

Analogue experiment of rain

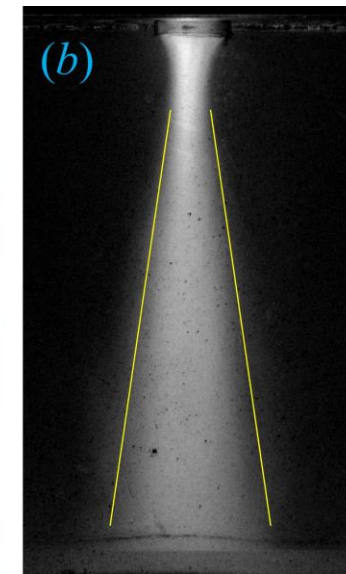
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Atmosphere
Air
Rain droplet
Water vapor

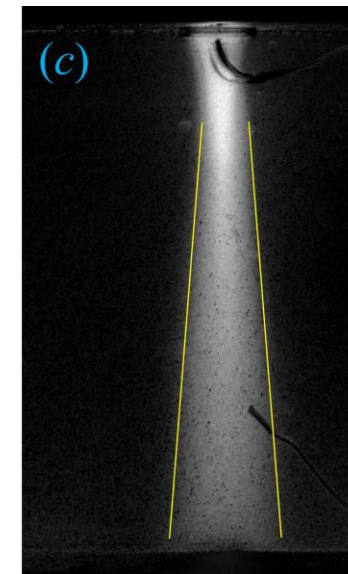
Experiment
Water
Salt particle
Dissolved salt



Localized rain



Sand
(non-dissolving)



NaCl
(dissolving)

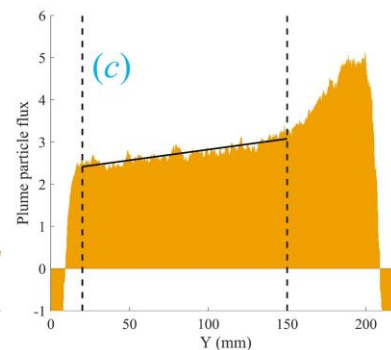
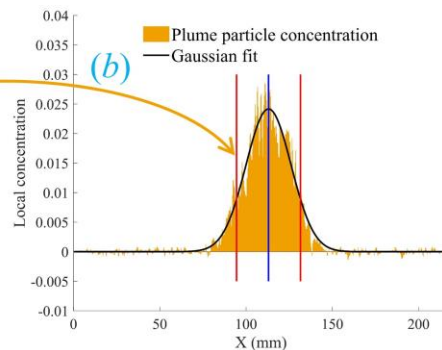
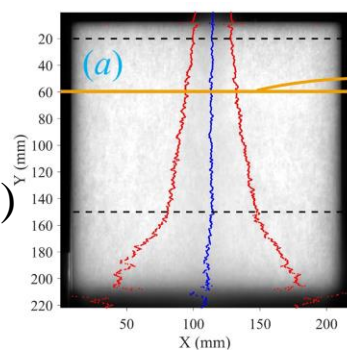
Model for non-dissolving particle:

Half width $b \sim \frac{Q^2}{M} \sim \alpha z$

Vertical velocity $w_p \sim \frac{M}{Q} \sim \text{constant}$

Reduced gravity $g'_p \sim \frac{F}{Q} \sim z^{-1}$

Beads
(non-dissolving)



Salt
(dissolving)

