Liouville properties of the Navier-Stokes

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ABSTRACT

We establish a Liouville theorem for bounded ancient mild solutions to the axi-symmetric incompressible Navier-Stokes equations on \((-\infty,0] \times (\mathbb{R}^2 \times \mathbb{T}^1)\). Connecting the compactness of \(\mathbb{T}^1\) to the oscillation of the stream function is a crucial observation.