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Università di Roma Tor Vergata
Dipartimento di Fisica



Seminar

Wednesday, 23 April 2014 - h. 14:30

Sala Grassano (Dipartimento di Fisica)

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“Clustering of particles falling in a random flow”

Abstract

To understand the dynamics of small inertial particles suspended in a complex flow is an important problem in aerosol science. If gravity is neglected it is observed that close-by particles cluster on a fractal attractor. This clustering is expected to increase the rate at which the particles collide. When the gravitational force is added to the system particles start to fall. We find that clustering of close-by particles may be either reduced or, quite surprisingly, enhanced due to the addition of gravity. We derive an analytical theory to explain this.

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