1047-35-308 **Igor Kukavica** (kukavica@usc.edu), Department of Mathematics, USC, 3620 S. Vermont Avenue, Los Angeles, CA 90089-2532, and **Vlad Vicol*** (vicol@usc.edu), Department of Mathematics, USC, 3620 S. Vermont Avenue, Los Angeles, CA 90089. *The Domain of Analyticity of Solutions to the Three-Dimensional Euler Equations.*

We address the problem of analyticity of solutions to the 3D Euler equations on the periodic domain and in the half space. We characterize the rate of decay of the real-analyticity radius of the solution $u(t)$ in terms of $\exp \int_0^t \|\nabla u(s)\|_{L^\infty} ds$, improving the previously known results. We also prove the persistence of Gevrey–class regularity for the Euler equations in a half space, and obtain an explicit rate of decay of the radius of Gevrey–class regularity.

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