

Interactive comment on “Aircraft observations of five pockets of open cells sampled during VOCALS REX” by C. R. Terai et al.

Anonymous Referee #2

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This manuscript describes pockets of open cells (POCs) observed during the during the VAMOS Ocean Cloud Atmosphere Land Study Regional Experiment (VOCALS-REX). A phenomenological description of POCs is provided in terms of aerosol, cloud, and boundary layer dynamics. The results are very similar to those in previous studies, so this study helps to solidify the existing conceptual understanding of the various POC associated properties. The topic is appropriate for ACP. I recommend the manuscript for publication.

Comments

To me the main remaining difficulty in explaining POCs is understanding the aerosol budget. Section 6.3 attempts to solve this, but is unsuccessful. The main problem is

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that the source term from the modeled sea-to-atmosphere flux is much more variable than the sink terms. Ultimately that means that the extremely simplified approach is not suitable to describe the many processes leading to the hypothesized equilibrium aerosol state.

pg. 8307: Integrated over the size distribution of the PCASP: I think the authors mean integrated over the same size range as sampled by the PCASP.

Interactive comment on Atmos. Chem. Phys. Discuss., 14, 8287, 2014.

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