



Contribution ID: 14

Type: poster

Dispersion relations of charged and uncharged pions in presence of weak magnetic field

Monday, 26 June 2017 17:20 (0 minutes)

In this work, the self energies of π_0 and π_{\pm} up to one loop order have been calculated in the limit of weak external magnetic field. The effective masses get an explicit magnetic field dependence which are modified significantly for the pseudo-scalar coupling due to weak field approximation of the external field. However, for the pseudo-vector coupling, only a modest reduction in the effective masses are noted. These theoretical developments are relevant for the study of the phenomenological aspect of mesons in the context of neutron stars as well as heavy ion collisions.

Primary author: ADHYA, Souvik Priyam (Post doctoral fellow)

Co-author: Prof. ROY, Pradip Kumar (Saha Institute of Nuclear Physics)

Presenter: ADHYA, Souvik Priyam (Post doctoral fellow)

Session Classification: Poster session