

APR10-2009-000284

Abstract for an Invited Paper
for the APR10 Meeting of
the American Physical Society

Hadrons inside and outside the medium¹

GERALD MILLER, University of Washington

Embedded in a medium, or just passing through, a hadron's properties are not the same as when it is free. One exciting manifestation of this is the EMC effect (1982) seen in deep inelastic scattering from nuclei which can not be explained by using free nucleon properties. The implications of this discovery have not been understood. Another example occurs in relativistic heavy ion physics in which the very existence of the hot dense medium is detected in part by the backward suppression of jets. We review the ways in which the hadronic wave function is modified in bound and scattering states of nuclear matter, with emphasis placed on recent experiments.

¹I thank USDOE for partial support.