Braun, W.; **Hepp, K.**

The Vlasov dynamics and its fluctuations in the $1/N$ limit of interacting classical particles.

(English) Zbl 1155.81383

Commun. Math. Phys. 56, No. 2, 101-113 (1977).

Summary: For classical N-particle systems with pair interaction $N^{-1} \sum_{1 \leqq i \leqq j \leqq N} \phi(q_i - q_i)$ the Vlasov dynamics is shown to be the w^*-limit as $N \to \infty$. Propagation of molecular chaos holds in this limit, and the fluctuations of intensive observables converge to a Gaussian stochastic process.

MSC:

81V70 Many-body theory; quantum Hall effect
82C22 Interacting particle systems in time-dependent statistical mechanics

Cited in **1** Review
Cited in **153** Documents

Full Text: DOI

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