

Meson couplings in magnetic fields.

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Content

Strong magnetic fields that are expected to appear in dense stars, magnetars and in (peripheral) relativistic heavy ion collisions, may be of the order of fractions of hadron masses, being therefore relatively weak as compared to hadron mass scales, such as the constituent quark or pion masses. In this limit, it is possible to derive (semi)analytical expressions for magnetic field corrections to usual hadron couplings and to couplings that disappear in the vacuum. I will present some magnetic field effects in light meson and also constituent quark effective couplings basically by developing a quark determinant in the presence of background quark currents and meson fields. Meson mixing effective interactions in such relatively weak magnetic fields also undergo modifications.

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