INTERNATIONAL CONFERENCE ON HIGH ENERGY PHYSICS
AMSTERDAM 2002

Abstract ID=ABS491
QCD: Hard interactions
QCD: Soft interactions
Experiment: L3 Collaboration
Contact Person: Juan Alcaraz
Institute: CERN
Email: Juan.Alcaraz@cern.ch

Total Cross Section in $\gamma\gamma$ Collisions at LEP

L3 Collaboration

Abstract

The reaction $e^+e^- \to e^+e^-\gamma^*\gamma^* \to e^+e^-$ *hadrons* for quasi-real photons is studied using data from $\sqrt{s} = 183$ GeV up to 202 GeV. Results on the total cross sections $\sigma(e^+e^- \to e^+e^-$ *hadrons*$)$ and $\sigma(\gamma\gamma \to$ *hadrons*$)$ are given for the two-photon centre-of-mass energies 5 GeV $\leq W_{\gamma\gamma} \leq$ 185 GeV. The total cross section of two real photons is described by a Regge parametrisation. We observe a steeper rise with the two-photon centre-of-mass energy as compared to the hadron-hadron and the photon-proton cross sections. The data are also compared to the expectations of different theoretical models.

Version 0
Date 2002-04-30 : 14:18:12'