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Log improvement of the Prodi-Serrin criteria for Navier-Stokes equations. (English)

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The authors consider a Log improvement of Prodi-Serrin criterion for global regularity solutions to Navier-Stokes equations in the space, provided the exponents in the Prodi-Serrin criterion are equal to five. The conclusion is that any weak solution to the system satisfying appropriate hypothesis must be smooth for any time and location.

Reviewer: [Mariano Rodriguez Ricard \(La Habana\)](#)

MSC:

[35Q30](#) Navier-Stokes equations

[35B65](#) Smoothness and regularity of solutions to PDEs

[76D03](#) Existence, uniqueness, and regularity theory for incompressible viscous fluids

[76D05](#) Navier-Stokes equations for incompressible viscous fluids

[35B45](#) A priori estimates in context of PDEs

Cited in **26** Documents

Keywords:

Navier-Stokes equations; regularity criterion; a priori estimates; Prodi-Serrin criterion

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