Phase mixing for the Vlasov equation in cosmology

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The Friedmann--Lemaitre--Robertson--Walker spacetimes are the standard homogenous isotropic cosmological models in general relativity. Each member describes a torus, evolving from a big bang singularity and expanding indefinitely to the future, with expansion rate encoded by a suitable scale factor. I will discuss a mixing effect which occurs for the Vlasov equation on these spacetimes when the expansion rate is suitably slow. This is joint work with Renato Velozo Ruiz (University of Toronto).