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 dimensional 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.

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