

Contribution submission to the conference Bonn 2010

Investigation of $e^\pm q$ contact interactions at H1, HERA —
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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 will present studies based on the data collected by the H1 experiment during the years 1994 to 2007. The single differential neutral current cross section measurements $d\sigma/dQ^2$, corresponding to integrated luminosity of 425pb^{-1} are well described by the Standard Model and are analyzed to set constraints on new phenomena. Limits for different contact interaction models parameters are determined and presented.

Part: T
Type: Vortrag;Talk
Topic: 2.14 Suche nach neuer Physik (ohne
MSSM) (Exp.)
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