Production and polarization of direct J/ψ to $\mathcal{O}(\alpha_s^3)$ in the improved color evaporation model in collinear factorization[1] VINCENT CHEUNG, University of California, Davis, RAMONA VOGT, Lawrence Livermore National Laboratory and University of California, Davis — One of the best ways to understand hadronization in QCD is to study the production of quarkonium. 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. In this talk, we will present the first calculation of quarkonium polarization in the improved color evaporation model (ICEM) by considering all diagrams at the order of α_s^3 and integrating over all color states.

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