

Holographic approach to dense QCD and neutron star mergers

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The gauge/gravity duality, combined with information from lattice QCD, nuclear theory, and perturbative QCD, can be used to constrain the equation of state of hot and dense QCD. I discuss an approach based on the V-QCD model, which predicts a strongly first order nuclear to quark matter phase transition with a critical endpoint. By using this model in state-of-the-art simulations of neutron star binaries with parameters consistent with GW170817, I study the formation of quark matter during the merger process.

Author: JARVINEN, Matti

Presenter: JARVINEN, Matti

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