1052-60-171   **Peter M Kotelenez*** (`pxk4@cwru.edu`), Case Western Reserve University, Department of Mathematics, Cleveland, OH 44106. *Correlated Brownian Motions and the Depletion Effect in Colloids [Based on joint work with Marshall Leitman (CWRU) and Jay Mann (CWRU)].*

We first review the model of correlated Brownian motions as derived from deterministic dynamics (Kotelenez 1995, 2005). We then describe the qualitative behavior of correlated Brownian motions at short distances. In particular, we obtain that at short distances and for random times two correlated Brownian motions are attracted to each other (K., Leitman and Mann 2008). This attractive behavior is in good agreement with the depletion phenomena, experimentally observed in colloids (Asakura and Oosawa (1954)). (Received August 26, 2009)