Charmonium Resonance Formation in $\gamma\gamma$ Collisions at LEP with the L3 Detector

Begona De La Cruz

CIEMAT–Madrid
The L3 Collaboration

May 15, 1998

Abstract

The formation of charmonium mesons in two-photon collisions has been studied with the L3 detector at LEP e^+e^- collider. We present results on the two photon partial widths for the charmonium resonances η_c and χ_{c2}, measured at $\sqrt{s} \simeq 91$ GeV with an integrated luminosity of 140 pb^{-1} and at $\sqrt{s} \simeq 183$ GeV with an integrated luminosity of 50 pb^{-1}. The studied decay channels are $\eta_c \to 4\pi$, 4K, $K^+K^-\pi^+\pi^-$, $K^0K^\pm\pi^\mp$, $\pi^0K^+K^-$, $\eta\pi^+\pi^-$ and $\chi_{c2} \to J/\psi\gamma$ ($J/\psi \to l^+l^-$).