

Referee Re-Review: Chemical characterization of cloud water at Monte Cimone (Italy): impact of air mass origin and assessment of atmospheric processes

Anonymous Referee #2

I appreciate the authors for addressing all of my comments, and I thank them for calculating chloride depletion in the cloud water phase. I was wondering whether the authors have also calculated chloride depletion for the PM phase, as the original draft included the following statement: “ We observed a depletion of Cl^-_{PM} and $\text{NO}_3^-_{\text{PM}}$, in the aerosol phase compared to the cloud aqueous phase, particularly visible for samples 09/10 A and B, 10/10 A and B, 17/10 B, 22/10 and 23/10 B and C.”

Additionally, it is not clear from the response whether any text has been added to discuss the results of the Cl^- depletion calculations, especially given the high percentage of Cl^- depletion for samples under Period 1.

We thank the reviewer for evaluating our work. In fact, we did not perform the calculation for Cl^-_{PM} and $\text{NO}_3^-_{\text{PM}}$ in the PM compared to the aqueous phase. We decide to not investigate chloride depletion in detail because we measured its concentration with ACSM, which is less sensitive than other instruments and could lead to wrong conclusions. We did not add the discussion on Cl depletion in the aqueous phase because it would add another concept and the article is already quite rich in this sense.

Technical comments:

Line 128: should be ‘TOC-VCPH/CPN analyzer’ instead of “TOC-VCPH/CPN TOC analyzer”

Line 532: should be ‘cells·mL⁻¹’ instead of “cells mL⁻¹”

Line 535: should be ‘cells·m⁻³’ instead of “cells m⁻³”

The text was corrected based on the reviewer's suggestions.

Anonymous referee #3

All my comments are well responded and I have no more questions except changing "4.0 Conclusions" to "4 Conclusion".

The text was corrected based on the reviewer's suggestion.