Contribution ID: **429** Type: **Parallel Sessions**

Quarkonium production in the LHC era: QCD corrections and new observables

Saturday, July 7, 2012 3:15 PM (15 minutes)

I will discuss the impact of QCD corrections on the P_T differential cross section for quarkonium production at RHIC [1], Tevatron and LHC energies [2], as well as the contributions from charm-gluon fusion [3]. I will discuss the promising agreement between the parameter-free predictions of the Colour-Singlet Model –up to alpha_s^5 in some cases– and the first LHC data for J/psi and Upsilon (see e.g. [4-7]), especially in the region of low transverse momenta and thus for the P_T integrated yields. I will also show predictions for the polarisation to be compared with the (forthcoming) LHC results [8]. Additionally, I will justify the introduction of new observables meant to better discriminate between the different mechanisms at work in quarkonium production at high energies. Finally, I will touch upon the issue of the extraction of gluon PDF using quarkonium yields [9] as it was done in pioneer works in the late eighties [10,11].

Primary author: Dr LANSBERG, Jean-Philippe (Institut de Physique Nucléaire d'Orsay (FR))

Presenter: Dr LANSBERG, Jean-Philippe (Institut de Physique Nucléaire d'Orsay (FR))

Session Classification: Room 217 - Education & Outreach - QCD, Jet, Parton Distributions - TR15&6

Track Classification: Track 6. QCD, Jets, Parton Distributions