

The motion of a thin film of fluid moving along an inclined plane, with free upper boundary is studied, an exact solution is given. For such motion it is proven a nonlinear stability criterion which involves Reynolds  $R$ , Froude  $F$ , and Weissmann  $W$  numbers. This criterion ensures exponential decay to the given Poiseuille flow if the perturbations are initially "not too large". Critical relations between  $R$ ,  $F$ ,  $W$ , and size of initial data are expressed by computative relations. The stability criterion ensures nonlinear stability without assuming any boundedness on the motions, and provides an "a priori" bound for the solution.