Contribution ID: **89** Type: **Oral presentation**

Cross section measurement of associated $J/\psi + W^{\pm}$ production with the ATLAS detector

Saturday 9 April 2022 18:00 (20 minutes)

The cross-sections of prompt and non-prompt production of $J/\psi + W^{\pm}$ are being measured by the ATLAS Collaboration using the 139 fb^{-1} Run II 13 TeV pp collision data set. The prompt production of J/ψ associated with a $W^{\pm}$, where both particles are produced in a single parton-parton interaction, provides constraints on models of non-relativistic QCD, especially in the realm of heavy quarkonia production. The measurement is an all-leptonic final state with $J/\psi \rightarrow \mu^{+}\mu^{-}$ and $W^{\pm} \rightarrow \ell^{\pm}\nu$, and it is performed differentially in J/ψ transverse momentum and rapidity. Finally, the non-prompt measurement allows for the study of top production and b-quark fragmentation.

Career stage

Graduate student

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