

SCET Workshop 2022



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TMDs in dijet and heavy hadron pair production at EIC (remote)

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We discuss the measurement of gluon transverse momentum distribution (TMD) in dijet and heavy hadron pair (HHP) production in semi-inclusive deep inelastic scattering. The factorization of these processes in position space shows the appearance of a specific new soft factor matrix element on top of angular and complex valued anomalous dimensions. We show in detail how these features can be treated consistently and we discuss a scale prescription for the evolution kernel of the dijet soft function. As a result we obtain phenomenological predictions for unpolarized and angular modulated cross-sections for the electron-ion collider (EIC) using current available information on unpolarized TMD.

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