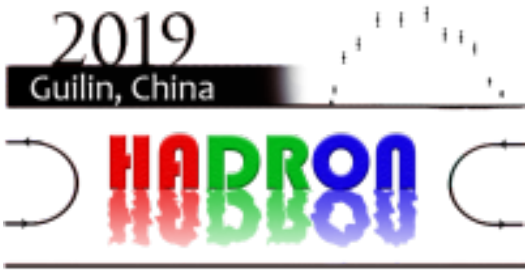

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Comprehensive study of light mesons in nuclear matter with three-flavor extended Linear Sigma Model

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Mass modifications of light scalar, pseudo-scalar, vector, and axial-vector mesons in nuclear matter are studied comprehensively. The mesons are described by the extended Linear Sigma Model which can reproduce vacuum properties such as masses and decay widths, and the nuclear matter is constructed by the two-flavor Parity Doublet Model which can fit the saturation density, binding energy, and incompressibility. We investigate the meson masses in nuclear matter including one-loop corrections in addition to the mean field. As results, reductions of eta and eta' mesons are found. we also find the mass of rho and omega mesons at the normal nuclear matter density do not change significantly. A change of axial anomaly in nuclear matter is also discussed.

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