SINGLE-MODE SQUEEZING OF GLUONS IN QCD JET

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Summary

We study the evolution of colour gluon states in an isolated QCD jet at the non-perturbative stage. Fluctuations of gluons are less than those for coherent states under specific conditions. This fact suggests that there gluon squeezed states can arise. The angular and rapidity dependences of the normalized second-order correlation function for present gluon states are studied at this stage of jet evolution. It is shown that these new gluon states can have both sub-Poissonian and super-Poissonian statistics corresponding to, respectively, the antibunching and bunching of gluons by analogy with squeezed photon states.