**Response to reviews**

We thank the reviewer for their comments which have improved the quality of our manuscript.

**Reviewer 1**

One thing that I still think might be worth sharpening in the introduction and discussion of the paper is the reference to the previous work having not considered evaporation and the effect of the temperature variation.

Response: In the original paper, we referred to the comprehensive review of past theoretical, experimental and numerical studies of droplet evaporation presented in Roy et al., 2023. This was the reason we initially didn't include the fundamental material requested by the reviewer. In this revised version, we have added an additional paragraph to the paper in the Introduction to briefly summarize the key literature requested by the reviewer.

As the authors indicate, textbooks often consider evaporation as it occurs in a falling droplet, but the same equations hold as in the case of condensation, and a similar interpretation of the mechanisms described by those equations (changing of course from supersaturation to subsaturation, condensational warming to evaporative cooling, and so...). The authors refer to Pruppacher and Klett. In Rogers and Yau, it is in the last paragraph of the first section of chapter 7, page 105 in the 3rd edition, which starts "The rate of evaporation of a droplet is also described by (7.18)...". Those equations retain the radial variation and the effect of latent heat (evaporative cooling in case of evaporation) on the droplet's temperature, Tr, which is then different from the ambient temperature, T_infty, and retaining this difference in the saturation vapor pressure changes the evaporation rate by a factor of order one.

Response: The last paragraph of Rogers and Yau (1987) is focused on droplet fall velocity as a function of droplet size. Eq. 7.18 is an approximate solution to the droplet growth/evaporation equation first presented in Mason (1971). This quasi-steady approximation is applicable for droplet growth where the supersaturation is typically less than 1% and the difference between the droplet temperature and ambient air is negligible. For evaporation, where vapor deficits can occur over a wide range of relative humidities, the approximation breaks down as the droplet temperature can deviate significantly from the ambient environment (Srivastava and Coen, 1992; Roy et al., 2023).

We have added a statement to this effect in the Introduction.

Sometimes in the text, I think that these ideas are being mixed with the quasi-steady approximation that is assumed in those textbooks, which might obscure the novelty of this paper, namely, the investigation of unsteady effects. That is why think that sharpening the differences to that previous work might be worth to strengthen the paper.

Response: We have added a paragraph addressing the reviewer's concern in the Introduction and noted in the Introduction and the Conclusions that the focus of this study is on the unsteady solution of the droplet evaporation in a subsaturated environment.