Crosbie et al report on measurements of the chemical composition of cloud water and particles collected during the Clouds, Aerosols and Monsoon Processes – Philippines Experiment (CAMP2Ex). They focus on three cases that differed by their air mass type. The analysis is focused on various parameters and ratios. The paper is generally well written (with some minor exceptions; see below) and the methodology and analysis are explained in detail. However, the paper lacks a discussion that places the results into the context of previous studies. In addition, language is sometimes somewhat colloquial.

## **Major comments**

- 1. The paper is very descriptive and the discussion is mostly limited to the comparison between the three cases and some attempts to explain their differences based on emissions and air mass type and history. With its current content, I recommend conversion to a Measurement Report.
- 2. If the authors prefer consideration as a Research Article, a discussion section should be added. The very detailed and nice introduction includes many useful references that highlight the complexity of aerosol cloud interactions and their importance in altering aerosol properties. The discussion of the presented results should be placed into context of such prior studies, either in a dedicated discussion section or as part of the conclusions. What are the main message and the main conclusions of this paper? What do we learn about the role of cloud processing that has not been known before?
- 3. The study is based on a very limited number of samples, which is inherent to the complexity, and difficulties of sampling in clouds. However, this sparsity of the samples and therefore the limitation of their interpretation should be also highlighted in the discussion section.

## **Minor comments**

- 4. I. 26: The first sentence sounds awkward: (1) is composition a 'quantity' or 'property'? How do you 'quantify' composition? (2) Add 'chemical'.
- 5. I. 51: 'aerosols' in the parentheses seems redundant
- 6. I. 186: 'degree of freedom': Do you mean simply 'parameters' here or do you perform a statistical analysis that justifies this expression that is strictly used for statistical contexts?
- 7. I. 410, I. 415: 'AMS (PILS) composition' sounds colloquial. It is the 'particle composition measured by AMS (PILS)'
- 8. I. 470: This equation needs more explanation. Please also write it as an equation and not as in-line text.
- 9. I. 515: 'more variable' than what? As compared to the previous studies?
- 10. l. 684: 'SS subjected to aqueous production' implies that sea salt is formed by processes in the aqueous phase. Please clarify.
- 11. I. 808: Was Cruz et al's data collected at the same location?

12. l. 813: (1) If the acids are in the gas phase, they are not present in ionic form. Thus, it should read that 'formic and acetic acids reside in the gas phase'. (2) Is the assumption of complete evaporation justified? See for example, Liu et al., 2012, <a href="https://doi.org/10.1029/2012JD017912">https://doi.org/10.1029/2012JD017912</a>, Xiu et al., ACS Earth Space Chem. 2020, 4, 2, 157–167, <a href="https://doi.org/10.1021/acsearthspacechem.9b00210">https://doi.org/10.1021/acsearthspacechem.9b00210</a>

## **Technical comments**

- 13. l. 115: Define 'CAPE'
- 14. Several references are not included in the reference list: e.g., Cruz et al., 2019; Paciga et al., 2014
- 15. It would be very useful to provide a table with all abbreviations used, together with a short definition or equation, e.g. RWF, AEM, etc. It makes the reading very tedious to constantly having to flip back and forth to find these definitions.
- 16. At several places in the text, semicolons are used instead of commas. Semicolons should be only used to separate main clauses whereas commas can separate lists (e.g., l. 123-127, l. 152).