

FAKULTÄT für PHYSIK
LUDWIG-MAXIMILIANS-UNIVERSITÄT
MÜNCHEN/GARCHING

PHYSIK-DEPARTMENT
TECHNISCHE UNIVERSITÄT MÜNCHEN
MÜNCHEN/GARCHING

Garching Maier-Leibnitz-Kolloquium

Donnerstag, 05.05.2022, 16¹⁵ Uhr

Hörsaal der LMU in Garching, Am Coulombwall 1
Treffen zum gemeinsamen Kaffee 16 Uhr

Dr. Xiangpeng Wang

(Physik Department, TU München)

Production and polarization of S-wave quarkonium in potential non-relativistic QCD

Based on the potential nonrelativistic QCD formalism, we compute the nonrelativistic QCD long-distance matrix elements (LDMEs) for inclusive production of S-wave heavy quarkonia. This greatly reduces the number of nonperturbative unknowns and brings in a substantial enhancement in the predictive power of the NRQCD factorization formalism. We obtain improved determinations of the LDMEs and find cross sections and polarizations of J/Ψ , $\Psi(2S)$, and excited Y states that agree well with LHC data. Our results may have important implications on pinning down the heavy quarkonium production mechanism.

Hybrid online access via ZOOM:

<https://lmu-munich.zoom.us/j/98457332925?pwd=TWc3V1JkSHpyOTBPQVIMelhuNnZ1dz09>

Meeting ID: 984 5733 2925

Passcode: 979953

gez. Peter Thirolf
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