

Interactive comment on “An overview of the HIBISCUS campaign” by J.-P. Pommereau et al.

Anonymous Referee #4

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This is a very long and dense report. It reads more like a technical report than a Journal paper and the details of instrument operation should either be synthesized or placed in appendices. Apart from this issue, the manuscript is quite readable, if long and describes in detail the instruments and conditions sampled. I have a few explicit comments below:

P 2393, Line 4. It is asserted that maritime tropical convection rarely reaches the top of the tropopause or overshoots. While it is clear that on average, maritime convection in the tropics is less intense than continental convection there is clear evidence in TRMM data (e.g. Nesbitt et al JCLim 2000, Zipser, BAMS 2007) and radar data (e.g. May and Ballinger, 2007) that significant numbers of cells reach the tropopause. Examples of very cold brightness temperatures have also been reported in MCS's and tropical cyclones (e.g. Ebert and Holland, MWR 1992)

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P 2397, Line 6) Please see the paper by Comstock and Jakob GRL 2004 examining ECMWF analyses of large scale ascent and linking this to observations of thin cirrus at the ARM tropical sites.

P 2399. It should be noted that the Bauru site is more sub-tropical than deep tropical and is well south of the TRMM LBA area for example.

Sect 4.1. Several of these subsections could be synthesized and condensed and the details left to appendices.

Sect 5.0 The absence of the Geophysica is mentioned several times - probably once is enough.

Sect 5. The description of the flights is somewhat repetitious. It is good to provide some background for the meteorology for each flight, but some of this could be in a table. It would be nice to see some indication of the key results from the different instruments.

Interactive comment on Atmos. Chem. Phys. Discuss., 7, 2389, 2007.

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