

Pion and Kaon internal Structure from Light-front dynamics.

Upcoming electron-ion collider is one of the important experiment to study the pion and Kaon internal Structure through Sullivan process. In this work, we have studied the pion and Kaon internal structure in the form of quark parton distribution function (PDFs) and form factors (FFs) in light front quark model (LFQM). These quark PDFs have been evolved to high Q^2 to compare with experimental results as well as other model predictions. As we know, there is no experimental data available for Kaon quark PDFs, so we have compared them with lattice predictions. The electro-magnetic FFs of both pion and Kaon has also been extracted from generalized parton distribution. These FFs has also been compared with experimental data and lattice simulations along with their radius. We have also tried to find the effect of Baryonic Density on PDFs and FFs of these Mesons using chiral SU (3) quark mean field model.

Authors: Dr DAHIYA, Harleen (Dr B R Ambedkar National Institute of technology, Jalandhar); PUHAN, Satyajit (National Institute of Technology Jalandhar)

Presenter: PUHAN, Satyajit (National Institute of Technology Jalandhar)

Track Classification: 7. Physics opportunities at the Future Electron Ion Collider and the RHIC Spin program