Yan Guo* (guoy@dam.brown.edu), 182 George Street, Providence, RI 01912, Benoit Pausader (benoit@math.brown.edu), Box 1917, Brown University, Providence, RI 01912, and Ian Tice (tice@dam.brown.edu), Box F, Brown University, Providence, RI 01912. Asymptotic stability in some fluid problems. Preliminary report.

We will discuss recent results of time decay rate in Euler-Poisson system for ion dynamics in a plasma, as well as time decay of a viscous surface wave of a incompressible fluid. (Received July 28, 2010)