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Speed of sound in a dynamical chiral quark model

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Gravitational waves offer an exciting chance to study dense matter and challenge theoretical models of dense EoS (Equations of State). A common class of models in dense matter, the standard NJL model, has the known problem that the speed of sound fails to approach the conformal limit. We investigate how a dynamical chiral quark model, which implements non-local interactions among quarks, can resolve the issue. The influence of confinement on quark number susceptibility and color superconductivity will also be explored.

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