

Meeting: 999, Nashville, Tennessee, SS 11A, Special Session on Nonlinear Partial Differential Equations and Applications

999-35-219 **Dejan Slepcev*** (slepcev@math.ucla.edu), Mathematics Department, UCLA, Box 951555, Los Angeles, CA 90095. *Blow-up dynamics of long-wave unstable thin-film equations*. Preliminary report.

Long-wave unstable thin-film equations have rich dynamics that includes spreading indefinitely, converging to a steady state, or blowing up in finite time. I will describe the known features of the blow-up of these equations. Particular attention will be given to the equation with critical parameters for which optimal lower bound on the blow-up rate, and mass concentration results will be discussed. (Received August 23, 2004)