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Statistic fluid dynamic of multiphase flow[1] HYUNKYUNG LIM, JAMES GLIMM, YIJIE ZHOU, XIANGMIN JIAO, Stony Brook University — We study a turbulent two-phase fluid mixing problem from a statistical point of view. The test problem is high speed turbulent two-phase Taylor-Couette flow. We find extensive mixing in a transient state between an initial unstable and a final stable configuration. With chemical processing as a motivation, we estimate statistically surface area, droplet size distribution and transient droplet duration.

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