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Electroweak physics
Beyond the Standard Model (experiment and theory)
Experiment: L3 Collaboration
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Study of Z Boson Pair Production at LEP

L3 Collaboration

Abstract

The pair production of Z bosons is studied using the data collected by the L3 detector at LEP in e^+e^- interactions at centre-of-mass energies ranging from 183 GeV up to 208 GeV, corresponding to 680 pb^{-1} of integrated luminosity. Results are presented on the measurement of the cross section of this process and of its subset in which b quarks are produced in the final states.

A search for anomalous triple neutral gauge boson couplings, forbidden in the Standard Model, is performed. No evidence for those couplings is found and limits on their values are set. Other new physics scenarios are also constrained by these data.

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