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Polarization of prompt J/ψ and Υ(1S) production in the color evaporation model using the k_T-factorization approach[1] VINCENT CHEUNG, University of California, Davis, RAMONA VOGT, Lawrence Livermore National Laboratory and University of California, Davis — Quarkonium prodcution is strong test of high energy QCD phenomenology but its production mechanism is still not well understood. The color evaporation model (CEM) and Nonrelativistic QCD (NRQCD) can describe production yields rather well but spin-related measurements like the polarization are stronger tests. So far no model can describe the yields and the polarization simutaneously. In this talk, I will outline the recent challenges to NRQCD and present the first p_T-dependent prediction of the polarization of prompt J/ψ and Υ(1S) in the CEM using the k_T-factorization approach, which integrates over all color states and takes the off-shell properties of the incoming-gluons and feed down mechanism into account.

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