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Measurement of Charm and Beauty Production in $\gamma\gamma$ Collisions at LEP

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Inclusive heavy flavour production in $\gamma\gamma$ collisions is studied with the L3 detector at the LEP collider. Hadronic final states containing charm and beauty particles are identified by detecting electrons or muons from their semi-leptonic decays. The cross section of charm production is measured at several center-of-mass energies between 91 GeV and 189 GeV. The cross section of beauty production is measured for the first time in $\gamma\gamma$ collisions. Even including real and virtual gluon emission (NLO QCD) the direct process $\gamma\gamma \to c\bar{c}, b\bar{b}$ is insufficient to describe charm and beauty production in $\gamma\gamma$ collisions. The cross section values and event distributions require resolved processes, sensitive to the gluon density function of the photon.