

Overall, I am satisfied with how the authors addressed my questions and comments during the first round of reviews. I recommend acceptance. My specific suggestions for improvement are outlined below.

Minor Comments

- Line 27–28: "...with calibrated measurements typically only accurate to within 5–10% in supersaturated regimes..."
- Line 85: "...has an average net warming effect" is redundant. Suggested: 'has a net warming effect on average.'
- Line 87: The use of water vapor and moisture is inconsistent. Consider using only one of the two throughout where applicable.
- Line 98: The phrase "...and hence the parameterization of the microphysical processes within them are a major source of uncertainty" contains a subject-verb agreement issue. Suggested: "...and hence the parameterizations of the microphysical processes within them are a major source of uncertainty."
- Line 105: "This has lead to the employment..." contains a grammatical error. Corrected: "This has led to the employment..."
- Line 209–210: "...by a logarithmically scaled factor ranging from 0.01 to 20." Suggested: "...by applying a logarithmic scaling factor between 0.01 and 20 to emulate varying INP concentrations."
- Line 235–236: "...by scaling the number of activated cloud droplets per time step in the entire profile..." Suggested: "by scaling the number of activated cloud droplets throughout the vertical profile at each model time step..."
- Line 275: "The values of the variables are usually taken..."
- Line 342: "droplet mass concentrations" should be droplet mass mixing ratio
- Line 351: Inconsistent use of units. Replace g/kg with kg kg^{-1} for consistency.
- Line 396: "concentration" should be "mixing ratio"
- Line 397: "frozen hydrometeors" or "frozen phase" is typically referred to as "ice hydrometeors" or "ice-phase" Apply this terminology consistently throughout.
- Line 462: Should the definition be : $(q_c + q_r)/q_{\text{tot}}$?

- Line 503–504: "...slightly increase the median RH_i ..." Corrected: "...slightly increases the median RH_i ..."
- Line 534: ‘ "proportional to the ice number concentration times the radius of ice..." Suggested: "inversely proportional to the product of ice number concentration and ice particle radius..."
- Line 589: " ~ -43 °C and ~ -330 hPa". Typo in pressure: " ~ -43 °C and ~ 330 hPa"
- Line 658: Keep consistency with hour units. Sometimes hour is used and other times h.
- Line 682: "...modulated by cloud physics processes". Slightly awkward. Consider: "modulated by cloud microphysical processes".
- Line 703: “to a lesser extend”. Typo. Suggested: "to a lesser extent"
- Line 714–715: "with the a less pronounced impact". Typo. Suggested: "with a less pronounced impact"