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Optimal spin quantization axes for the polarization of dileptons and quarkonium¹ DAEKYOUNG KANG, ERIC BRAATEN, The Ohio State University, JUNGIL LEE, CHAEHYUN YU, Korea University — The leading-order parton processes that produce a dilepton with large transverse momentum predict that the transverse polarization should increase with the transverse momentum for almost any choice of the quantization axis for the spin of the virtual photon. The rate of approach to complete transverse polarization depends on the choice of spin quantization axis. We propose axes that optimize that rate of approach. They are determined by the momentum of the dilepton and the direction of the jet that provides most of the balancing transverse momentum. This method also is applied to the polarization of quarkonium.

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