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Reaction-Diffusion Simulations for Multiply-Waisted Hourglass Geometries[1] THOMAS OLSEN, YU HOU, ADAM KOWALSKI, Lewis & Clark College, Portland, OR, RICHARD WIENER, Pacific University, Forest Grove, OR — In previous work, the Reaction-Diffusion model [2] correctly predicted a period doubling cascade to chaos in Taylor-Couette flow with hourglass geometry[3]. Our current calculations apply the model to Taylor-Couette flow in a cylindrical geometry with multiple waists of super-critical flow connected by regions of barely super-critical flow. We compare our results to the findings of an ongoing experimental program.

[1]Research Corp., NSF DMR-0241814 & DMR-0241890, & Rogers Science Research Program
[2]H. Riecke and H.-G. Paap, Europhys. Lett. **14**, 1235 (1991).
[3]Richard J. Wiener *et al*, Phys. Rev. E **55**, 5489 (1997).

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