Supplement of Atmos. Chem. Phys., 25, 18549–18569, 2025 https://doi.org/10.5194/acp-25-18549-2025-supplement © Author(s) 2025. CC BY 4.0 License.





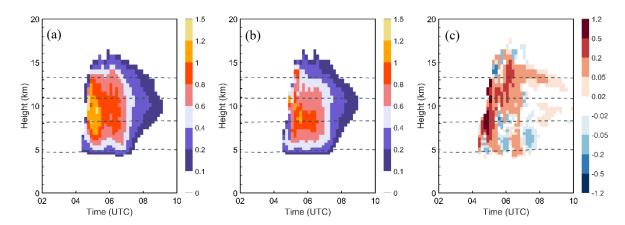
## Supplement of

## Influence of secondary ice formation on tropical deep convective clouds simulated by the Unified Model

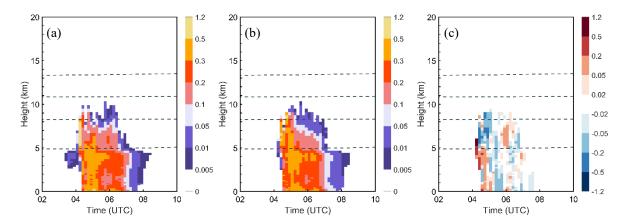
Mengyu Sun et al.

Correspondence to: Mengyu Sun (mengyu.sun@manchester.ac.uk)

The copyright of individual parts of the supplement might differ from the article licence.



**Figure S1**. Time–height plots of ice water content (IWC; g m $^{-3}$ ) for simulations: (a) all-SIP, (b) no-SIP, and the difference between allSIP and noSIP simulations (i.e., allSIP minus noSIP). Panels (a–c) are averaged over regions where IWC > 0.01 g m $^{-3}$ . The 0, -20, -40, and -60 °C isotherms are shown by the dashed lines.



**Figure S2**. Same as Figure S1, but for rain water content (RWC;  $g m^{-3}$ ). RWC values are averaged over the area where either the ice water path or rain water path exceeds  $1 g m^{-2}$ .