

# Generalized Parton Distribution for non zero skewness in transverse and longitudinal impact parameter spaces

We investigate the Generalized parton distributions(GPDs) by expressing them in terms of overlap of light front wave functions (LFWFs) using a simulated model. We study the spin non flip  $H(x,\zeta,t)$  and spin flip  $E(x,\zeta,t)$  part of GPDs for the particle conserving ( $n \rightarrow n$ ) overlap in the DGLAP region  $0 < x < \zeta$ . Fourier transform of the GPDs with respect to the transverse momentum transfer gives the distribution of partons in the transverse position space and fourier transform w.r.t. the skewness parameter  $\zeta$  gives the distribution of parton in the longitudinal position space.

**Primary author:** Mr KUMAR, Narinder (Dr. B. R. Ambedkar National Institute of Technology, Jalandhar)

**Co-authors:** Dr DAHIYA, Harleen (Dr. B.R. Ambedkar National Institute of Technology, Jalandhar); Dr SHARMA, Neetika (Dr. B.R. Ambedkar National Institute of Technology, Jalandhar)

**Presenter:** Mr KUMAR, Narinder (Dr. B. R. Ambedkar National Institute of Technology, Jalandhar)