

## **Topic F: Experimental Techniques and Diagnostics**

“Imaging foam dynamics using space- and time-resolved Diffusing Wave spectroscopy”

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We use a novel space- and time-resolved light scattering apparatus to investigate the dynamics of shaving cream foam. Previous space- and time-averaged data collected by conventional Diffusing Wave Spectroscopy –light scattering in the limit of high multiple scattering– have been interpreted by assuming that the foam dynamics is due to discrete bubble rearrangement events. Our space- and time resolved experiments allow us to directly “visualize” these intermittent events. Quite unexpectedly, however, we find that a distinct, continuous dynamical process is also present, accounting for a substantial fraction of the average foam dynamics.