$$\frac{dD}{dt} = -\frac{D}{2\tau_e\left(1-\frac{t}{\tau_e}\right)}$$

$$\tau_e = \frac{D^2}{84.76\Delta\Theta\left(1+0.27Re^{1/2}\right)}$$

$\tau_e =$ Evaporation time scale of the droplet

$\Delta\Theta =$ Wet bulb temperature depression

$D =$ Drop diameter

$Re =$ Reynolds number

$t =$ Time