

QCD symmetries in eta and etaprime mesic nuclei

Friday, 19 September 2014 11:00 (30 minutes)

We discuss the role of QCD symmetries and confinement in understanding eta and etaprime mesic nuclei. Eta and etaprime bound states in nuclei are sensitive to the flavour-singlet component in the meson. The bigger the singlet component, the more attraction and the greater the binding. Recent results on the etaprime mass in nuclei from the CBELSA/TAPS collaboration are very similar to the prediction of the Quark Meson Coupling model. In the model eta-etaprime mixing induces a factor of two enhancement of the eta-nucleon scattering length relative to the prediction with a pure octet eta, with real part about 0.8 fm.

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