 lines 19-20 and fig 8 show an example of this. Another examples can be found at table 2 and table 3 and the corresponding text. I hope the authors go through the whole manuscript with this respect and make the necessary changes. (A good example of this issue can be found on page 26287 line 6, which clearly states that +/- refers to standard deviation.)

Detailed comments:

Page 26280, line 9-> and fig 5: It is not obvious that there are four modes in concentration frequency distribution. Visually observing I find only 3 (the one at 800-900 cm⁻³ being rather unclear). Did you fit some functions to separate modes?

Page 26281, line 3: Replace Fig 7 with Fig 7b).

Page 26282, line 2: Replace Fig 6 with Fig 7a)

Page 26183, line 5: add also MSA

Page 26285, line 4-5: The sentence starting with “aerosol arriving...” has something wrong.

Page 26288, line 15: and -> an

Page 26291, line 7: Please explain GF-PDF

Page 26292, line 11: Did you measure GF’s up to >2? Since sea salt GF is found at

C11221

about 2.2. This is not clear from Fig 13.

Fig 3 and 4: Explain the y-scale (km a.g.l. or m a.g.l.) and the x-scale (JD). Explain also the vertical lines at Fig 4.

Fig 6: The variable at left should be D_p and the size distribution function $dN/d\log D_p$ should be next to the colour scale.

Fig 7. It looks that the periods with nucleation are at plot a), but the caption informs otherwise. Please check.

Interactive comment on Atmos. Chem. Phys. Discuss., 9, 26265, 2009.

C11222