

Current Driven Tricritical Point in Large- N_c Gauge Theory

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We discover a new tricritical point realized only in nonequilibrium steady states, using the AdS/CFT correspondence. Our system is a (3+1)-dimensional strongly coupled large- N_c gauge theory. The tricritical point is associated with a chiral symmetry breaking under the presence of an electric current and a magnetic field. The critical exponents agree with those of the Landau theory of equilibrium phase transitions. This suggests that the presence of a Landau-like phenomenological theory behind our nonequilibrium phase transitions.

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