Dimensional Analysis of Taylor-Couette Flow with Hourglass Geometry in both Laminar and Turbulent Regimes[1] ADAM KOWALSKI, THOMAS OLSEN, Lewis & Clark College, Portland, OR, RICHARD WIENER, Pacific University, Forest Grove, OR — Previously we have presented preliminary measurements indicating that the irregular generation of new Taylor Vortex Pairs in laminar Taylor-Couette flow with hourglass geometry could be characterized as low dimensional chaos[2] and in the corresponding case of turbulent flow the chaotic dimension was higher[3]. We now present data from far more extended time series of the periods between vortex formation, confirming and extending our original results. We present confirmation of our computational methodology in other systems.

[2]T. Olsen, R. Bjorge, & R. Wiener, Bull. Am. Phys. Soc. **47-10**, 76 (2002).
[3]T. Olsen, B. Tomlin, R. Bjorge, & R. Wiener, Bull. Am. Phys. Soc. **48-10**, 111 (2003).

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