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Spinodal instability with varying criticality in holography

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The spinodal instability is the prime signal for the first-order phase transition in the Quantum-ChromoDynamics phase diagram relevant for the RHIC beam energy scan. We evolve planar unstable black branes dual to a plasma with a first order phase transition subject to the spinodal instability. By varying criticality we extract characteristics of the interface between the cold and hot stable phases. We explain a new criterium for distinguishing the inhomogeneous states formed by the spinodal instability. Approaching the critical point we demonstrate the first holographical dynamical dissipation into the preferred fully phase separated final solution.

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