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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Investigating PAH relative reactivity using congener profiles, quinone measurements and back trajectories" *by* M. S. Alam et al.

Anonymous Referee #2

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The manuscipt describes the measurements of PAHs and quinones concentrations in the air samples (gaseous and particle phases) collected in remote area. The problem of quinones presence in the atmospheric air is not well described yet. In this paper, the authors for the first time report the results of atmospheric quinones determination at remote areas.

The manuscript is elegantly prepared. The analytical work is well described and referred. The results are clearly presented and logic. The great value is in the searching for information about reactivity with radicals and partitioning of PAHs between the phases of parent PAHs and quinones. The other important point is the differences in

seasonal concentrations of quinones, what gives clues about their environmental fate.

I believe that the manuscript greatly contributes to understanding of atmospheric chemistry of PAHs and PAH related compounds and in my opinion can be published as it is.

Interactive comment on Atmos. Chem. Phys. Discuss., 13, 25741, 2013.