

LEPTON DISTRIBUTIONS NEAR A QUARK SURFACE

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At asymptotically large densities the ground state of hadronic matter is believed to be not ordinary nuclei but a phase of matter in which the fundamental degrees of freedom are quark cooper pairs carrying colour charge. If such a state is realized in nature it will necessarily be accompanied by a surrounding distribution of leptons which will ensure overall charge neutrality. I will discuss the density distribution of such a lepton layer and some of it's potential applications. In particular I will highlight some implications for a dark matter model in which the dark matter is composed of nuggets of quark matter.

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