

α_M	mass accommodation coefficient of water vapour
α_{MA}	mass accommodation coefficient of the chemical compound “A”
$c_{A\infty}$	ambient concentration of the trace gas “A”
c_{pd}	specific heat at constant pressure for dry air
D_A	diffusion coefficient of the chemical compound “A”
E	reaction activation energy
$\mathbb{H}_A^{\text{eff}}$	effective Henry’s law constant of the chemical compound “A”
ΔH_D	reaction enthalpy of dissociation at constant temperature and pressure
ΔH_H	reaction enthalpy of dissolution at constant temperature and pressure
\mathbb{K}_A	dissociation constant
$k_{0,\dots,4}$	reaction rate coefficients
κ	hygroscopicity parameter
M_A	molar mass of the chemical compound “A”
$n(r_d)$	spectral density function of aerosol particle sizes
n_{tot}	total aerosol concentration
\mathcal{N}	super-droplet multiplicity
θ	dry air potential temperature
p_v	partial pressure of water vapour
p_{1000}	pressure equal 1000 hPa
R	gas constant
R_d	gas constant for dry air
\mathbb{R}_A	reaction rate of the chemical compound “A”
ρ_d	dry air density
r_d	dry radius
\bar{r}_d	mean radius of the assumed lognormal aerosol particle size distribution
r_w	drop radius
r_c	cloud water mixing ratio
r_r	rain water mixing ratio
r_v	water vapour mixing ratio
σ_g	geometric standard deviation
T	temperature of air
$\langle v \rangle$	average velocity of the molecules