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The filed effect on local temperature distribution in natural convection in a magnetic fluid JUN HUANG, WEILI LUO, University of Central Florida — Previously, we have reported the magnetic field effect on the flow front of natural convection in magnetic fluids. In this work we present the local temperature distribution as a function of applied field, from which flow patterns are constructed. We will also report, and discuss the possible mechanism for, a crossover field, above which the field dependence diminishes.

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