

# A Fourier transform method for relaxation of kinetic equations

Manuel Portilheiro, Universidade Autónoma de Madrid, Spain  
manuel.portilheiro@uam.es

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## Abstract

I will describe a new method based on the Fourier transform to obtain a relaxation limit of the Boltzmann-Poisson system for electron density. The relaxation will be obtained for two different scalings: the *low field scaling* and the *drift-collision balance scaling*, corresponding to two different regimes of the equation. To introduce the method and the weak sense of solution (dissipative solutions), I will start with the example of a two velocity toy model.

**Keywords:** Relaxation of kinetic systems; weak solutions; dissipative solutions;

**AMS codes:** 35L65; 78A40, 82C40;

## References

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