

Compact stars in the QCD phase diagram VI (Cosmic matter in heavy-ion collision laboratories?)

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Numerical configurations of differentially rotating quark stars

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It is widely known that there is an X-ray plateau phase following sGRBs. This phase is supposed to be related to the hyper-/supra-massive NS formed after the merger in many sGRB models. The evolution of this hyper-/supra-massive neutron star mainly depends on the total mass of the binary and the EoS, which will also significantly affect the gravitational wave and electromagnetic emissions in the post merger phase. We have built models of both uniform and differential rotating compact stars with quark star EoSs. Comparisons with neutron star models are made, possible way to distinguish between EoSs by future observations are also discussed.

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