

Abstract Submitted  
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**Rayleigh-Bénard convection at high Prandtl numbers in circular and square geometry** STEPHEN R. JOHNSTON, Georgia Institute of Technology, ENRICO FONDA, KATEPALLI R. SREENIVASAN, New York University, DEVESH RANJAN, Georgia Institute of Technology — Experiments using water and simulations have shown that flow structures and turbulent fluctuations in Rayleigh-Bénard convection are affected by the shape of the container. We study the effect of the geometry in both square and cylindrical test cells of aspect ratio of order unity in high Prandtl fluids (up to  $10^4$ ). Flow visualization using a photochromic dye seeded throughout the fluid allows us to uninvasively study the evolution of the large scale structures. We discuss the observations in the two geometries and compare them with previous observations at low Prandtl numbers.

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