

Heavy Flavour production in ATLAS

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ATLAS prepared a program for measurements of production cross sections both of b-hadrons and Onia in central proton-proton collisions at new energy 14 TeV of LHC.

Dedicated triggers based on muon, di-muon or electron signatures are designed to accommodate large statistics with already first several months. Starting from semi-inclusive measurements for very early stage exclusive channels will soon dominate measurements, allowing tests of QCD in Heavy Flavour sector already with 10 pb⁻¹. With larger statistics production polarization measurements are being prepared for J/psi and Lambda_b. It is expected that 30 fb⁻¹ collected at 10³³ cm⁻² s⁻¹ will allow specific measurements not accessible with limited statistics of Tevatron. In particular Lambda_b polarization measurement can be achieved using Lambda_b -> J/psi Lambda decay. In J/psi a polarization measurement will allow to confirm or exclude model predictions within large interval of transverse momenta.

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