

## Studies of Diffractive Events with H1 and ZEUS Detectors at HERA

*Monday 11 December 2017 11:35 (15 minutes)*

Studies of diffractive events at H1 and ZEUS detectors at HERA are presented. These studies include: Production of exclusive dijets in diffractive deep inelastic scattering (DIS); Exclusive  $\rho^0$  meson photoproduction with a leading neutron; Measurement of  $D^*$  meson production in diffractive deep inelastic scattering; Diffractive photoproduction of isolated photons; Measurement of the cross-sections and their ratios for electroproduction of  $\psi(2S)$  and  $J/\psi(1S)$ . The data used for first three studies are taken from HERA-II, however those used for last two are taken from both HERA-I and HERA-II running periods. The overall kinematic range covered with these measurements is  $2 < Q^2 < 180 \text{ GeV}^2$  (photon virtuality) for diffractive DIS and  $Q^2 < 1 \text{ GeV}^2$  for diffractive photoproduction. The total energy of the photon proton system ( $W$ ) covered in the presented studies extends from 30 GeV to 250 GeV and with an electron-proton centre of mass energy,  $s = \sqrt{319} \text{ GeV}$ . The results are compared to predictions from models based on different assumptions about the nature of the diffractive exchange.

**Primary author:** Dr KAUR, Prabhdeep (SLIET Longowal)

**Presenter:** Dr KAUR, Prabhdeep (SLIET Longowal)

**Session Classification:** WG4: Small-x and Diffraction