

Gehring's Lemma for kinetic Fokker-Planck equations

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Gehring's Lemma states that a real function satisfying a reverse Hölder inequality on subdomains has an improved degree of integrability. Motivated by open problems on quasi-conformal mapping, it was initially introduced by Gehring and then adapted and used to study gain integrability on gradient of solutions of elliptic and parabolic equations. Here I will present a joint work with Cyril Imbert and Clément Mouhot in which we establish the result for kinetic Fokker-Planck equations by getting a Gehring lemma for kinetic cylinder subdomains.