

Associated vector boson plus prompt charmonium and di-charmonium production at the ATLAS experiment

Thursday, 28 August 2014 17:10 (20 minutes)

We present evidence of associated vector boson+prompt J/ψ production and measure its production rate. This is a key observable to further the understanding of quarkonium production mechanisms. We estimate the relative contributions to the signal from single and double parton scattering (DPS) and discuss possible implications of this novel final state for study of multiple parton interactions. We also review the cross-section measurement of double- J/ψ production, separating the prompt-prompt, prompt-non-prompt and non-prompt di- J/ψ production and estimating also the DPS contribution. Single parton scattering cross-sections are compared to cutting-edge theoretical calculations in the colour singlet and colour octet formalisms.

Primary author: Mr PRELL, Soeren (Iowa State)

Presenter: Mr PRELL, Soeren (Iowa State)

Session Classification: Quarks and gluons in hadrons, the hadron spectrum

Track Classification: 2) Quarks and gluons in hadrons, the hadron spectrum