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Electroweak physics
Beyond the Standard Model (experiment and theory)
Experiment: L3 Collaboration
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Tests of the Standard Model with the $e^+e^- \to e^+e^-$ process at LEP

L3 Collaboration

Abstract

Bhabha scattering is studied with the L3 detector at LEP at center-of-mass energies 189 GeV $< \sqrt{s} <$ 209 GeV. The analyzed data correspond to a total integrated luminosity of 607 pb^{-1}. The precise measurement of the differential cross section in the angular region $|\cos\theta| < 0.9$ allows several tests of the Standard Model. The dependence of the fine structure constant α_{em} on the energy scale is investigated in detail.

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