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Spatially Localized Binary Fluid Convection EDGAR KNOBLOCH, University of California at Berkeley, DAVID LO JACONO, ALAIN BERGEON, IMFT and UPS, Toulouse — Three-dimensional convection in a binary mixture in a porous medium heated from below is studied. For negative separation ratios steady convection patterns, spatially localized in one[1] or two dimensions, are computed and numerical continuation is used to examine the growth, stability and proliferation of each pattern as parameters are varied. The results are complemented by direct numerical simulations with periodic boundary conditions in the horizontal.

[1]D. Lo Jacono, A. Bergeon and E. Knobloch, Phys. Fluids **22**, 073601 (2010).

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