Error Estimations to Simulation Scheme for Nonlinear Boltzmann-Type Equations

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Abstract

Accurate numerical modeling of nonlinear process acting flows is critical for solving transport problems both in fundamental and applied science. In this respect, the last years have been marked by a considerable progress in the development of algorithms for Boltzmann models. We consider the generalized method of Nambu [8], Babovsky and Illner [1] which combines analytical and stochastic techniques into a convergent algorithm for the reacting Boltzmann equations [4]. We report on error control to complete the theoretical support of the scheme developed in previous works.