The behaviour of small inertial particles in homogeneous and isotropic turbulence

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The description of the statistical properties of small inertial particles suspended in turbulent flows is an important problem within fluid dynamics in general, and cloud physics in particular.

For passively advected particles, in recent years a large number of experimental and numerical observations have been collected, mostly in the simplest situation of homogeneous and isotropic turbulence (HIT).

I will review some results obtained in direct numerical simulations of HIT about small scale properties of inertial particles velocity statistics and spatial distribution. In particular, I will try to highlight effects for which gravitational accelerations matters.

References

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