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**Pushing on colloids: How a gel can stress a glass**

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We employ a novel technique to for the application of external mechanical and osmotic stress on dense suspensions of colloidal particles. Thermally expandable NIPA hydrogels are used to confine a sediment of colloidal particles. By allowing the gel to expand up to ten times it's initial volume, we dramatically compress the sediment. Using laser scanning confocal microscopy, we directly measure the effects of increased stress on the properties of a colloidal hard sphere suspensions. We observe the appearance of heterogeneities as the particles are pushed together. We will present results on the analysis of the local volume and dynamical properties of these heterogeneities and postulate their equivalence to characteristic features of analogous systems near their jamming transition.