8.2 Outlook

In the future, with an increased luminosity and more component detectors commisioned, more comprehensive measurement on J/ψ production will be possible. The purity of the data will be better determined since the LPS(leading proton spectrometer) and FNC(forward neutron calorimeter) will help to discriminate between elastic and diffractive processes, and accurate dE/dx measurement and HES(hadron electron separator) will help to reduce pion contamination. Ratio of the longitudinal and transverse cross sections, which has been of theoretical interest and is predicted differently by VMD and QCD inspired models,[90] can be determined by measuring Q^2 dependence which requires larger statistics and tracking converage in the rear region. Measurement of t dependence of the cross section for elastic photoproduction of J/ψ at large t is also of recent theoretical interest.[95] Polarization of J/ψ in photoproduction, which has not been determined to this day, can also be studied at HERA.