U A (1) symmetry broken and anomaly current in a parallel electromagnetic field

Summary

In this paper, we're going to explore the $U_A(1)$ symmetry broken and anomaly current in a parallel electromagnetic field. We relax the SU(2) Nambu-Jona-Lasinio (NJL) model to investigate the condensations induced by electromagnetic field which contains chiral condensation, π^0, η condensation and mass splitting. We also calculate the $U_A(1)$ susceptibility, which reflects the degree of the $U_A(1)$ symmetry broken.

Primary author: Mr WANG, Lingxiao (Tsinghua University)

Co-authors: Dr CAO, Gaoqing (Fudan University);   Prof. ZHUANG, Pengfei (Tsinghua University);   Prof. HUANG, Xuguang (Fudan University)

Presenter: Mr WANG, Lingxiao (Tsinghua University)