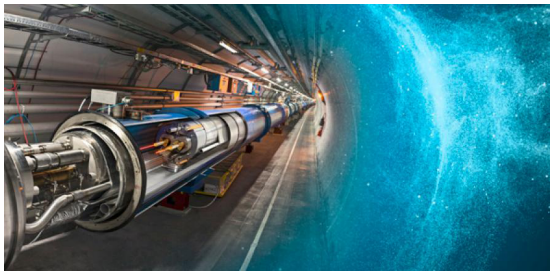

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Azimuthal decorrelation between jets at all orders in QCD hard processes

Tuesday, 22 March 2022 17:15 (15 minutes)

We study the azimuthal decorrelation $\Delta\phi$ for di-jet production that promise to reveal important information on perturbative and non-perturbative QCD dynamics. This observable has been measured by the H1 collaboration that employed the E_t-weighted recombination scheme whereby our observable is continuously global and sensitive to soft and/or collinear emissions in the back-to-back region, giving rise to single and double logarithms. We now wish to employ the four-vector recombination scheme (E-scheme) that makes our observable falling into the category of non-global QCD observables. Hence the resummation becomes highly non trivial due to the presence of non-global and/or clustering algorithms when the jets are defined using the k_t and anti-k_t clustering procedure. In the present work we carry out this resummation to next to leading logarithmic accuracy including the non-global and clustering logarithms involved in DIS at HERA.

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