

# Limits on contact interactions and leptoquarks at HERA

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High-precision HERA data corresponding to a luminosity of around  $1 \text{ fb}^{-1}$  have been used in the framework of  $eeqq$  contact interactions (CI) to set limits on possible high-energy contributions beyond the Standard Model to electron–quark scattering. Measurements of the inclusive deep inelastic cross sections in neutral and charged current  $ep$  scattering were considered. The analysis of the  $ep$  data has been based on simultaneous fits of parton distribution functions including contributions of CI couplings to  $ep$  scattering. Several general CI models and scenarios with heavy leptoquarks were considered. Improvements in the description of the inclusive HERA data were obtained for a few models. Since a statistically significant deviation from the Standard Model cannot be established, limits in the TeV range were set on all models considered.

## I read the instructions

## Secondary track (number)

**Author:** WING, Matthew (University College London)

**Presenter:** WICHMANN, Katarzyna (Deutsches Elektronen-Synchrotron (DE))

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