1141-37-192   **Federico Bonetto*** (`bonetto@math.gatech.edu`), School of Mathematics - GaTech, 656 Cherry St, Atlanta, GA 30332, and **Nikolai Chernov**, **Alexey Korepanov** and **Joel Lebowitz**. *Long time behavior for thermostated particles under a weak electric field.*

We investigat2 a model system consisting of N particles moving on a d-dimensional torus $\mathbb{T}^d$ under the action of an electric field E with a Gaussian thermostat to keep the total energy constant. The particles are also subject to stochastic collisions which randomize direction but do not change the speed. We prove that in the van Hove scaling limit, $E \to 0$ and $t \to t/E^2$, the trajectory of the speeds v_i is described by a specific stochastic differential equation. (Received July 29, 2018)