

Abstract Submitted
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Spatiotemporal chaos and infinite-lifetime turbulence in pipes and channels¹ DWIGHT BARKLEY, DAVID MOXEY, University of Warwick — Lifetime measurements of localized states have been the focus of many recent studies of transitional turbulence. We argue that the transition to infinite-lifetime turbulence must be understood as a transition to spatiotemporal chaos, similar to directed percolation (although the transition may not be strictly DP). While such arguments were first made many years ago, we report evidence substantiating this view from direct numerical simulations of long pipes. We also report work on modeling these phenomena.

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