

S1 Additional figures

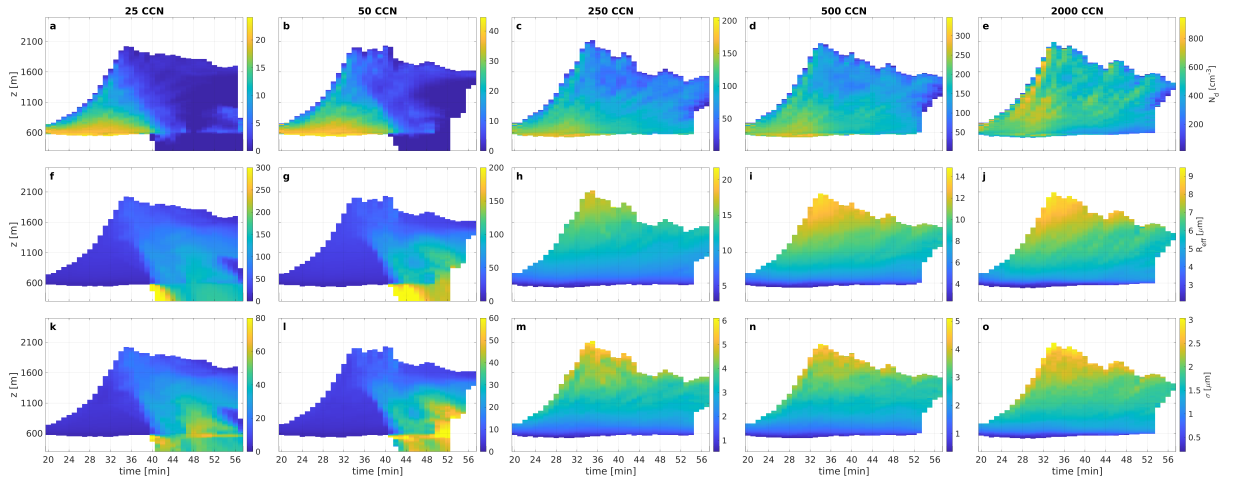


Figure S1: Hovmöller diagrams of horizontally averaged cloud microphysical properties: top row - droplet number concentration [cm^{-3}], middle row - effective radius [μm], and bottom row - standard deviation of the drop size distribution (DSD) [μm]. Columns correspond to simulations initialized with different CCN concentrations (left to right): 25, 50, 250, 500, and 2000 cm^{-3} . Note that each panel uses a different color scale, and that the color bars in panels f, g, k, and l are clipped for visual clarity.

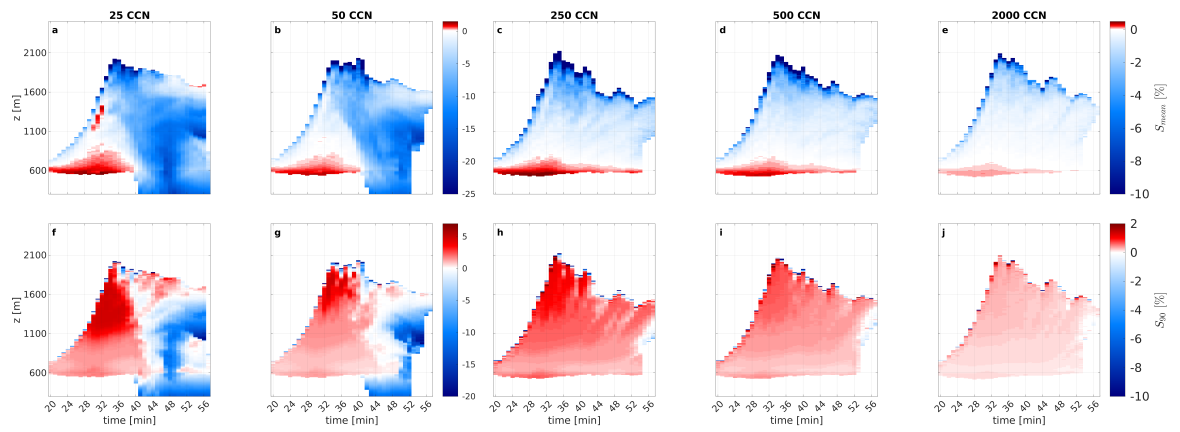


Figure S2: Hovmöller diagrams of cloud saturation ratio. The top row shows the horizontally averaged saturation ratio at each level, and the bottom row shows the horizontal 90th percentile saturation ratio at each level. Columns correspond to simulations initialized with different cloud condensation nuclei (CCN) concentrations, decreasing from right to left: 2000, 500, 250, 50, and 25 cm^{-3} .

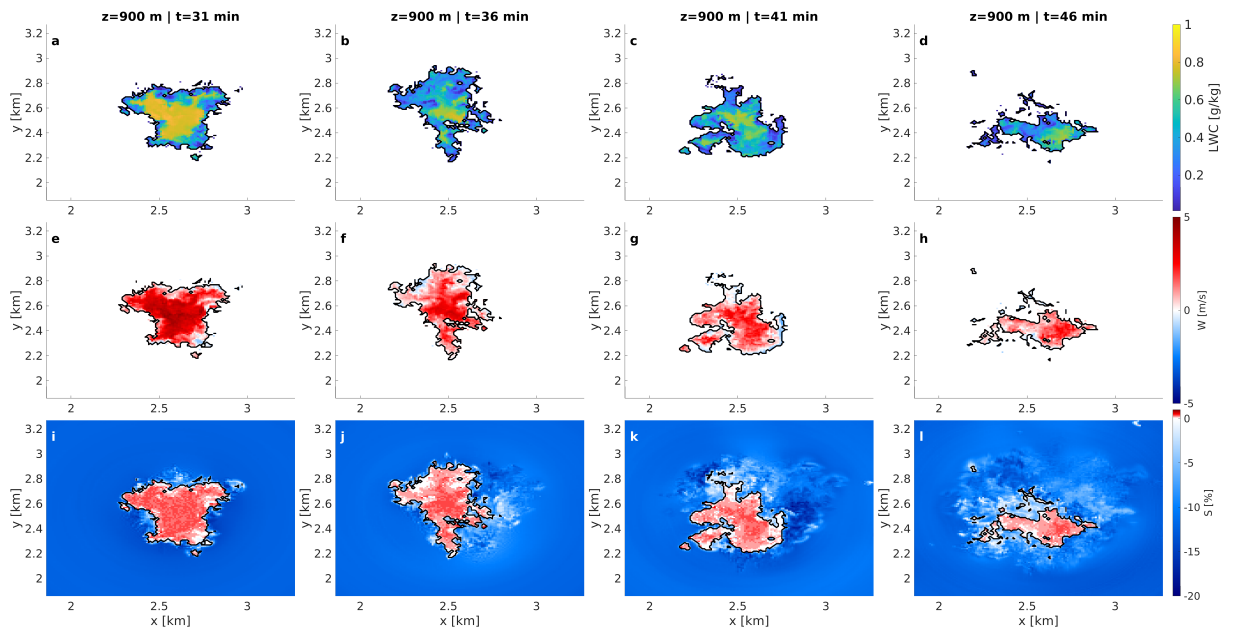


Figure S3: Horizontal cross-sections at a height of 900 m. The upper panels show liquid water content (LWC) [g/kg], the middle panels show vertical velocity [m/s], and the lower panels show saturation [%]. Rows correspond to different times during the cloud evolution. Results for the non-precipitating cloud initialized with 500 cm^{-3} CCN.

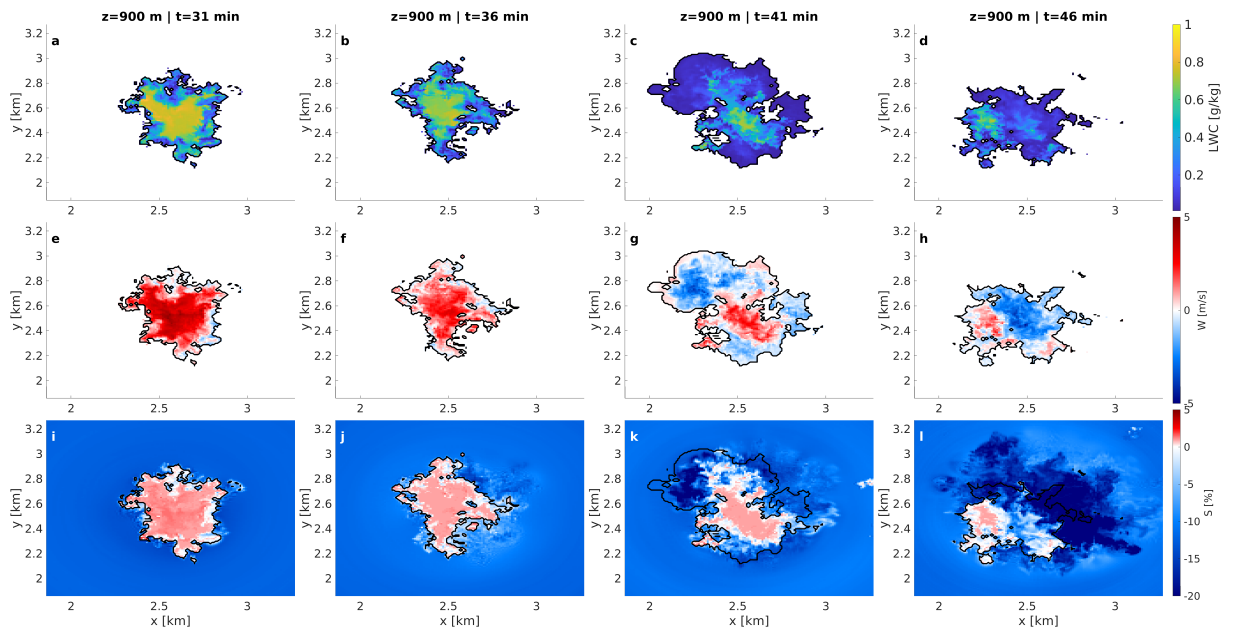


Figure S4: Horizontal cross-sections at a height of 900 m. The upper panels show liquid water content (LWC) [g/kg], the middle panels show vertical velocity [m/s], and the lower panels show saturation [%]. Rows correspond to different times during the cloud evolution. Results for the precipitating cloud initialized with 50 cm^{-3} CCN.

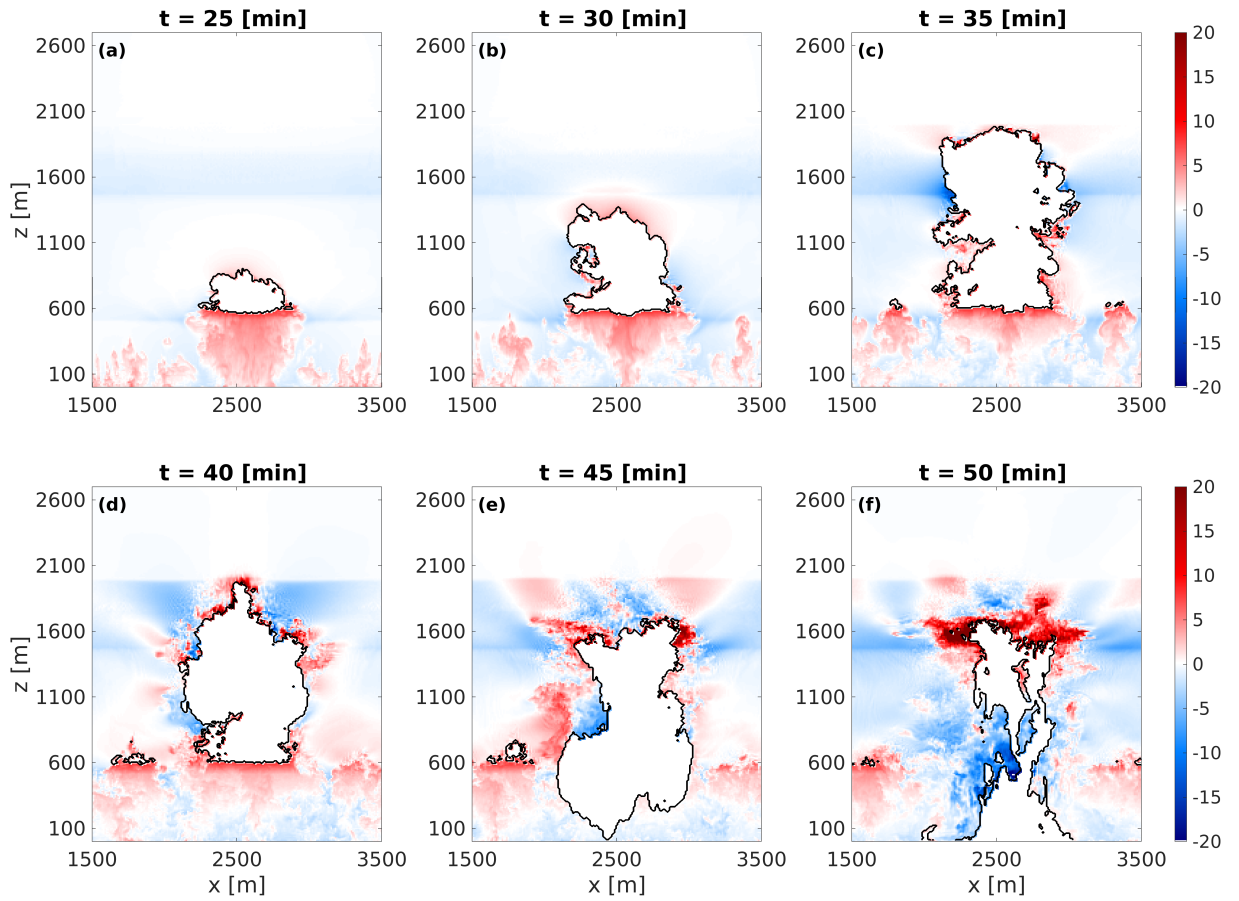


Figure S5: Vertical cross-sections from the 50 cm^{-3} CCN simulation. Color shading represents the relative humidity anomaly relative to the initial RH profile, while black contours mark the cloud boundary ($LWC > 0.01 \text{ g kg}^{-1}$). Panels show different times during the cloud evolution.