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Search for New Physics in $e^{\pm}q$ Contact Interactions —
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Deep inelastic neutral current $e^{\pm}p$ scattering at high momentum transfer Q^2 allows to study the structure of eq interactions at short distances and to search for new phenomena beyond the Standard Model. The concept of four-fermion contact interactions provides a convenient method to investigate the interference of possible new particle fields associated to large scales with γ and Z fields of the Standard Model.

This talk presents a search for physics beyond the Standard Model in neutral current deep inelastic scattering at high Q^2 in $e^{\pm}p$ collisions at HERA. Studies are based on the data collected by the H1 experiment during years 1994 to 2007. The single differential neutral current cross section measurements $d\sigma/dQ^2$, corresponding to integrated luminosity of $440pb^{-1}$ are well described by the Standard Model and are analyzed to set constrains on new phenomena. Limits for different contact interaction models are determined and preliminary results are presented.

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