

Interactive comment on “Comparison of Aircraft Measurements during GoAmazon2014/5 and ACRIDICON-CHUVA” by Fan Mei et al.

Anonymous Referee #1

Received and published: 24 May 2019

Review of “Comparison of aircraft measurements during GoAmazon2014/5 and ACRIDICON-CHUVA” by Mei et al.

Recommendation: Reject

This paper looks at data from two different aircraft (the G1 and HALO) collected during three coordinate flights during a recent research campaign, and reports on the comparisons between the measurements obtained by these aircraft. Although comparisons of the performance of instruments operating on the same platform are rather common, the intercomparison between probes operating on different aircraft are less common (but not non-existent). Therefore, it is possible that detailed comparisons between probes could yield some interesting findings as it would allow one to better assess how the different flight conditions as opposed to the instruments themselves affect the

C1

intercomparison.

Unfortunately, this paper does not make a significant contribution to the literature in this respect. Instead, it merely presents data on what were the differences between instruments measuring a range of different variables (e.g., gas phase measurements, aerosols, clouds and solar radiation) and comparing these differences against the quoted uncertainties in the measurements. I really did not learn much by reading the manuscript as there really was not detailed treatment of why any of the differences between the instruments occurred, but rather only a very broad brush cursory description of what the differences were was included.

This paper read much like a technical document that many different groups who operate aircraft write after the completion of a field project. The question thus arises as to whether such technical documents should appear in the refereed literature as this group is trying to do. My thought is that such a paper does not belong in the refereed literature. If such papers are to be routinely published by all groups, there will be a massive proliferation of published papers. And, this paper really does not make a meaningful contribution to understanding the operating characteristics of different probes as would be expected from an AMT manuscript. Thus, whereas there are no flaws in the manuscript as submitted, I do not see that the manuscript makes any substantial contribution to scientific progress within the scope of the journal (substantial new concepts, ideas, methods or data). Therefore I recommend rejection.

If the authors would want to convert this work into a refereed publication, I would encourage them to do more detailed comparisons of the instruments in their different categories separately (e.g., gas phase, clouds, aerosols, radiation, etc.). This would allow them to delve into more details of how the probes actually work and examine whether or not the different aircraft parameters also have some effect on the measured quantities. Such a study would have more scientific significance.