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William Chen and **Alejandro Sarria*** (as29@williams.edu), 150 meacham street,
Williamstown, MA 01267. *Infinite energy solutions of the 3D incompressible Euler equations with damping.*

We study periodic solutions of the damped 3D incompressible Euler equations of the form $u = (u_1(x, y, t), u_2(x, y, t), z\gamma(x, y, t))$ on an infinite 3D channel of rectangular cross-section. In 2000, Constantin showed that, starting from a smooth initial condition u_0 , such class of solutions ceases to be smooth at some finite time $T = T(u_0)$. We incorporate a damping term αu into the system and derive conditions on the damping coefficient $\alpha > 0$ that suppress the aforementioned (undamped) blowup. (Received March 20, 2017)