Measurement of the Production Rate of Charm Quark Pairs from Gluons in Hadronic Z^0 Decays

The OPAL Collaboration

Abstract

The rate of secondary charm-quark-pair production has been measured in 4.4 million hadronic Z^0 decays collected by OPAL. By selecting events with three jets and tagging charmed hadrons in the gluon jet candidate using leptons and $D^{\star\pm}$ mesons, the average number of secondary charm-quark pairs per hadronic event is found to be $(3.20\pm0.21\pm0.38)\times10^{-2}$.

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