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$\Upsilon(1S)$ polarization in pp collisions at $\sqrt{s} = 13$ TeV with ALICE

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The quarkonium production mechanism in elementary proton-proton (pp) collisions remains unclear. Indeed, none of the production models is able to describe it over the full kinematic range. One of the most discriminating observable between models is the polarization state of quarkonium produced in high energy collisions. The ALICE experiment has measured the polarization of inclusive J/Ψ produced in pp collisions at $\sqrt{s} = 7$ and 8 TeV and of the inclusive J/Ψ and $\Upsilon(1S)$ produced in Pb-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV. In this contribution, we will present the ALICE measurement for $\Upsilon(1S)$ polarization in pp collisions at $\sqrt{s} = 13$ TeV. The measurement is done at forward rapidity ($2.5 < y < 4$) via the dimuon decay channel ($\Upsilon(1S) \rightarrow \mu^+ \mu^-$) both in helicity and Collins-Soper frames and the results are given in p_T intervals, from 0 to 15 GeV/c.

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