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## Inclusive Deep Inelastic Scattering at High $Q^2$ with Longitudinally Polarised Lepton Beams at HERA

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Inclusive  $e$ -pmp single and double differential cross sections for neutral and charged current deep inelastic scattering processes are measured with the H1 detector at HERA. The data were taken at a centre-of-mass energy of  $\sqrt{s} = 319\text{GeV}$  with a total integrated luminosity of  $333.7\text{ pb}^{-1}$  shared between two lepton beam charges and two longitudinal lepton polarisation modes. The differential cross sections are measured in the range of negative four-momentum transfer squared,  $Q^2$ , between 60 and  $50\,000\text{GeV}^2$ , and Bjorken  $x$  between 0.0008 and 0.65. The measurements are combined with earlier published unpolarised H1 data to improve statistical precision and used to determine the structure function  $xF_3^{\gamma Z}$ . A measurement of the neutral current parity violating structure function  $F_2^{\gamma Z}$  is presented for the first time. The polarisation dependence of the charged current total cross section is also measured. The new measurements are well described by a next-to-leading order QCD fit based on all published H1 inclusive cross section data which are used to extract the parton distribution functions of the proton.

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