

MA T H E M A T I C A L P H Y S I C S S E M I N A R

Rutgers University
Hill Center - Room 705

**How long does it take for a large Newtonian system, starting
from extremey non-equilibrium, to reach spatial equilibrium?**

Jozsef Beck, Rutgers University
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Abstract

The question in the title is clearly motivated by non-equilibrium statistical physics (which is in a far less advanced state, compared to the equilibrium case). We prove several theorems using Fourier analysis and techniques from number theory. There is some similarity to the well-known Kronecker-Weyl equidistribution theorem, but there is also a fundamental difference in the core issue: the time scale. The object of the talk is to explain/clarify this.