

FRACTIONAL KINETICS FOR ANOMALOUS DIFFUSION AND RELAXATION

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S u m m a r y

Recently, kinetic equations with partial fractional derivatives have attracted attention as a tool for the description of anomalous relaxation and diffusion phenomena. We present a short review on the modern status of fractional kinetic equations. The topics considered are as follows:

- derivation of fractional kinetic equations with space fractional derivative;
- anomalous diffusion and relaxation;
- non-Boltzmann stationary states.

Applications of the general theory to plasma physics problems are proposed.