

We introduce a novel approach to the mean-field limit of stochastic systems of interacting particles, leading to the first ever derivation of the mean-field limit to the Vlasov-Poisson-Fokker-Planck system for plasmas in dimension 2 together with a partial result in dimension 3. The method is broadly compatible with second order systems that lead to kinetic equations and it relies on novel estimates on the BBGKY hierarchy. By taking advantage of the diffusion in velocity, those estimates bound weighted  $L^p$  norms of the marginals or observables of the system, uniformly in the number of particles. This allows to treat very singular interaction kernels between the particles, including repulsive Poisson interactions. This is a joint work with D. Bresch and J. Soler.