Abstract Submitted for the MAR09 Meeting of The American Physical Society

Structure of Quasi-One Dimensional Ribbon Colloid Suspensions¹ BINHUA LIN, STUART A. RICE, The University of Chicago, THOMAS STRATTON, BIANXIAO CUI, Stanford University — We report the results of an experimental study of a colloid fluid confined to a quasi-one dimensional (q1D) ribbon channel. Our findings confirm the principal predictions of previous theoretical studies of such systems. These are (1) that the density distribution of the liquid transverse to the ribbon channel exhibits stratification and (2) that even at the highest density the order along the strata, as measured by the longitudinal pair correlation function, is characteristic of a liquid.

¹The research reported in this paper was supported by a Dreyfus Foundation Mentor Grant and by the NSF funded MRSEC Laboratory at The University of Chicago (NSF DMR-0213745).

Binhua Lin The University of Chicago

Date submitted: 23 Nov 2008 Electronic form version 1.4