Sequences of Classical Hard-Core Collisions

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Knowledge of the collective dynamics of small groups of particles is needed in the calculation of the density dependence of the transport properties of dilute gases. For the particularly simple case of hard - core repulsion, this requires knowledge of the possible sequences of collisions among small groups of such particles in infinite space. New results for the one - dimensional case are presented in the context of the current state of knowledge for the one - dimensional case as well as for the case of more than one dimension.