Kohler Curve

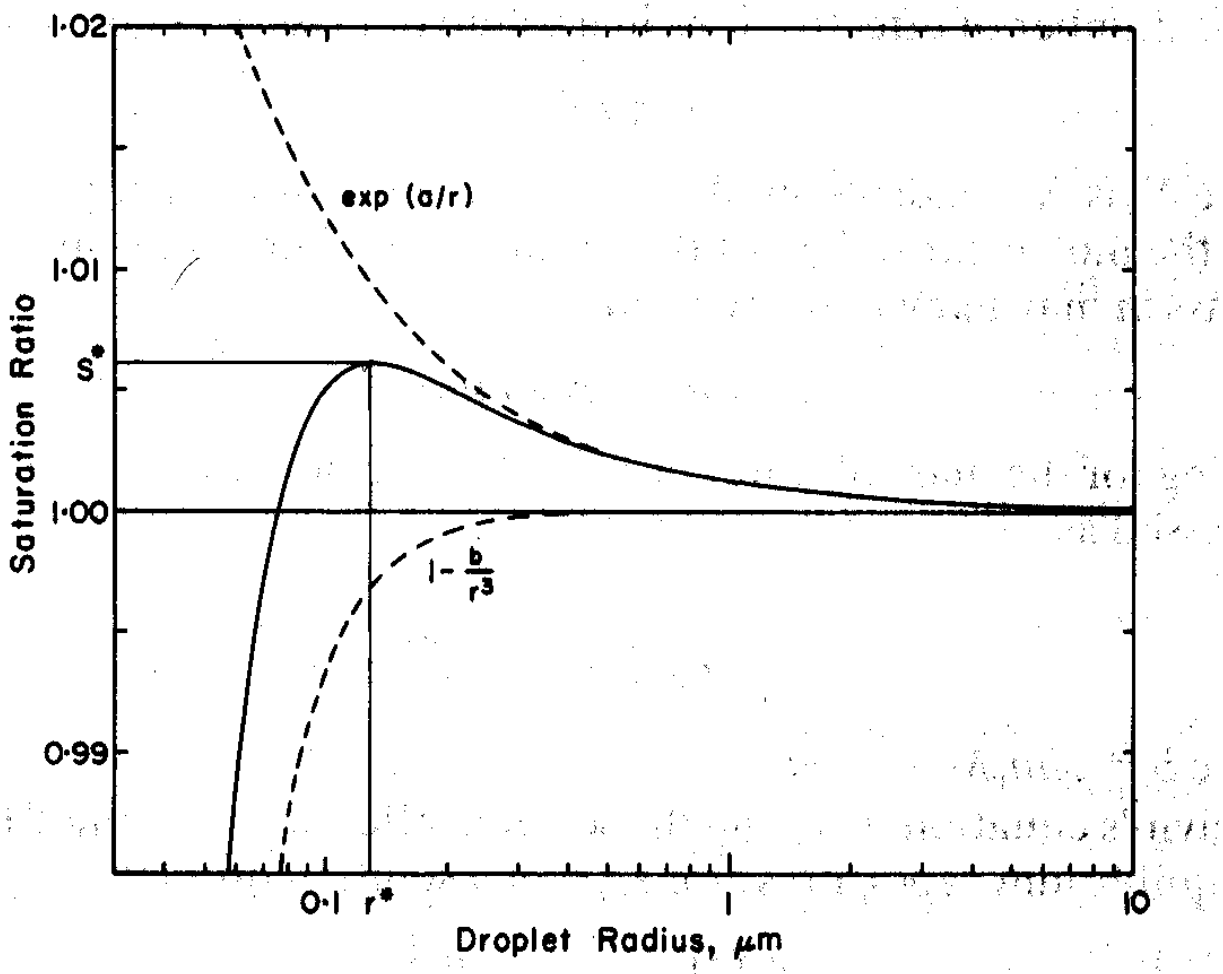


FIG. 6.2. Equilibrium saturation ratio of a solution droplet formed on an ammonium sulfate condensation nucleus of mass 10^{-16} g.

Kohler Curve

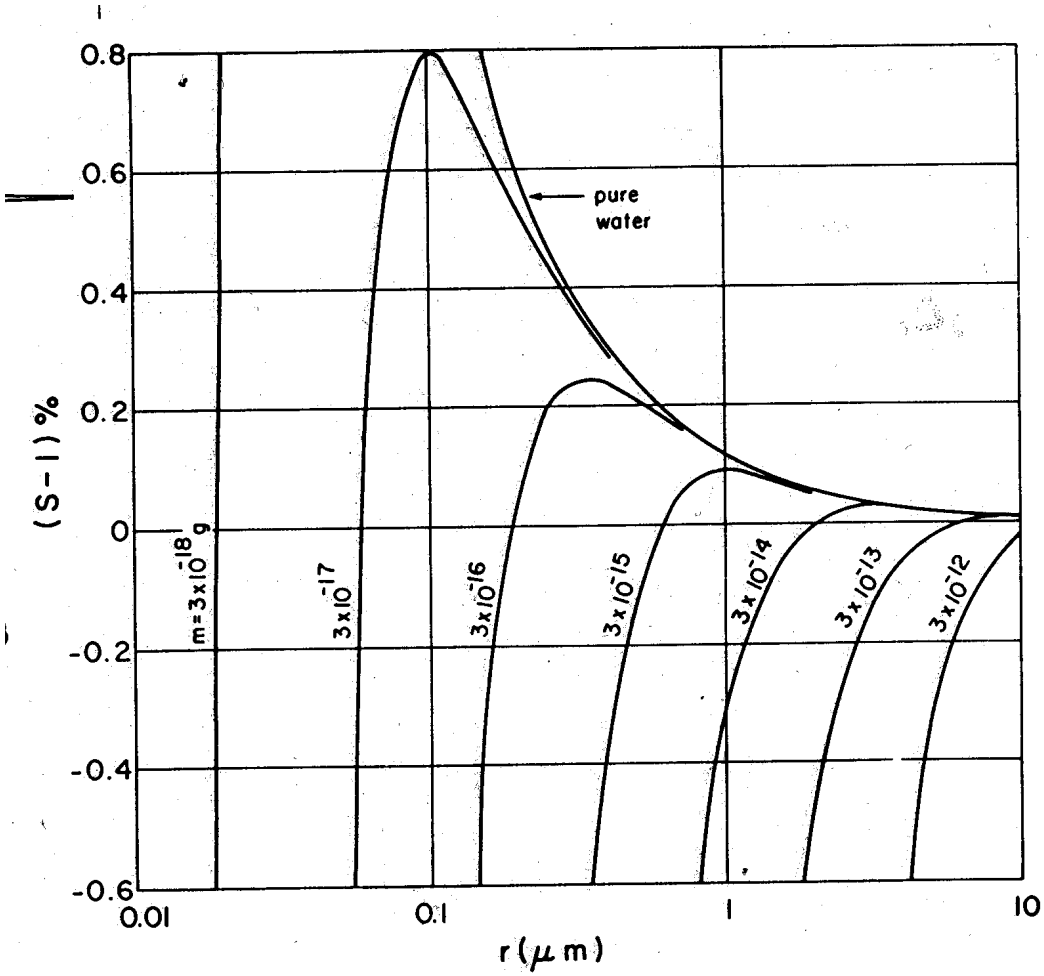


Fig. V-7. *Activation of condensation nuclei.* $(S - 1)$ = supersaturation; r = drop radius. The upper curve gives the supersaturation corresponding to the vapour pressure of pure water droplets. The other curves correspond to droplets containing a fixed mass of sodium chloride, as indicated on each curve. The line for 0 supersaturation corresponds to the equilibrium vapour pressure over a plane surface of pure water. The curves are calculated for 0°C.

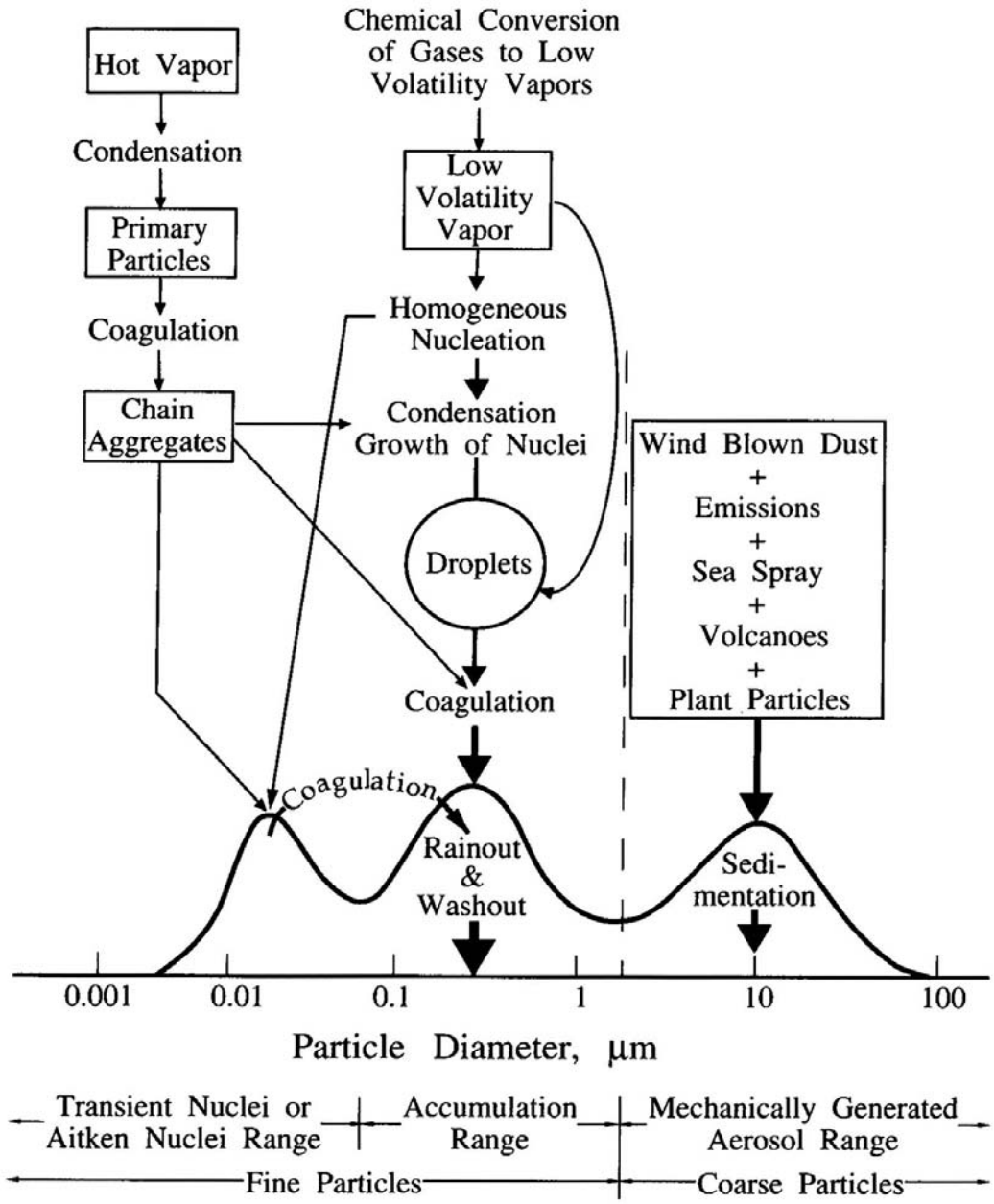
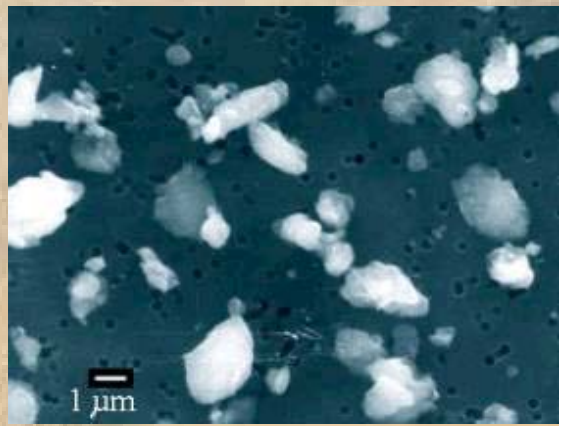


FIGURE 2.15 Idealized schematic of the distribution of particle surface area of an atmospheric aerosol (Whitby and Cantrell, 1976). Principal modes, sources, and particle formation and removal mechanisms are indicated.

Mineral Dust

Dust (mineral aerosols)
- diameter size: 2-300 μm
- main material: sand, silt, clay
- includes essential trace metals such as Fe
- consists of insoluble and soluble fractions

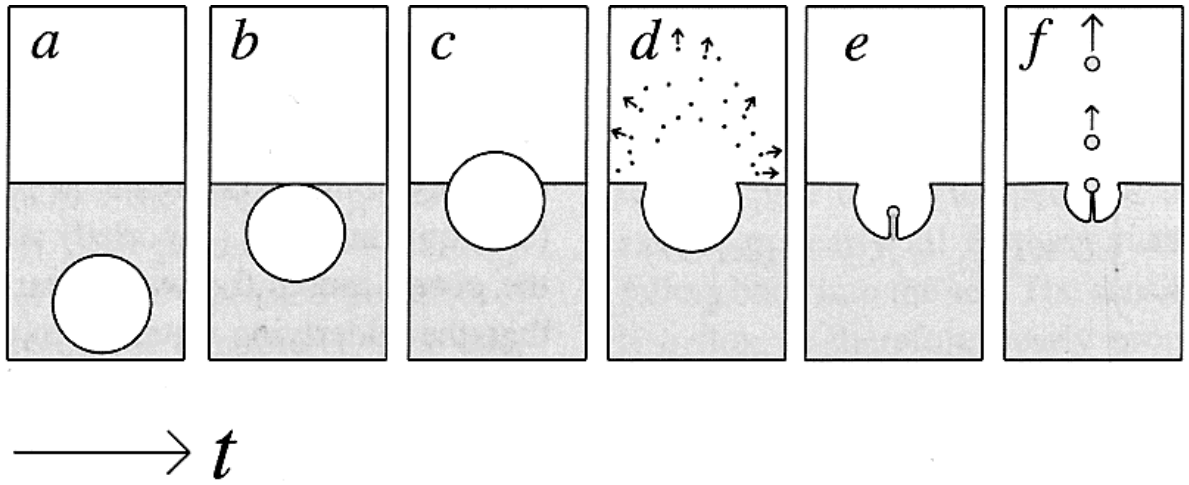


Organic aerosols - burning

Seasalt aerosols...

wind→ bubbles→ spray

whitecap coverage $W \alpha U^{3+}$

seasalt production via bubble bursting...

- film drops (many, small, organics)
- jet drops (fewer, larger)