

# **Bounds to the change of vorticity by transition from slip- to no-slip fluid flow**

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For the transition from slip- to no-slip fluid flow, we establish lower and upper bounds to the resulting change of the  $L^2$ -norm of the vorticity. Moreover we present a transport-diffusion splitting scheme that is built up solely by a transport step and subsequent diffusion step (without any additional vorticity creation operator as introduced in former studies by Lighthill, Marsden and Chorin), the splitting scheme being consistent with the Navier-Stokes equations with no-slip boundary condition.