The revised paper is a much improved compared to the first version. I just have a few minor editorial comments and one suggestion of this manuscript.

We thank the reviewer for reading again the manuscript.

Page 22, line 10: The size distribution is very important for CCN, thus I agree with the statement regarding the lognormal modes. But it is not just about the primary emissions – secondary processes have a large role on size distribution. I think the issue of simulated size distribution, which is not evaluated in this study, is an important point and warrants mention in the conclusions. I just have one other comment that does not have to be done for this paper. The authors could test this hypothesis by changing the size distribution to better fit the observed size distribution and then compute CCN. If CCN improves, which I suspect it would, then. >> ***We agree with the reviewer that secondary processes are important for the number size distribution, but as specified in the text (on the basis of previous papers), the CCNs are more sensitive to the primary emissions than nucleation. The size distribution could be misrepresented because the right distribution of the primary emissions between the modes is not known a priori, moreover being the approach modal the standard deviations of the lognormal modes are held constant during the run and their values could not be representative of the observed ones. We are planning a study on the sensitivity of the modelled CCNs to the aerosol size distribution parameters, aerosol hygroscopicity and updraft velocity. A remark has been added to the conclusion rephrasing the sentence "… the uncertainties in CCN efficiency is a general modelling problem that may prevent a correct representation of the amplitude of the aerosol-cloud interaction, i.e. the response of microphysical cloud properties to the variation of CCN concentrations. This issue surely deserves and warrants further insight in the future" as "… the uncertainties in CCN efficiency is a general modelling problem that may prevent a correct representation of the amplitude of the aerosol-cloud interaction, i.e. the response of microphysical cloud properties to the variation of CCN concentrations. This issue surely deserves and warrants further insight in the future, studies on the sensitive of the CCNs to emission distribution in the lognormal modes, aerosol hygroscopicity and updraft velocity are desirable to improve the aerosol activation in the models"***

Page 23, line 23: "aerosol is only aware about liquid clouds" is awkward. Suggest changing to "accounts for aerosols only within liquid clouds," >> ***The sentence has been rephrased as suggested.***

Page 24, line 8: change “Nord” to “North”. ***Done.***

Page 29, line 8: Change “performances” to “performance” and ”were” to “was”. It is awkward to have plural for performance since I think of it as the overall assessment of the model rather than individual metrics. ***Done.***

Page 31, line 1: Change “CCN load” to “CCN concentrations”. ***Done.***