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Possibilities for experimental observation of dynamical quasicondensation in sudden expansion of hard-core bosons on optical lattices LEV VIDMAR, University of Munich, STEPHAN LANGER, University of Pittsburgh, FABIAN HEIDRICH-MEISNER, University of Munich — Recent experiments with ultracold atomic gases give access to the studies of transport properties of interacting particles in optical lattices [1,2]. Sudden expansion of strongly interacting bosons and fermions exhibits rich phenomena [3]. For instance, it was shown experimentally that hard-core bosons expand ballistically in one dimension [2], in agreement with exact numerical studies. Nevertheless, dynamical quasicondensation of hard-core bosons [4] remains a challenge for experimentalist. We discuss the possibility how the quasicondensation of expanding bosons could be observed in realistic experimental conditions.

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