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**Collisions in a liquid fluidized bed** ALICIA AGUILAR-CORONA, Laboratoire de Genie Chimique, Toulouse France, ROBERTO ZENIT, Universidad Nacional Autonoma de Mexico, OLIVIER MASBERNAT, Laboratoire de Genie Chimique, Toulouse France — Collisional phenomena in a liquid fluidized bed were studied in terms of two parameters: the collision frequency and the coefficient of restitution. Experimental measurements of these parameters were conducted by particle tracking in an index-matched array. Collision detection was based on the use of a peak acceleration threshold of the instantaneous speed of dark tracers. The measurements of collision frequency were compared with the theoretical expression derived from the kinetic theory for granular flow (KTGF). The normal and tangential restitution coefficients were measured from the trajectories before and after contact for both particle-particle and particle-wall collisions. A comparison with previous theoretical and experimental works is presented and discussed.

Roberto Zenit
Universidad Nacional Autonoma de Mexico

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