

Abstract Submitted  
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**An Estimate for the Systematic Uncertainty Associated with the Polarization of the Upsilon Meson at CMS** BRANDON MCKINZIE, Univ of California - Davis — An estimate for the systematic uncertainty associated with the polarization of the Upsilon meson is presented for the LHC heavy-ion collision energy of  $\sqrt{s_{NN}} = 2.76$  TeV. Kinematic cuts are applied to simulated collision data in order to model the acceptance of the CMS detector. The systematic uncertainty is then plotted as a function of  $\Upsilon$   $p_T$  for both high- and low-acceptance polarization cases. We find that Upsilon acceptance varies as a function of  $p_T$ , with, when no kinematic cuts are applied, as high as a twelve-percent difference between levels of polarization (at low  $p_T$ ) and, when kinematic cuts are applied, as high as a four-percent difference (at mid  $p_T$ ).

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