Theoretical Aspects of Hadron Spectroscopy and Phenomenology

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## Heavy Quarkonium Production in pNRQCD

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Potential NRQCD (pNRQCD) effective field theory provides expressions for decay rates and production cross sections of strongly coupled heavy quarkonia in terms of quarkonium wavefunctions and universal gluon field correlators. This brings in a reduction of the number of nonperturbative unknowns, and improves the predictive power of the nonrelativistic effective field theory approach to heavy quarkonium phenomenology. This also paves a way for computing nonperturbative matrix elements for quarkonium decay and production from first principles. In this talk, we present first pNRQCD predictions for exclusive electromagnetic production of heavy quarkonium. We also present a recent development in pNRQCD that may allow us to compute inclusive hadroproduction rates of heavy quarkonium from first principles, which has not been possible so far.

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