# Multiplicity dependence of $\Upsilon$ meson production in $p$+$p$ collisions at $\sqrt{s} = 510$ GeV at the STAR experiment

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The production of quarkonia in vacuum is not fully understood. Theoretical models offer different predictions and experimental measurements are needed to help in distinguishing and improving them. Furthermore, understanding the quarkonium production offers an insight into the quark-gluon plasma properties in heavy-ion collisions.

This poster presents results of the latest $\Upsilon$ measurements in $p + p$ collisions at $\sqrt{s} = 510$ GeV using data collected in 2017 by the STAR detector. The measurement uses the dielectron channel to reconstruct $\Upsilon$ mesons with $2 < p_{\mathrm{T}} < 15$ GeV/c and $|\eta| < 1$. The analysis studies the dependence of the self-normalised $\Upsilon$ yield on the self-normalised event multiplicity to elucidate the connection between hard and soft processes involved in quarkonium production. The used data offers an increase in statistics compared to previous measurements done at RHIC allowing for improved precision and extended multiplicity reach.