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**Spatiotemporal stress/strain correlations in a quasi-2D jammed emulsion** KENNETH DESMOND, ERIC R. WEEKS, Emory University — We flow quasi-2D emulsions in a flow geometry analogous to pure shear to better understand the microscopic events within jammed materials during the straining process. Our quasi-2D system serves as an experimental model system of jamming and consists of oil-in-water emulsion droplets confined between two parallel plates. Using a technique we have developed, we can determine the forces between pairs of droplets in contact based on each droplet's deformation. By imaging the motion and deformation of the droplets during the flowing process, we quantify the microscopic events using spatiotemporal correlations in strain and stress. We study these spatiotemporal correlations at various droplet concentrations to understand how the microscopic events change as we approach the jamming point.

Prefer Oral Session  
 Prefer Poster Session

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