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# Quarkonium+$\gamma$ production in $\gamma$-proton interactions at LHC

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## Summary

The quarkonium plus photon production in coherent hadron - hadron interactions at LHC is studied using the non-relativistic QCD (NRQCD) factorization formalism. Considering two different sets of NRQCD matrix elements we estimate the rapidity distribution and total cross sections for $J/\Psi + \gamma$ and $\Upsilon + \gamma$ production. Our results demonstrate that the experimental analysis of this process is feasible and that it can be used to constrain the matrix elements.

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