

学术报告

Sharp one component regularity for Navier-Stokes equations

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报告地点：天津大学 6 号楼 111 教室

报告摘要：We consider the conditional regularity of mild solution v to the incompressible Navier-Stokes equations in three dimensions. Let $e \in \mathbb{S}^2$ and $0 < T^* < \infty$. J. Chemin and P. Zhang (Ann. Sci. Éc. Norm. Sup⁽⁴⁾, 2016) proved the regularity of v on $(0, T^*]$ if there exists $p \in (4, 6)$ such that
$$\int_0^{T^*} \|v \cdot e\|_{L^p(\mathbb{R}^3)}^{p-2} dt < \infty.$$
 J. Chemin, P. Zhang and Z. F. Zhang (Arch. Ration. Mech. Ana., 2017) extended the range of p to $(4, \infty)$. In this article we settle the case $p \in [2, 4]$. Our proof also works for the case $p \in (4, \infty)$.

欢迎大家参加！