

Breaking Droplet in a Shear Flow

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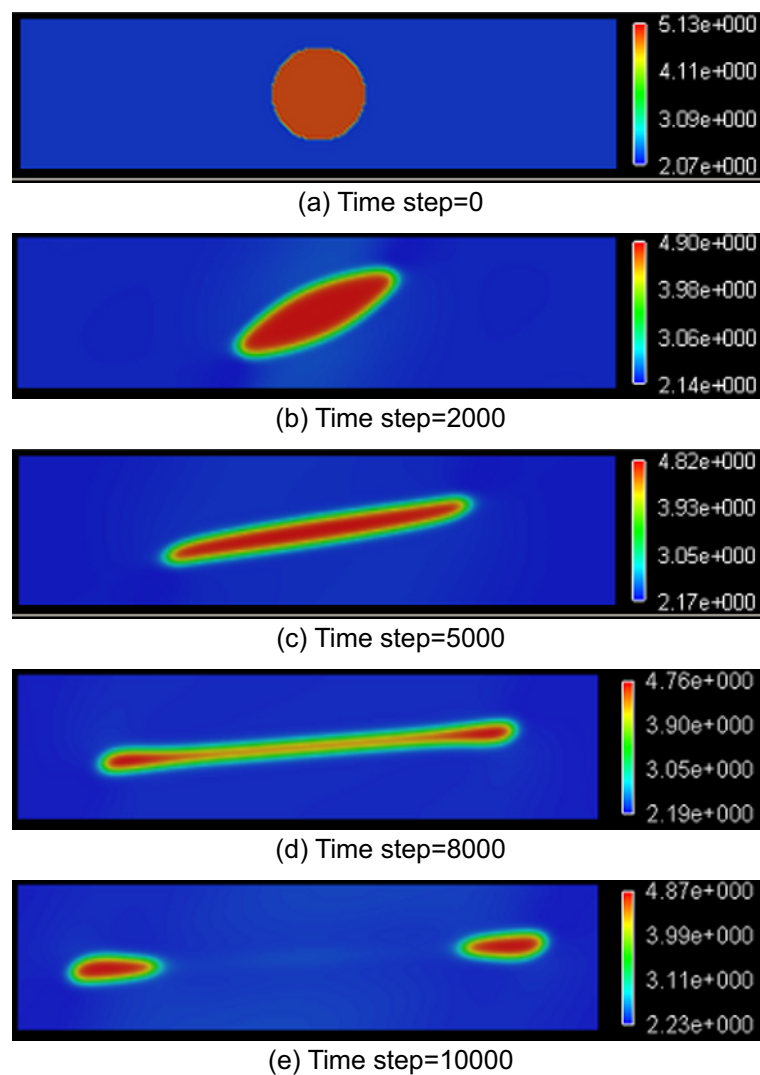


Fig.1. The droplet breaking in a shear flow.

In recent years, numerical analysis of natural phenomena is briskly performed according to the development of computers. Various analytical methods have been proposed and many phenomena have been analyzed by computers. Visualizing numerical results of simulation are important to grasp a phenomenon intuitively. We show some numerical results of a two-phase flow. Figure 1 shows a process of the breaking droplet in a shear flow. We analyzed the droplet between parallel plates is torn by the shear force using LBM (Lattice Boltzmann Method). We can see the droplet changes the shape and splits into two parts with progress of time. Especially LBM can capture the interface of fluid well, because the fluid is considered as the gathering of imaginary particles.