

## Excitation and saturation of the spinodal instability

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Ever since the discovery of the quark-Gluon plasma (QGP) the location of the critical point in the QCD phase diagram - the end point of the first-order transition between hadron matter and QGP - has been a main research goal for heavy-ion collisions experiments. We use the gauge/gravity duality to study as first a four-dimensional, strongly-coupled gauge theory with a first-order thermal phase transition. In the dual gauge theory the Gregory-Laflamme instability corresponds to the spinodal instability. We uncover the favored final phase separated state across phase mergers. This final inhomogeneous system is independent of the early unstable mode excitations.

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