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Percolation in the Rayleigh-Benard convection[1] HIROSHI SHIBATA, Sojo University — The divergence of the viscosity coefficient and the heat conductivity in the Rayleigh-Benard convection was found in the numerical calculation from 2004 to 2005[1-3]. The interpretation for this phenomenon from the viewpoint of physics is incomplete. The present author proposes a physical interpretation introducing the percolation theory[4]. The temperature difference region where the divergence of the viscosity coefficient occurs depends on the system size length. This system size dependency gives us an insight for the physics in the divergence of the viscosity coefficient in the Rayleigh-Benard convection.

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[4] D. Stauffer, *Introduction to Percolation Theory* (Taylor & Francis, London, 1985).

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