

Evolution of the internal structure of layered convection system

Kei Kurita[1], Takatoshi Yanagisawa[2]

[1] Dep. Earth & Planet. Phys., Univ. of Tokyo, [2] Earth and Planetary Sci., Univ. of Tokyo

Evolution of layered convecting system has been investigated in laboratory experiments on the miscible fluids pair. Aided by mutual mass transfer across the interface, the mass-ratio of the convection layers changes with time. This process is referred as the hydrodynamical entrainment. Based on these experiments, we discuss 1) stability of D-layer at the base of the mantle, and 2) present mass-ratio of the upper and the lower mantle.