This paper investigates the growth of ice particles through the Bergeron-Findeisen process by using Direct Numerical Simulations (DNS). The paper is well written, and the results are interesting. I can recommend this paper for publication, but I would like the authors to answer next questions:

1) I would like to know more details about the simulations, such as grid spacing, time stepping and used numerics. It would be also interesting to know if the droplets/ice sediment, and with which velocity.

2) In the description of the measured environmental conditions (table 1) it would be useful to have the mixing ratios q_c and q_i and the number concentrations q_{nc} and q_{ni}. It is also said that drizzle was measured, but I guess this has no influence on the experiments.

3) The DNS experiments have a dissipation rate of 10 \text{m}^{-2}\text{s}^{-3}. Is this not too high for such a cloud?

4) Please state the mean temperature in the experiments.

5) Why do you use a standard ice concentration in the DNS of 1000 \text{l}^{-1} when only 1\text{l}^{-1} was measured?

6) The experiment RH_noGC starts with unusually low radius of droplets (R=1.5 \text{ \mu m}), which I do not think can be easily found in clouds. It is then not surprising that all liquid
water quickly evaporates if RH<100%. Please motivate these experiments.

7) It is a common assumption in weather models/LES with a time step 1-20 seconds that liquid water is in thermodynamic equilibrium, but not the ice. The underlying assumption is that water condensation/evaporation is much faster than ice processes. Could the authors comment on how good this approximation is? These experiments could be very useful to verify the above-described approximation.