

First measurement of associated vector boson plus prompt J/psi production at the ATLAS experiment

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We present the discovery of associated W+prompt J/psi production and subsequent measurement of the production rate, which is a key observable to furthering understanding of quarkonium production mechanisms. We estimate the relative contributions to the signal from single and double parton scattering and discuss possible implications of this novel final state for study of multiple parton interactions in the future. The single parton scattering cross-sections are compared to cutting-edge theoretical calculations in the colour singlet and colour octet formalisms. Future possibilities for measurements with Z+J/psi and Di-J/psi are discussed.

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