Analysis of gel heterogeneities on a local level PHILIP BOYNE, FREDERIC LECHENAULT, KAREN DANIELS, Dept. of Physics, NC State Univ. — We study the heterogeneity of gels near the sol-gel transition through measurements of the spatial variations in gel strength. The correlated motion of fluorescent polystyrene microspheres suspended in gels is measured via two-point microrheology. Analysis of this correlated motion provides a local measure of gel heterogeneity. Additionally, we divide the images into micron-wide squares and determine how rheological properties spatially vary as a function of gel concentration. Our results imply that weaker gels exhibit more heterogeneity than stronger gels.