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## Medium Modification of Vector Mesons

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The theory of the strong interaction, Quantum Chromodynamics (QCD), has been remarkably successful in describing high-energy and short-distance-scale experiments involving quarks and gluons. However, applying QCD to low energy and large-distance scale experiments has been a major challenge. Chiral symmetry is one of the most fundamental symmetries in QCD and provides guiding principles to deal with strong interaction phenomena in the non-perturbative domain. Various QCD-inspired models predict a partial restoration of chiral symmetry in nuclear matter with modifications of the properties of hadrons from their free-space values. Measurable changes such as a shift in mass and/or a change of width are predicted at normal nuclear density. Photoproduction of vector mesons off nuclei were performed at Jefferson Lab using the CEBAF Large Acceptance Spectrometer (CLAS). The properties of the  $\rho$ ,  $\omega$  and  $\phi$  mesons were investigated via their rare leptonic decay to  $e^+e^-$ . The latest results regarding medium modifications of the vector mesons in the nuclear medium will be discussed and a brief summary of the next round of experiments at different laboratories will be given.

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