

***Interactive comment on* “Size-resolved aerosol water uptake and cloud condensation nuclei measurements as measured above a Southeast Asian rainforest during OP3” by M. Irwin et al.**

Anonymous Referee #3

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“Size-resolved aerosol water uptake and cloud condensation nuclei measurements as measured above a Southeast Asian rainforest during OP3” by M. Irwin et al. The data appear to be of high quality and of high relevance for atmospheric science studies as ACP requires.

Whilst the introduction section is really good, I felt the overall manuscript is quite heavy to read. There are 12 figures in the ACPD manuscript, and 5 in the supplementary information (SI). Some of the figures from ACPD version could go to SI : for example, Figure 6 and 7 which are not key figures.

Figure 1 and 4 can be merged, and the legend of current figure 4 should be outside

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the chart.

Figure 5 does not do a good job in summarising the message. Why not give the average GF-PFG for the whole period (and for the terrestrial versus marine if substantially different)?

Figure 9 needs more explanation on why results are different.

In the discussion section, I felt there was too little comparison with other studies (Good et al. 2010a, 2010b, Irwin et al. 2010 for the most recent for example).

I also believe there should be an average size distribution for: whole field study, marine and terrestrial, also including average BC concentrations if data are available. BC trends could be added with figure 1 showing the organic/sulphate ratio. I find it difficult there are only two scenarios (marine and terrestrial), was PMF on AMS organic matrix carried out and is this published somewhere else?

Overall, whilst the importance and the quality of the data are not remotely questioned, but a better presentation should be achieved with the figures.

Interactive comment on Atmos. Chem. Phys. Discuss., 11, 3117, 2011.

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