

Interactive comment on “Volatile organic compounds (VOCs) in photochemically aged air from the Eastern and Western Mediterranean” by Bettina Derstroff et al.

Anonymous Referee #2

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Review of Derstroff et al., VOCs in photochemically aged air from the Eastern and Western Mediterranean.

Derstroff et al present PTRMS observations from CYPHEX and use these observations together with several models to evaluate the sources and sinks of several VOCs. The manuscript is well written and the tools are described in enough detail (generally, but see note below). My main concern with the analysis is that after reading the manuscript I'm not sure what I have learned and what the key findings are. It seems largely a data description report. I don't per se have a problem with that, but the editor should decide whether this minimal contribution is sufficient for publication. My own opinion would be to suggest the authors go back and see what more can be gleaned from this data.

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From an analysis point of view, I find Figure 13 to be the most compelling, but it seems lost in the rest of the discussion. A few minor comments. 1. Ln 71 Should add recent Muller et al paper (Nature Comm) to discussion of methanol budget. 2. Ln 155. Would like more information on the large variation in the lab calibrations. Do the authors have any hypotheses for the challenges? Beyond adding uncertainty to the data, does the potential for RH dependent error alter any of the conclusions derived from these data? 3. Please explain how the solubilities are determined for use in the models. For several compounds, these are pH sensitive (H^*)? 4. Ln 270. This PP is confusing as earlier there is a discussion of what the ecology of the island is.

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