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Non-equilibrium quantum phase transition in an itinerant electron system DIMA FELDMAN, Brown University — Recently there was much interest in quantum ferromagnetic transitions in one-dimensional itinerant electron systems. In particular, it was argued that spontaneous magnetization of the electrons might explain the 0.7 anomaly in quantum wires. We investigate the effect of an applied voltage bias on the ferromagnetic transition for one-dimensional itinerant electrons, and determine the critical behavior near the phase transition point.

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