

ID de Contribution: 227

Type: **Talk**

Observation of double J/ψ production in pPb collisions with CMS

mardi 4 juin 2024 14:40 (20 minutes)

The first observation of the simultaneous production of two J/ψ mesons in proton-nucleus collisions will be presented. The analysis is based on a data sample recorded at a nucleon-nucleon center-of-mass energy of 8.16 TeV by the CMS experiment at the CERN LHC corresponding to an integrated luminosity of 174.6 nb^{-1} . The J/ψ mesons are reconstructed in their $\mu^+\mu^-$ decay channel for transverse momenta $p_T > 6.5 \text{ GeV}$ and rapidity $|y| < 2.4$. The measured inclusive fiducial cross section $\sigma(\text{pPb} \rightarrow J/\psi J/\psi + X)$ will be compared to perturbative quantum chromodynamics predictions at next-to-leading-order accuracy, including nuclear parton densities effects, for the production of two J/ψ mesons in single- (SPS) and double- (DPS) parton scatterings. A fit of the data to the expected $\text{pPb} \rightarrow J/\psi J/\psi + X$ SPS and DPS kinematic distributions of the two J/ψ mesons will provide new constraints on the effective DPS cross section of σ_{eff} , related to the transverse distribution of partons in the proton.

Auteur principal: LEONTSINIS, Stefanos

Orateur: LEONTSINIS, Stefanos

Classification de Session: Track2-HF&Q

Classification de thématique: Heavy-Flavours & Quarkonia