

Figure 1(a)

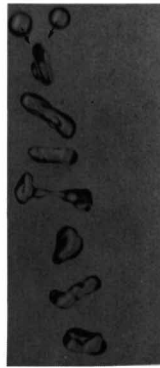


Figure 1(b)

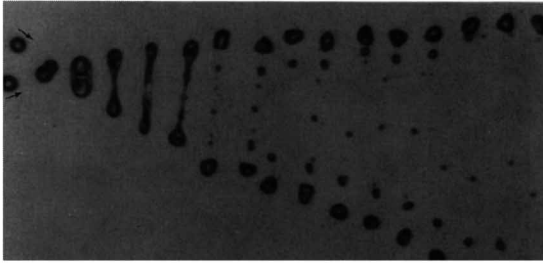


Figure 1(c)

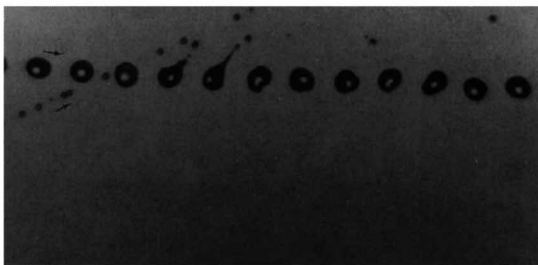


Figure 1(d)

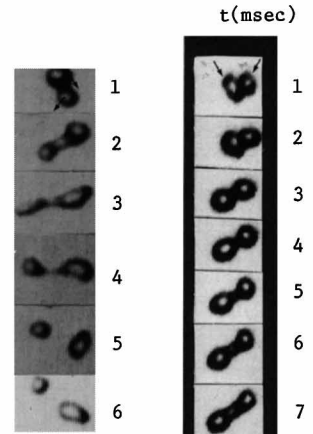


Figure 1(f)

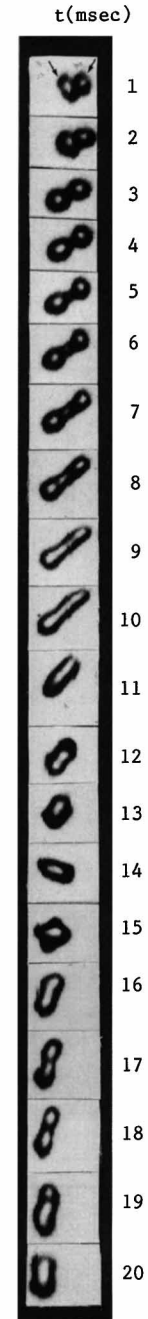


Figure 1(e)

COLLISION DYNAMICS OF TWO LIQUID DROPS

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The resultant phenomena of the collision between two drops of similar liquids depend on four dimensionless parameters: Reynolds number, Weber number, diameter ratio, and the impact parameter. The single flash still photographs show the binary collisions of two streams of water drops. The uniform size drop streams, generated by Rayleigh meth-

od, are collided with each other at different angles. Two different coalescence collisions at $We = 10$ and different impact parameters are presented in Figs. 1(a) and 1(b). Figure 1(c) shows the separating collision where the temporarily coalesced drop will stretch and separate into two large drops and many satellite droplets. In this figure $We = 20$ and the impact parameters are around 0.2. Figure 1(d) shows collisions of two streams of drops with large size differences. The detailed collision dynamics between two drops are also presented by the high-speed video pictures at 1 msec intervals in Figs. 1(e) and 1(f).