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Dijet Cross Sections in Photoproduction and Determination of the Gluon Density in the Photon

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Using data collected in 1996 by the H1 detector at the HERA collider the differential di-jet cross section $d\sigma/dx_\gamma^{jets}$ is measured in photoproduction processes. This cross section is sensitive to the gluon content of the photon at small parton fractional momentum x_γ. By extracting an effective parton density of the quasi real photon and using quark distributions as derived from e^+e^- scattering, the gluon density of the photon is determined in leading order QCD. This measurement leads to an improved knowledge of the gluon content of the photon and covers the kinematic range down to $x_\gamma^{jets} = 0.04$.