Power-law tail of the velocity distribution in granular gases WEN-FENG KANG, University of Massachusetts Amherst, ELI BEN-NAIM, Los Alamos National Lab, JON MACHTA, University of Massachusetts Amherst — We use a two-dimensional event-driven molecular dynamics simulation to study the velocity distribution of a granular gas. We implement the high energy injection mechanism described in Ref. [1]. At a small rate $\gamma$ we boost randomly chosen particles to a high energy. The resulting driven steady state is found to have a power-law high-energy tail in the velocity distribution, $f(v) \sim v^{-\sigma}$. The simulation results for the exponent $\sigma$ are in good agreement with the theoretical predictions of Ref. [1].