Supplement of

Conditions for super-adiabatic droplet growth after entrainment mixing

Fan Yang et al.

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Table S1: Initial dry aerosol radii for different bins.

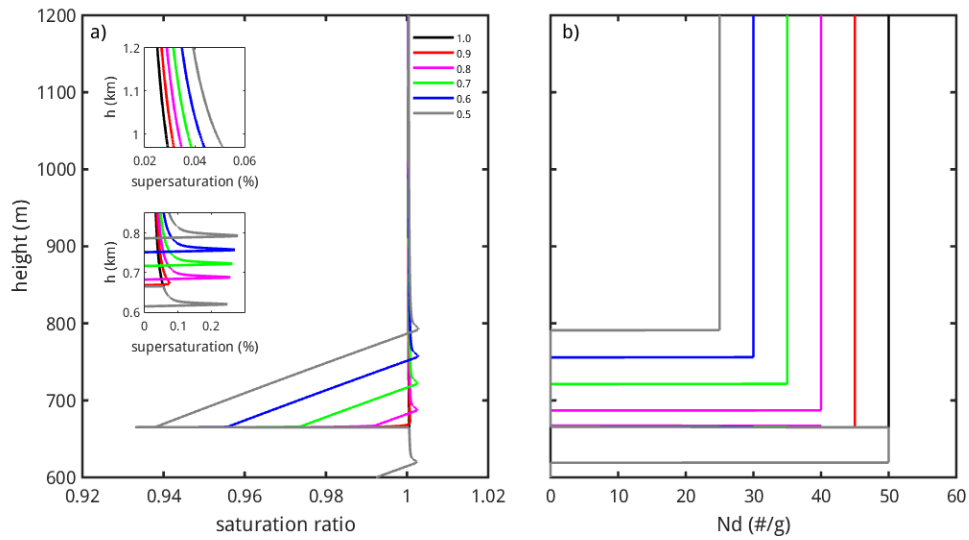| Bin number	r_{dry} (nm)	Bin number	r_{day} (nm)
1	463.7	11	61.5
2	378.9	12	50.3
3	309.6	13	41.1
4	253.0	14	33.6
5	206.7	15	27.4
6	168.9	16	22.4
7	138.0	17	18.3
8	112.8	18	15.0
9	92.1	19	12.2
10	75.3	20	10.0

Figure S1: (a) Saturation ratio and (b) cloud droplet number concentration profiles for various cloud mixing fractions when monodisperse cloud droplets mix with clean environment air with low updraft velocity (0.1 ms^{-1}).
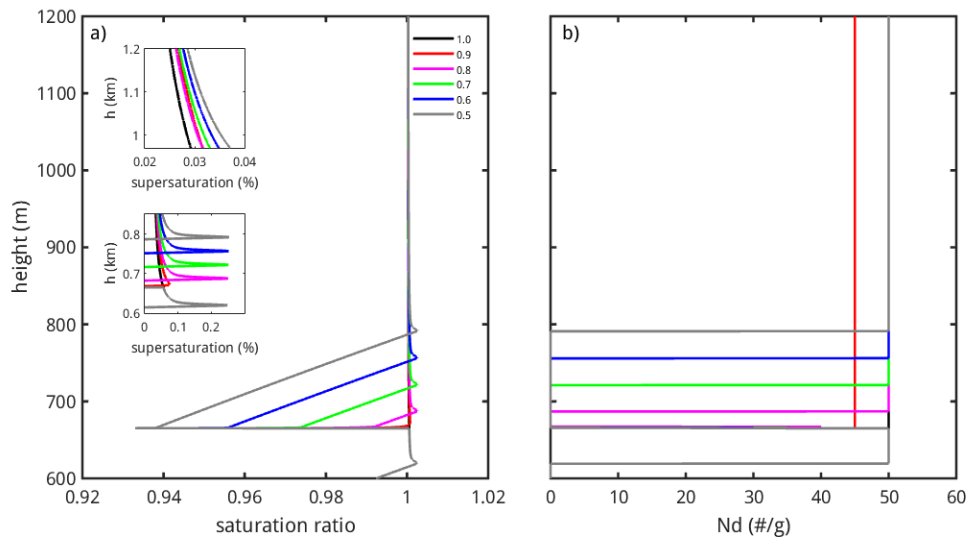

Figure S2: (a) Saturation ratio and (b) cloud droplet number concentration profiles for various cloud mixing fractions when monodisperse cloud droplets mix with polluted environment air with low updraft velocity (0.1 ms^{-1}).
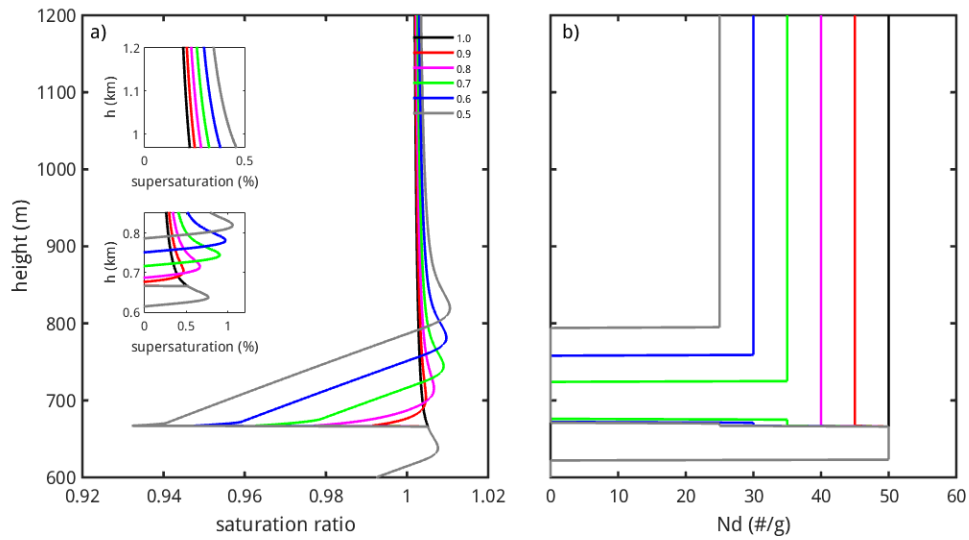
Figure S3: (a) Saturation ratio and (b) cloud droplet number concentration profiles for various cloud mixing fractions when monodisperse cloud droplets mix with clean environment air with high updraft velocity (1.0 ms⁻¹).
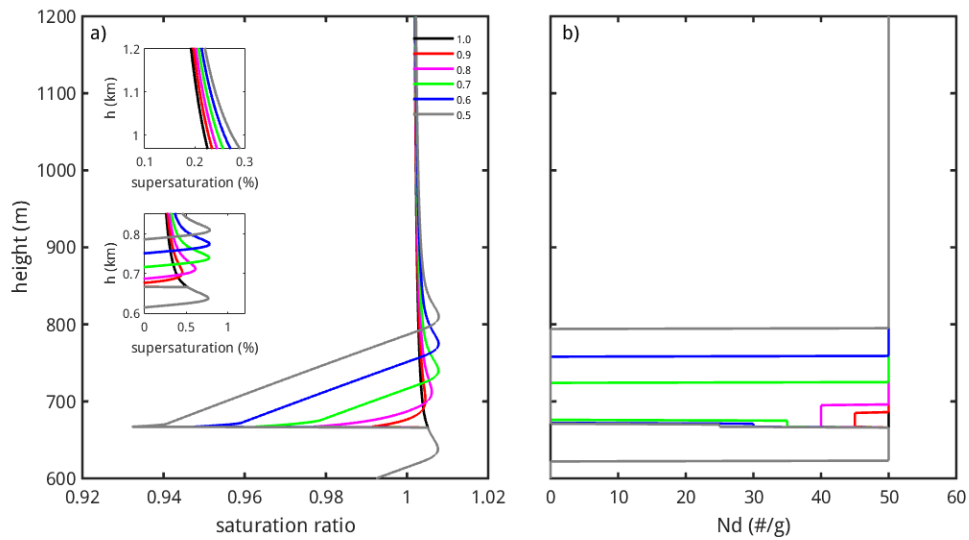

Figure S4: (a) Saturation ratio and (b) cloud droplet number concentration profiles for various cloud mixing fractions when monodisperse cloud droplets mix with polluted environment air with high updraft velocity (1.0 ms⁻¹).
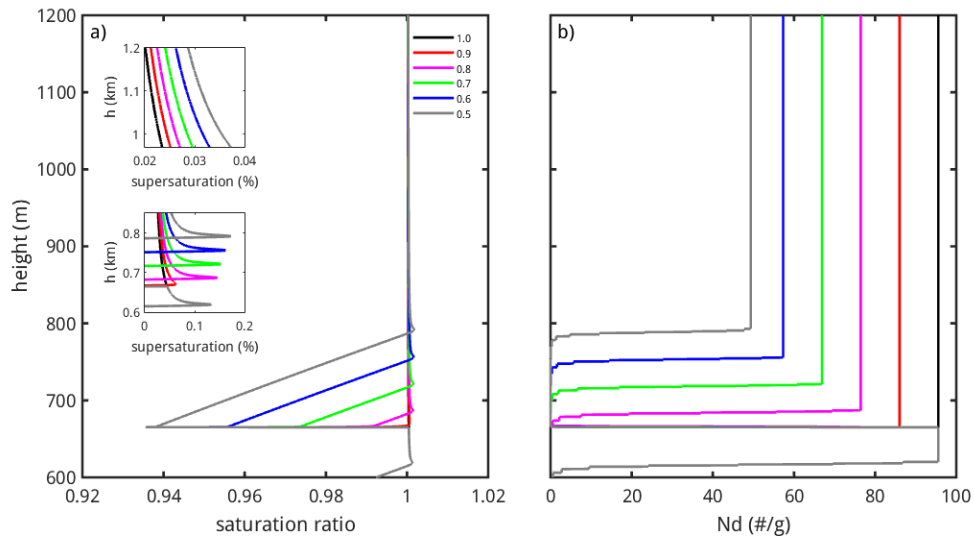
Figure S5: (a) Saturation ratio and (b) cloud droplet number concentration profiles for various cloud mixing fractions when polydisperse cloud droplets mix with clean environment air with low updraft velocity (0.1 ms^{-1}).
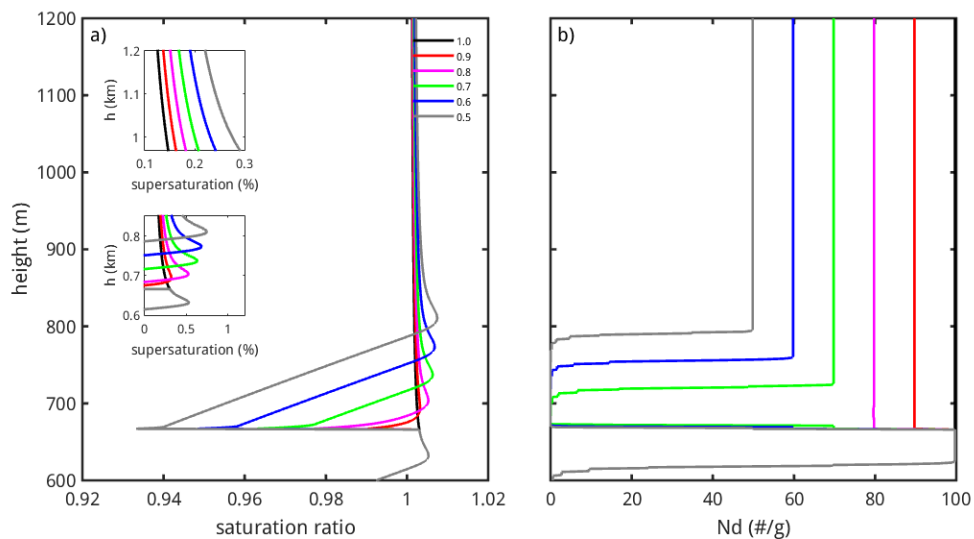

Figure S6: (a) Saturation ratio and (b) cloud droplet number concentration profiles for various cloud mixing fractions when polydisperse cloud droplets mix with clean environment air with high updraft velocity (1.0 ms^{-1}).