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# Speed of Sound of strong-interaction matter at supranuclear densities

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Towards the equation of state of neutron stars, we present results for the zero-temperature thermodynamics of strong-interaction matter at high densities which have been obtained based on first-principles functional Renormalization Group studies. In particular, we discuss gluon vacuum polarization effects on the equation of state and the speed of sound in a (semi-)perturbative manner. Eventually, we present consistent constraints for the speed of sound at supranuclear densities by taking into account results from studies based the existence of a (color-) superconducting gap.

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