Local Topological Dynamics in Sheared 2D Foams[1] KAPILANJAN
KRISHAN, YUHONG WANG, MICHAEL DENNIN, Physics, University of California, Irvine — We describe our experiments on two dimensinal foams subject to
parallel shear. The system provides insights into shear localization in glassy systems. The dynamics of the system are described through statistics on the local
topological rearrangements through neighbour rearrangements as well as average
velocity profiles. The statistics indicate qualitative differences in the dynamics of
the flow associated with boundary conditions affecting the wettability of the foam.
In particular, we correlate the distribution of T1-events with localized regions of
plug-flow.

Kapilanjan Krishan
University of California, Irvine

Date submitted: 02 Aug 2005   Electronic form version 1.4