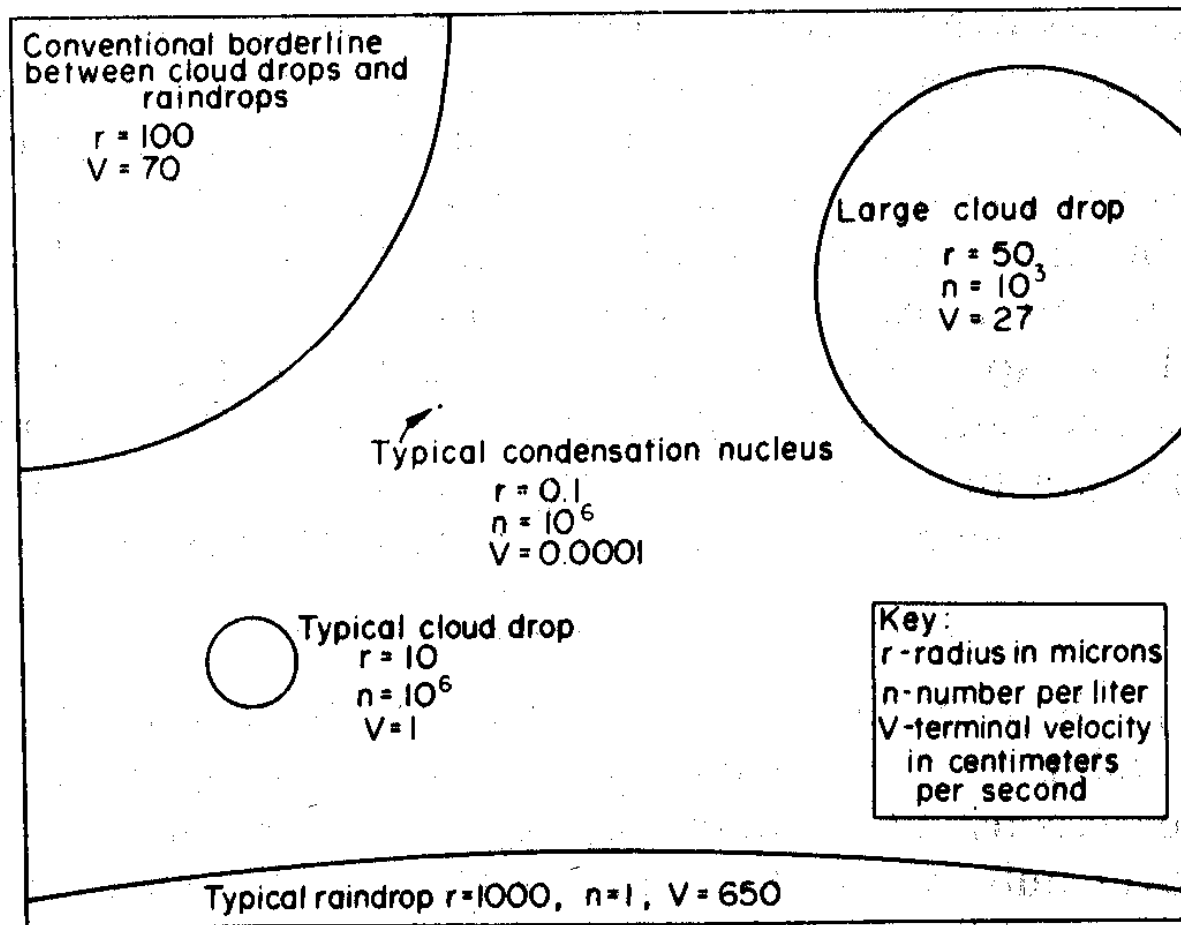


Initiation of Rain: Collision and Coalescence



Collision Efficiency

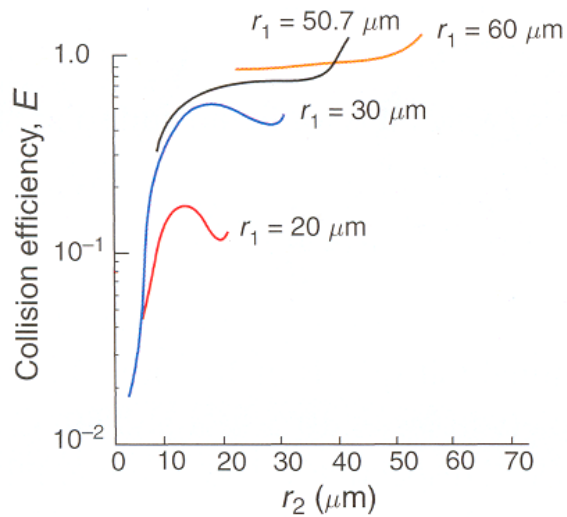


Fig. 6.20 Calculated values of the collision efficiency, E , for collector drops of radius r_1 with droplets of radius r_2 . [Adapted from H. R. Pruppacher and J. D. Klett, *Microphysics of Clouds and Precipitation*, Kluwer Academic Pub., 1997, Fig. 14-6, p. 584, Copyright 1997, with kind permission of Springer Science and Business Media. Based on *J. Atmos. Sci.* **30**, 112 (1973).]

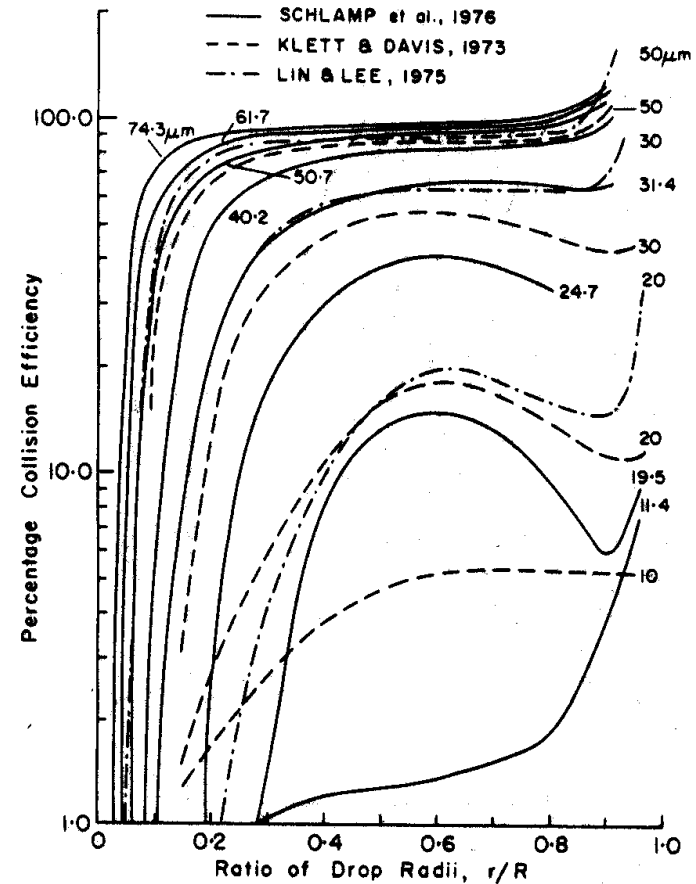


FIG. 8.2. Computed collision efficiencies for pairs of drops as a function of the ratio of their radii. Curves are labeled according to the radius R of the larger drop.

Coalescence Efficiency

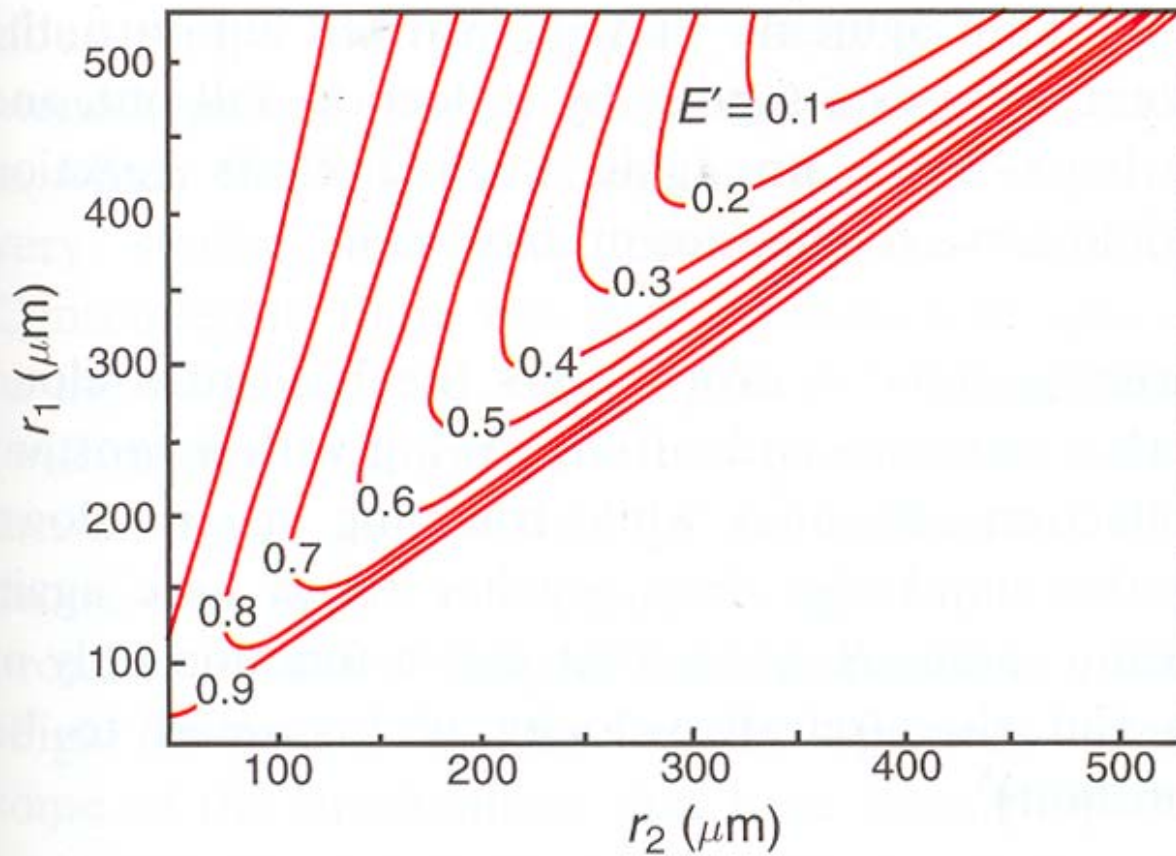


Fig. 6.22 Coalescence efficiencies E' for droplets of radius r_2 with collector drops of radius r_1 based on an empirical fit to laboratory measurements. [Adapted from *J. Atmos. Sci.* **52**, 3985 (1995).]

Droplet Growth vs. Time

