

Erratum to: Time-Periodic Solutions of the Navier-Stokes Equations in Unbounded Cylindrical Domains – Leray’s Problem for Periodic Flows

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Equation (32) in the proof of Theorem 3 is incorrect. A correction can be done as follows. In going from equation (30) to equation (32), replace the test function ϕ by w_l , $l = 1, \dots, m$, (as opposed to $\lambda_l w_l$). Further, in equation (32), replace (only on the left-hand side) k by $k \lambda_l^{-1}$. Finally, in the definition of the matrix \mathcal{M} given in the original paper, namely,

$$\mathcal{M} = \begin{bmatrix} M & kI \\ -kI & M \end{bmatrix}$$

replace the matrices kI by the diagonal matrix $K = k \operatorname{diag} [\lambda_1^{-1}, \dots, \lambda_m^{-1}]$. The proof then follows as in the original paper. The statement of the theorem remains unchanged.

We use this occasion to correct a few misprints. In equation (20), page 308, the last symbol χ should be replaced by $A \chi$. On page 309 the real function α should satisfy not only $\alpha(a) = 0$ but also $\alpha(b) = 1$. In the second term on the right hand side of equation (27), $(b - a)$ should be replaced by $(b - a)^2$ and $u(t)$ by $u'(t)$. Finally, in page 310, replace $\gamma_{ij} = \delta_{ij} - (w_j, e)(e, w_l)$ by $\gamma_{jl} = \delta_{jl} - (w_j, e)(e, w_l)$.

The author regrets the inconvenience.

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