

Inviscid limit for damped and driven incompressible Navier-Stokes equations in \mathbb{R}^2

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We consider the zero viscosity limit of long time averages of solutions of damped and driven Navier-Stokes equations in \mathbb{R}^2 . We prove that the rate of dissipation of enstrophy vanishes. Stationary statistical solutions of the damped and driven Navier-Stokes equations, in the spirit of Foias [3, 4], converge to renormalized stationary statistical solutions of the damped and driven Euler equations. These solutions obey the enstrophy balance and are inspired by the work of DiPerna and Lions, [2]. This talk is based on a joint work with Peter Constantin, [1].

References

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