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Inhomogeneous meson condensation

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The meson condensed phase is an interesting portal on the properties of QCD in a regime in which various methods, including lattice QCD, are reliable.

We discuss inhomogeneous topologically nontrivial configurations of the pion fields in the framework of chiral perturbation theory.

Solitons characterized by a nonvanishing topological charge naturally emerge. These states that can be identified with baryons surrounded by a bath of pions, meaning that the system has an effective nonvanishing baryonic density.

Primary author: MANNARELLI, Massimo

Presenter: MANNARELLI, Massimo

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