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Measurement of the polarization of Υ mesons in PbPb collisions with the CMS detector

We present a measurement of Υ polarization in PbPb collisions with the CMS detector. The results are obtained in the helicity and Collins-Sopper frames and compared with the corresponding measurements in pp collisions. Until now, all studies of quarkonium suppression in heavy ion collisions have assumed unpolarized production in the computation of the detection acceptance. The observed suppression patterns could be caused (to a large extent) by variations in quarkonium polarization rather than by a genuine medium-induced modification of the production yields. Polarization measurements represent an important step in establishing a comprehensive picture of the production and suppression of quarkonia in a hot QCD medium.

Category

Experiment

Collaboration (if applicable)

CMS

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