Abstract Submitted
for the MAR08 Meeting of
The American Physical Society

Three-particle correlation functions of quasi-two dimensional one-component and binary colloid suspensions.[1] BINHUA LIN, HAU MY HO, STUART A. RICE, University of Chicago — We report the results of experimental determinations of the triplet correlation functions of quasi-two-dimensional one-component and binary colloid suspensions in which the colloid-colloid interaction is short ranged. The suspensions studied range in density from modestly dilute to solid. The triplet correlation function of the one-component colloid system reveals extensive ordering deep in the liquid phase. At the same density the ordering of the larger diameter component in a binary colloid system is greatly diminished by a very small amount of the smaller diameter component. The possible utilization of information contained in the triplet correlation function in the theory of melting of a quasi-two-dimensional system is briefly discussed.

[1]This research was supported by a grant from the NSF CHE-9977841 and by the MRSEC Laboratory at The University of Chicago.

Binhua Lin
University of Chicago

Date submitted: 21 Nov 2007 Electronic form version 1.4