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The Search for Precursor and Aftershock Dynamics in Aqueous Foam MICHAEL M. FOLKERTS, SAMUEL W. STANWYCK, OLEG G. SHPYRKO, Department of Physics, University of California, San Diego — We probe the dynamics of an aqueous foam sample using optical photon correlation spectroscopy. Using a multi-speckle detection scheme to record the changes in a coherent laser speckle pattern, we gain insight into the nature of the dynamics in the foam during the aging process. We introduce Temporal Contrast Analysis, an approach that couples to intermittent, “avalanche”-like events, and enables us to study the magnitude, duration and temporal spacing of such events. We will discuss the application of Temporal Contrast Analysis to search for precursor and aftershock events that precede or succeed major structural rearrangements in the foam.

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