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First evidence of prompt J/ψ production in association with a W boson and measurement of prompt J/ψ+W cross-section with 4.7 fb−1 of data at $\sqrt{s}$= 7 TeV at the Large Hadron Collider CONSTANTINOS MELACHRINOS, University of Chicago, DARREN PRICE, Indiana University, PETER ONYISI, University of Texas, Austin, ATLAS COLLABORATION — The process pp →W+/- J/ψ provides a powerful probe of the production mechanism of charmonium in hadronic collisions. Using the full 2011 ATLAS dataset corresponding to an integrated luminosity of 4.7 fb−1, we have observed the first evidence of the production of W+/- + prompt J/ψ events in proton-proton collisions in the W + J/$\psi \to \mu$+/- $\mu + \mu-$ channel, and measured the differential cross-section for this process.

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