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James P Kelliher* (kelliher@math.ucr.edu) and **Hantaek Bae**. *Conservation of striated regularity for Eulerian velocities.*

That vorticity having Hölder regularity in the direction of a “sufficient” family of vector fields (striated regularity) continues to have such regularity for all time under the evolution of the 2D Euler equations was first shown by Chemin in 1991. A partial extension of this result for short time was made in 3D by Gamblin and Saint Raymond in 1995 and in full generality by Danchin in 1999. These results were all obtained with an extensive use of paradifferential calculus. We describe how both the 2D and 3D results can be obtained following an elementary approach of Ph. Serfati 1994, and how the solutions can be viewed as preserving striated regularity of the velocity rather than of the vorticity. (Received February 23, 2015)