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Compact Stars with a Dyson-Schwinger Quark Model

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Based on a Dyson-Schwinger quark model with various choices of the quark-gluon vertex and gluon propagator, we study the equation of states of cold dense quark matter and the interior structure of compact stars. For the hybrid quark stars, we combined with a hadronic equation of state derived within the Brueckner-Hartree-Fock many-body theory. We found possible results of 2-solar-mass hybrid stars. We also investigate possibilities of strange quark stars with the quark model and study some effects of rotation on compact stars.

On behalf of collaboration:

[Other]

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