

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

### **Anonymous Referee #2**

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I have reviewed the paper “An overview of the HIBICCUS campaign” by J. P. Pommereau et al. This is a generally well-written paper that provides an overview of an extensive and interesting field campaign. My comments are largely editorial since the paper draws few science conclusions. There are numerous typographical and English language errors. I suggest that one of the co-authors from the U.K. read over the paper and correct these. For instance, footnote 8 has two misspelled words, and Footnote 7 seems to be dangling across two pages. While the writing is generally fine, there are numerous unclear sentences, missing articles, and incorrect uses of tense. The paper has large numbers of acronyms many of which do not appear to be defined. For instance UT/LS on page 2391 is not defined until later. NASA-TRMM (pg 23930 is never defined. ECMWF, NCEP, ERA40, RAMS, LEM and so forth are not defined. There may be 100 examples of similar undefined acronyms. I'd use a spell checker to find these and define them, even if most people know what they mean. I found Section 6 to be

rather disappointing. The section is really a laundry list of other papers, without the graphs and figures to understand the results. I found few firm conclusions here. Rather than merely providing a few paragraphs about each paper it would be more useful to draw out overall conclusions from the set of papers, or describe how they compliment each other. I don't see the relevance to comparing a model to data taken many years earlier than HIBISCUS. In several places (eg pg 2438 line 14, pg 2439 line 26, pg. 2440 line 1) model results are referred to as observations. Mixing models and data is confusing, and then calling the model results observations is particularly confusing. It seemed to me that the modeling sections suggest that convection may be dehydrating various parts of the TTL, while the data show it hydrates the continental TTL. I am skeptical of the modeling results, but they are not presented in enough detail to understand. However, having clear contradictions in the results is confusing. I'd be tempted to remove all the model references from the Results. The models are not data, just interpretations. Misc (note this is not a complete list of editorial errors, the paper needs work by one of the co-authors.) Pg. 2392 line 15 roles should be plural. Pg. 2393 line 1 what is continental -maritime that occurs only over land mean? Pg. 2393 line 20 what does HIBISCUS mean? Pg. 2394 line 8, start with "The" line 26 replace e.g. with words that mean something. Pg. 2395 line 4 define this as the 3rd objective instead of next, restate sentence so the objective is defined . Line 4-10 split into 2 sentences, it is confusing now. Line 19 change is to was. Pg. 2396 line 5 define what it is about water vapor that is an issue. Line 7 remove comma. Pg. 2397 line 1. Unless you observed cirrus at 30 km, break this sentence into two. Line 10 "different" than what? Pg 2398 line 5 The final goal was instead of "finally is". Pg. 2339 line 1 allow "us" to Line 4 7 or 17 km? Line 5-7 don't make sense. Line 8 how is it perceived? Line 14 remove "to be" Pg. 2401 line 8. What was too heavy? This page and the next have large numbers of undefined acronyms. Pg. 2403 line 29 presented not were presenting. Pg. 2404 line 1" discussed" Pg. 2410 line 20 "allow it to " Pg. 2415 line 2-3 this sentence is confusing. Pg. 2415 line 5 descended not are left descending Pg. 2417 line 9 called a secondary Pg. 2418 line 10 "towards the north-east" Pg. 2419 line 13 reduced relative

to what? Line 18 towards the south-east Pg. 2420 line 2 indicated line 25, why did SF-3 come after SF-4? Pg. 2421 line 26-this sentence doesn't make sense. Pg. 2422 line 21 remove "a" Pg. 2430 line 26 replace "to" with from Pg. 2440 line 3 what does compares well mean? What compared well. Line 4 what issue was better understood? How was it understood. Pg. 2441 line 10 how does PV tell you this? Pg. 2442 line 4 Are you saying SAGE is correct, or incorrect? Pg. 2443 line 3 where is here? Line 18 where are these available? Pg. 2448 line 9. How do you know the particle size ? Pg. 2475 line 3 put a space between A and -2.

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

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