**Abstract #012345**
**Parallel sessions: 2,3,4**
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# Electroproduction of $\rho$ Mesons with Proton Diffractive Dissociation and of Elastic $\phi$ Mesons at HERA

H1 Collaboration

The electroproduction of $\rho^0$ mesons with proton diffractive dissociation for $Q^2 > 7$ GeV$^2$ and the elastic electroproduction of $\phi$ mesons for $Q^2 > 6$ GeV$^2$ are studied in $e^+p$ collisions at HERA with the H1 detector, for an integrated luminosity of 2.8 pb$^{-1}$. The differential cross sections are derived as a function of $P_t^2$, $Q^2$ and the vector meson polarisation state. The cross section ratio between proton dissociative and elastic production of $\varrho$ mesons is measured and discussed in the framework of the factorisation hypothesis of the diffractive vertex. Results on elastic $\phi$ meson production are compared with previous H1 measurements of elastic $\rho$ meson electroproduction. The ratio of the elastic cross section for $\phi$ and $\varrho$ meson production is investigated as a function of $Q^2$.