

First measurement of low momentum dielectrons radiated off cold nuclear matter.

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The High Acceptance DiElectron Spectrometer HADES is installed at the Helmholtzzentrum für Schwerionenforschung (GSI) accelerator facility in Darmstadt. It investigates dielectron emission and strangeness production in the 1-3 AGeV regime. A recent experiment series focusses on medium-modifications of light vector mesons in cold nuclear matter. In two runs, p+p and p+Pb reactions were investigated at 3.5 GeV beam energy; about $9 \cdot 10^9$ events have been registered. In contrast to other experiments the high acceptance of the HADES allows for a detailed analysis of electron pairs with a low momenta relative to nuclear matter, where modifications of the spectral functions of vector mesons are predicted to be most prominent. Comparing these low momentum electron pairs to the reference measurement in the elementary p+p reaction, we find in fact a strong modification of the spectral distribution in the whole vector meson region and will discuss these results [1].

[1] G. Agakishiev *et al.* [HADES Collaboration], Phys. Lett. B **715**, 304 (2012);