

Abstract Submitted
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Convectons **in** **peri-**
odic and bounded domains EDGAR KNOBLOCH, University of California at Berkeley, ISABEL MERCADER, ORIOL BATISTE, ARANTXA ALONSO, UPC, Barcelona, Spain — Numerical continuation is used to compute spatially localized convection in a binary fluid with no-slip laterally insulating boundary conditions and the results compared with the corresponding ones for periodic boundary conditions. The change in the boundary conditions produces a dramatic change in the snaking bifurcation diagram that describes the organization of localized states with periodic boundary conditions: the snaking branches turn continuously into a large amplitude state that resembles periodic convection with defects at the sidewalls. Odd parity convectons are more affected by the boundary conditions since the sidewalls suppress the horizontal pumping action that accompanies these states in spatially periodic domains [O. Batiste et al., J. Fluid Mech. 560, 149 (2006)].

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